DREDGE MATERIAL TESTING and EVALUATION

Gunners Lake
Germantown, Maryland

PREPARED FOR:

McCormick Taylor
509 South Exeter Street, 4th Floor
Baltimore, Maryland 21202

PREPARED BY:

AB CONSULTANTS, INC.
9450 ANNAPOLIS ROAD
LANHAM, MARYLAND 20706

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1. AB Consultants, Inc. – Sieve Analysis Results
2. Test America, Inc. – Analytical Report 1 (TAI Job ID: 180-6792-1)
3. Test America, Inc. – Analytical Report 2 (TAI Job ID: 180-7603-1)
4. ALS Environmental Laboratory – Bio Test Report
5. Summary of Metals and Semivolatile Compounds
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EXECUTIVE SUMMARY

AB Consultants, Inc. (ABC) conducted an investigation to characterize and evaluate the proposed dredge material in two (2) locations at the northern end of Gunners Lake in Germantown, MD. The purpose of this study was to sample the sediments in the dredging areas and perform laboratory analyses to determine if any environmental or health concerns exist in the material.

To obtain information of subsurface conditions, three (3) soil test holes (B-1 to B-3) were performed at the site to collect sediment samples for laboratory analysis. The analyses performed on the sediment samples followed the guidelines as directed by Montgomery County and the United States Army Corps of Engineers (USACE) Technical Note DOER-C2 for dredged material which includes the following:

- Physical Analysis: A standard sieve analysis was performed at ABC's Geotechnical Laboratory in Lanham, MD to determine the grain size of the sediment samples.
- Chemical Analysis: Chemical analysis was conducted on the sediment samples to investigate general chemistry, contaminant presence, and nutrient content in the proposed dredge material. The chemical analysis was performed by Test America Laboratories, Inc. in Pittsburgh, PA.
- Biological Analysis: Pathogen (Coliform) analysis was conducted on the sediment samples to detect the presence of fecal coliform bacteria. The biological analysis was performed by ALS Environmental in Middletown, PA.

The results obtained from the appropriate characterization tests were used to determine the current physical, chemical and biological properties of the sediments and to perform an assessment using federal and state standards. Based on the results of this investigation, the following conclusions can be made.

- The sediment classification indicated the soils to be silt with little gravel to sandy silt with a trace of clay and organics.
- The chemical analyses results indicated that three (3) metals (aluminum, chromium, and iron) and five (5) polycyclic aromatic hydrocarbons (PAH's); benzo [a] anthracene, benzo [b] fluoranthene, benzo [a] pyrene, dibenz [a,h] anthracene and indeno [1,2,3-cd] pyrene were found in the sediment samples at levels above soil screening levels (SSL's) established by the United States Environmental Protection Agency (USEPA) and the Maryland Department of the Environment (MDE).
- Analytical results indicated that fecal coliform was not detected (ND) at the Reporting Detection Limit (RDL).

This investigation was limited to a screening-level sampling investigation. The US EPA Mid-Atlantic Risk Assessment dated May 2012 was utilized to place a risk assessment for

Benzo[a]pyrene, which is typical for the other PAH compounds for the evaluation of carcinogens for both the magnitude and duration of exposure. The Carcinogenic Target Risk for Benzo[a]pyrene is:
Ingestion Screening Level - 0.0200 mg/kg or 0.0200 parts per million (ppm)

There are five (5) PAH's identified as exceeding the MDE Residential Clean-Up Standard for this study. When adding these PAH's together, an adult would reach the chronic toxicity with an ingestion of approximately **0.1 mg/kg or 0.1 ppm** of impacted soil per day over an extended period of time.

The results of the nutrient analysis indicate high Nitrogen and Phosphorus levels. Excess nutrients in receiving waters can stimulate algae growth, and as a result, deplete the supply of oxygen necessary for fish and disrupt the aquatic food chain.

1.0 INTRODUCTION

1.1 General

AB Consultants, Inc. (ABC) conducted an investigation to characterize and evaluate the proposed dredge material at Gunners Lake. The purpose of this study was to explore the thickness of sediment that accumulated in two (2) areas at the northern end of the lake and to evaluate the dredging areas. To obtain information of subsurface condition, three (3) soil test holes were performed at the site to collect sediment samples for laboratory analysis. The following report sections discuss the field operation and laboratory test results.

1.2 Scope of Work

The investigation of the proposed dredge material at the site consisted of the following:

- Planning and executing a subsurface exploration program to evaluate sediment conditions for the proposed dredge material.
- Performing soil test pits and collecting sediment samples.
- Performing laboratory analyses on sediment samples obtained from the borings.
- Providing an environmental/geotechnical report that includes results of field and laboratory studies.

1.3 Site Location

Gunners Lake is located approximately 0.75 miles west of I-270 along Wisteria Drive in Germantown, Maryland.

1.4 Characterization of Lake and Lake Sediments

Gunners Lake was built in 1985 as part of Gunners Village by building a dam across Gunners Branch in the Great Seneca watershed. The dam also serves as a road embankment for Wisteria Drive and is designated as a significant hazard dam by the Maryland Department of Environment (MDE) Dam Safety office. The lake is owned and operated by North Lake Federation. The lake's parcel size is approximately 34.3 acres including 20.0 acres of water surface. The total drainage area to the lake is about 1,233 acres.

Over the years, Gunners Lake has seen large amounts of sediment loading, and it has never been dredged. Recently, the Department of Environmental Protection (DEP) has determined that partial lake dredging would be beneficial to the overall water quality. Currently, at the lake's headwaters where Gunners Branch enters the lake, sediment build-up has formed a delta with sediment levels at or above the normal water elevation. Because of budget limitations, DEP has decided to dredge only in that area and only remove up to 20,000 cubic yards of sediment. In addition, two areas of the common

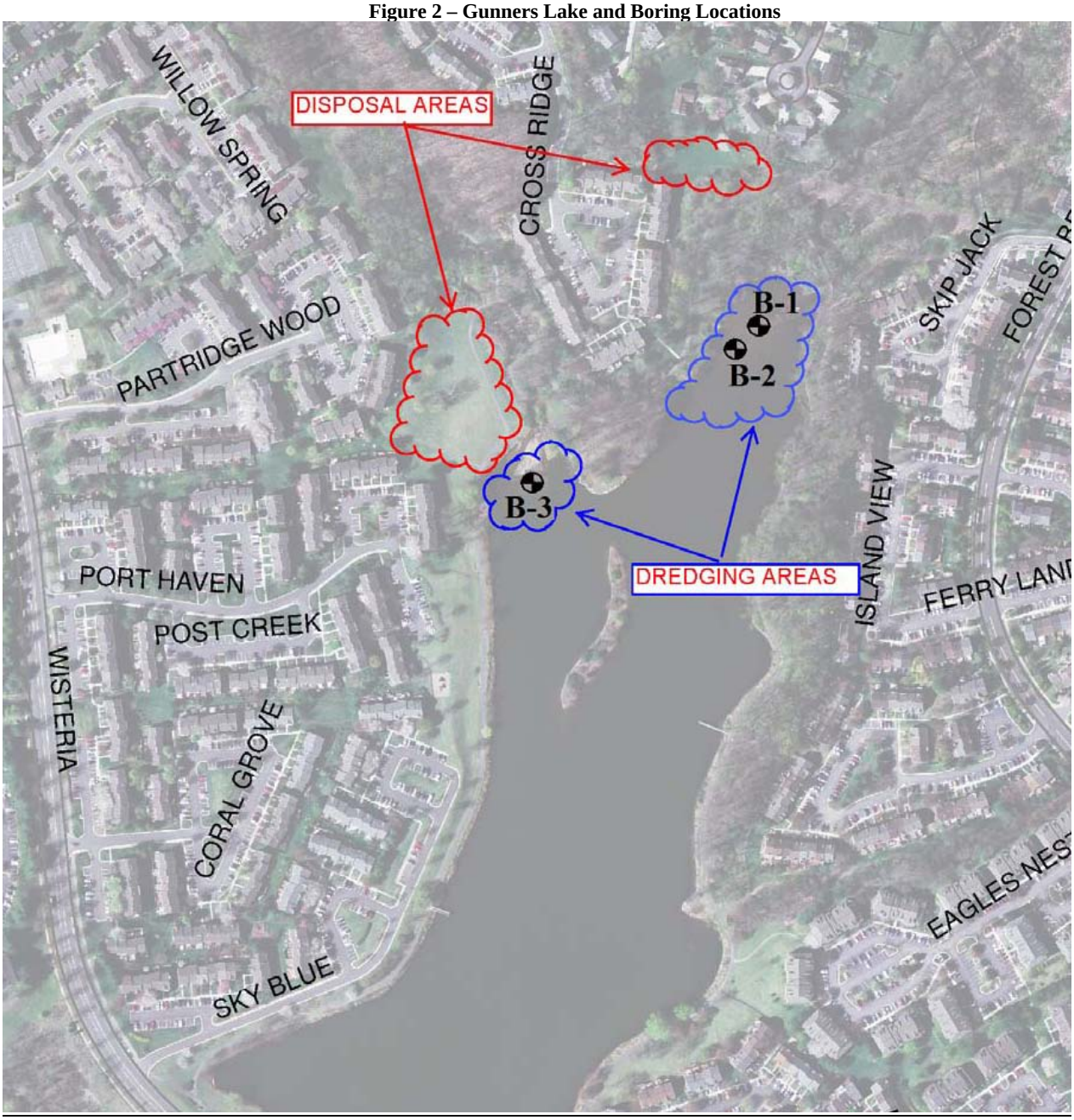
space in North Lake Woods, which are about 350-500 feet from the dredging area, have been identified as potential sites for sediment disposal.

The lake sediments in the proposed dredge area were characterized by collecting sediment samples and performing laboratory analysis to determine the grain size and concentration of contaminants that may be present. The results of the laboratory analysis will help to determine how the sediments are handled and used. The particle size (gravel, sand, silt, or clay) of the sediment samples were classified at ABC. Sediments composed largely of silt are easy to dredge, but can be harder to dewater. Sediments composed largely of clay are generally more difficult to dredge and dewater. The type and extent of sediments in the proposed dredge area of the lake are important to determine the best approach to dredge and dewater the sediment and identify potential sediment re-use options.

The area surrounding the lake is suburban with predominately high-density residential and commercial land use. Figures 1 and 2 below show the Vicinity Map and Boring Locations at Gunners Lake, respectively.

Figure 1 – Site Vicinity Map

Figure 2 – Gunners Lake and Boring Locations



2.0 SAMPLING METHODS

2.1 Field Sampling

Three (3) soil test pits were performed at predetermined locations previously staked out in the field by ABC. A site vicinity map is included in Attachment 1. Test pits were hand augered at the referenced site to depths of 0.5+/- ft. through 4.5 +/- ft below the existing ground surface on December 10, 2011. Due to the shallow depth of sediment

encountered in test hole B-2, additional holes were dug in a 5-ft radius to confirm the subsoil condition.

2.2 Sample Handling

The test borings were advanced by using hand augers and soil samples collected from the augers. Nylon gloves were utilized during sampling and changed between borings. The auger and sampling equipment were decontaminated between borings. A representative sample was placed in containers and transported to ABC's laboratory for sieve analysis. Based on sampling instructions from our sub-consultant, Test America, Inc. (TAI), representative sediment samples were collected, placed in containers provided by their laboratory and were transported to TAI for sediment chemical analysis. Additional samples were collected and sent to ALS Environmental Laboratory (ALS) for biological properties analysis on the proposed dredge material.

A small portion of samples obtained from the field will be retained in our laboratory for a period of thirty (30) days from the date of final report. They will be available for inspection during this period, after which the samples will be discarded.

3.0 LABORATORY TESTING

Laboratory testing for Gunners Lake followed the specification in the Army Corps of Engineers Technical Note (USACE) DOER-C2 for dredged material. The three (3) sediment samples collected were analyzed for physical, chemical, and biological properties as shown below:

Physical Analysis: A standard sieve analysis was performed at ABC's Geotechnical Laboratory in Lanham, MD to determine the grain size of the sediment samples.

Chemical Analysis: Chemical analysis was conducted on the sediment samples to investigate general chemistry, contaminant presence, and nutrient content in the proposed dredge material. The chemical analysis was performed by Test America Laboratories, Inc. in Pittsburgh, PA.

Biological Analysis: Pathogen (Coliform) analysis was conducted on the sediment samples to detect the presence of fecal coliform bacteria. The biological analysis was performed by ALS Environmental in Middletown, PA.

4.0 ANALYTICAL LABORATORY RESULTS

The results obtained from the appropriate characterization tests were used to determine the current physical, chemical and biological properties of the sediment samples. The results were then utilized to perform an assessment using federal EPA and MDE standards.

4.1 Physical Analysis (Sieve Analysis ASTM 422)

ABC performed a sieve analysis in accordance with ASTM 422 and the results are included in Attachment #1. A summary of the sieve analysis results is presented in Table 1 below.

Table 1 – Sieve Analysis

SUMMARY OF ENCOUNTERED SEDIMENT				
Location	Excavation Depth (below existing grade)	Sample Description	Passing #200 Sieve (%)	USCS
B-1	0 to 4.5 ft	Silty sand with little gravel	17.0	SM
B-2	0 to 0.5 ft	Sandy silt with trace of clay and organics	73.9	ML
B-3	0 to 4.5 ft	Silty sand with some gravel	5.1	SW-SM

4.2 Chemical Analysis (ASTM, CSSS, ASA, and EPA Test Method)

TAI performed general chemistry and metal testing on selected sediment samples. Tests performed by TAI are summarized in Table 2 and the results presented in the TAI Analytical Reports 1 and 2 (Attachments #2 and #3).

Table 2 – Chemical Analysis

APPROPRIATE CHARACTERIZATION TEST FOR CHEMICAL PROPERTIES OF DREDGED MATERIAL TO DETERMINE SUITABILITY FOR BENEFICIAL USES	
Test Description	TAI Analytical Report Page No. for B-1, B-2, and B-3, respectively
10) pH	15, 20, 24
11) Calcium Carbonate Equivalents (Neutralizing Value (%CCE)	56, 58, 60
12) Cation Exchange Capacity	56, 58, 60
13) Salinity (Conductivity (Saturated Paste))	56, 58, 60
14) Sodium	15, 19, 24
15) Chloride	15, 20, 25
16) Sodium Adsorption Ratio (SAR)	56, 58, 60
17) Electrical Conductivity (Electrical Conductivity)	15, 20, 25
18) Total Organic Carbon	15, 20, 24
19) Carbon:Nitrogen Ratio	56, 58, 60
20) Total Kjeldahl Nitrogen	15, 20, 24
21) Ammonium Nitrogen	15, 20, 24
22) Nitrate-nitrogen	15, 20, 24
23) Nitrite-nitrogen	15, 20, 25
24) Total Phosphorus	25, 25, 25
25) Orthophosphorus	15, 20, 24
26) Potassium	15, 19, 24
27) Sulfur	56, 58, 60
28) Diethylene Triamine Pentaacetic Acid (DTPA) Metals*	*
29) Total Metals	14, 19, 24
30) Pesticides (chlorinated) Congeners	12, 17, 22
31) Polynuclear Aromatic Hydrocarbons (PAHs)	11-12, 15-17, 20-21
32) Polychlorinated Biphenyls (PCBs)	13, 18, 22
33) Dioxins	13, 18, 23

* Test results are presented in TAI Analytical Report 2.

The detectable levels of laboratory results for general chemistry, bacteriological, contaminants, and soil nutrient content are shown on Table 3.

Table 3 – Analytical Results Reported at Detectable Levels

INORGANIC METALS (Sediment)	Units	LAB SAMPLE ID		
		B-1 180-2792-1	B-2 180-2792-2	B-3 180-2792-3
		Sediment (0 to 4.5 FT)	Sediment (0 to 0.5 FT)	Sediment (0 to 4.5 FT)
Aluminum	mg/kg	8000	21000	5100
Antimony	mg/kg	0.21	1.1	0.044
Arsenic	mg/kg	1.7	4.3	3.2
Beryllium	mg/kg	0.53	1.1	0.39
Cadmium	mg/kg	0.27	0.5	0.13
Chromium	mg/kg	27	57	15
Colbalt	mg/kg	11	20	11
Copper	mg/kg	23	66	17
Iron	mg/kg	18000	38000	26000
Lead	mg/kg	16	34	13
Managanese	mg/kg	210	770	200
Nickel	mg/kg	29	54	15
Selenium	mg/kg	0.43	1.1	0.21
Potassium	mg/kg	740	1800	360
Silver	mg/kg	0.03	0.092	0.01
Thallium	mg/kg	0.087	0.24	0.034
Tin	mg/kg	0.96	2.8	1.2
Zinc	mg/kg	100	210	120
Sodium	mg/kg	87	240	36

INORGANIC METALS (Water and Terrestrial)	Units	LAB SAMPLE ID					
		B-1		B-2		B-3	
		Water (0 to 4.5)	Terrestrial (0 to 4.5 FT)	Water (0 to 4.5)	Terrestrial (0 to 0.5)	Water (0 to 4.5)	Terrestrial (0 to 4.5)
Aluminum	mg/kg						
Antimony	mg/kg						
Arsenic	mg/kg	0.0067	0.67	0.03	0.013	0.0038	0.0025
Beryllium	mg/kg						
Cadmium	mg/kg	0.0073	0.0084	0.0035	0.024	0.0034	0.0058
Chromium	mg/kg	0.032	0.039	0.075	0.034	0.32	0.032
Colbalt	mg/kg						
Copper	mg/kg	0.550	0.780	0.12	1.9	0.35	0.46
Iron	mg/kg						
Lead	mg/kg	1	0.96	0.058	0.23	0.62	0.58
Managanese	mg/kg						
Nickel	mg/kg	0.54	0.63	1.4	1600	0.30	0.29
Selenium	mg/kg						
Potassium	mg/kg	740					
Silver	mg/kg	ND	ND	ND	ND	ND	ND
Thallium	mg/kg						
Tin	mg/kg						
Zinc	mg/kg	2	2.8	1.4	7.1	1.2	1.3
Sodium	mg/kg						
Mercury	mg/kg	ND	0.00004				

Table 3 (Cont'd)

SEMIVOLATILE ORGANIC COMPOUNDS (SVOC's)	Units	LAB SAMPLE ID		
		B-1 180-2792-1	B-2 180-2792-2	B-3 180-2792-3
		Sediment (0 to 4.5 FT)	Sediment (0 to 0.5 FT)	Sediment (0 to 4.5 FT)
Acenaphtylene*	mg/kg	0.011	ND	ND
Acenaphthene*	mg/kg	0.11	ND	ND
Anthracene*	mg/kg	4.6	0.097	0.041
Benzo [a] anthracene*	mg/kg	1.7	0.97	0.28
Benzo[a]pyrene*	mg/kg	1.8	1.6	0.36
Benzo[b]fluoranthene*	mg/kg	2.1	2.3	0.38
Benzo[k]fluoranthene*	mg/kg	0.75	1	0.2
Benzo[g,h,i]perylene*	mg/kg	1.1	1.5	0.28
Bis(2-ethylhexyl) phthalate	mg/kg	0.49	3.2	0.82
Butyl benzyl phthalate	mg/kg	0.19	1	0.53
Chrysene*	mg/kg	2	1.8	0.4
Dibenz(a,h)anthracene*	mg/kg	0.21	0.27	0.052
Diethyl phthalate	mg/kg	0.025	ND	ND
Fluoranthene*	mg/kg	4.2	ND	0.75
Fluorene*	mg/kg	0.2	ND	0.018
Indeno[1,2,3-cd]pyrene*	mg/kg	0.99	1.3	0.23
2- Methylnaphthalene*	mg/kg	0.0046	0.23	0.041
Naphthalene*	mg/kg	0.025	0.19	0.035
Phenanthrene*	mg/kg	2.7	0.72	0.3
Pyrene*	mg/kg	3.7	2.1	0.6

BACTERIOLOGICAL	UNITS	LAB SAMPLE ID		
		B-1	B-2	B-3
Fecal Coliform	MPN/gm	ND	ND	ND

DIOXINS	UNITS	LAB SAMPLE ID		
		B-1	B-2	B-3
2,3,7,8- TCDD	pg/g	0.25	0.44	ND
Total - TCDD	pg/g	1.2	3.6	ND
Total HpCDD	pg/g	92	350	8.3
OCDD	pg/g	2100	8000	210
Total TCDF	pg/g	1.4	5.7	0.085
Total PeCDF	pg/g	1.8	6.3	0.27
Total HxCDF	pg/g	5.6	15	0.89
Total HpCDF	pg/g	11	37	0.88
OCDF	pg/g	14	46	0.74

Table 3 (Cont'd)

PCB CONGENERS	UNITS	LAB SAMPLE ID		
		B-1	B-2	B-3
PCB 8	mg/kg	0.00017	0.0022	0.00016
PCB 18	mg/kg	0.00024	0.00071	ND
PCB 28	mg/kg	0.00028	0.00044	ND
PCB 87	mg/kg	0.16	ND	ND
PCB 101	mg/kg	ND	0.00049	ND
PCB 118	mg/kg	ND	ND	ND
PCB 138	mg/kg	ND	0.0017	ND
PCB 153	mg/kg	ND	0.0019	ND

ORGANOCHLORIDE PESTICIDES	Units	LAB SAMPLE ID		
		B-1 180-2792-1	B-2 180-2792-2	B-3 180-2792-3
		Sediment (0 to 4.5 FT)	Sediment (0 to 0.5 FT)	Sediment (0 to 4.5 FT)
4,4'-DDD	mg/kg	ND	ND	ND
4,4'-DDE	mg/kg	ND	ND	ND
4,4'-DDT	mg/kg	ND	ND	ND
beta-BHC	mg/kg	ND	ND	ND
Chlordane (technical)	mg/kg	ND	ND	ND
beta-BHC	mg/kg	ND	ND	ND
Dieldrin	mg/kg	ND	ND	ND
Endosulfan sulfate	mg/kg	ND	ND	ND
Endrin	mg/kg	ND	ND	ND
gamma-BHC (Lindane)	mg/kg	ND	0.0026	ND
Heptachlor epoxide	mg/kg	ND	ND	ND
Methoxychlor	mg/kg	ND	ND	ND
Toxaphene	mg/kg	ND	ND	ND

Table 3 (Cont'd)

GENERAL CHEMISTRY	Units	LAB SAMPLE ID		
		B-1 180-2792-1	B-2 180-2792-2	B-3 180-2792-3
pH	SU	6.44	6.32	5.75
Total Phosphorus	mg/kg	950	2600	480
Chloride	mg/kg	55	120	25
Percent Moisture	%	24	71	18
Nitrogen, Kjeldahl	mg/kg	290	4400	250
Specific Conductance	umhos/cm	310	570	210
Total Organic Carbon	mg/kg	13000	56000	17000
Nitrate as N	mg/kg	ND	1.8	ND
C/N Ratio	ratio	7:1	8:1	1:01
Cation Exchange Capacity	meq/100g	12.5	40.2	7.3
Neutralizing Value (%CCE)	%	15.1	13.4	11.8
Sodium Adsorption Ratio (SAR)	ratio	3.33	0.882	1.33
Total Sulfur	mg/kg	129	578	137
Calcium	ppm	4.88	97.3	49.5
Total Carbon	%	0.7	7.3	0.1
Magnesium	ppm	10.4	33.6	11.6
Total N	%	0.1	0.9	<1.0
Sodium	ppm	56.8	39.6	39.9
Ammonia, Distilled	mg/kg	77	41	4.6

Environmental Contaminant Analysis

The results of the analytical reports prepared by TAI for Gunners Lake were compared to soil screening levels (SSLs) from the EPA and MDE Generic Numeric Cleanup Standards for Groundwater and Soil. Three (3) soil borings were conducted on site December 10, 2011 by ABC which included both sediment and water samples. Six (6) samples were taken at each of the three (3) soil borings from 0.5+/- ft through 4.5+/- below the existing ground surface.

Inorganic Metals

The Maryland Clean-up Standards represent concentration levels at which no further remedial response action would be required based upon the potential threat posed by these substances to human health within the constraints of current knowledge. The soil concentration values for residential sites are intended for properties for residential use. For metals and trace elements, MDE has provided an alternative standard titled "Anticipated Typical Concentration" (ATC) for three (3) geological provinces which include the eastern, central, and western portions of the state for developing reference levels. This site is determined to be in the central province for this analysis. According to MDE Cleanup Standards for Soil and Groundwater Interim Final Guidance, June 2008, the ATC represents concentration levels collected from environmental investigations previously overseen by MDE. The ATC derived reference levels exceed the proposed Maryland Cleanup Standards under a residential use setting. This result is a consequence of multiple factors and does not necessarily indicate that a hazard is posed to either

human health or the environment in areas of the state where the reference levels exceed the proposed residential clean-up standards.

Three (3) metals exceeding both the MDE Residential Cleanup Standards and ATC standards include Aluminum, Chromium, and Iron. Arsenic however, exceeds the Residential Cleanup Standards, but does not exceed the ATC standard. Table 4 summarizes the results that exceeded the minimal MDE Generic Numeric Cleanup Standards for Groundwater and Soil. Previously, arsenic was utilized in various agricultural insecticides and poisons throughout the area. Refer to Attachment #5 for a summary of Inorganic Metals.

Table 4 – Metals Exceeding MDE Standards

Chemical Constituent	Units				MDE Soil Standards			
Lab Sample ID		B-1 180-2792-1 Sediment (0 to 4.5 FT)	B-2 180-2792-2 Sediment (0 to 0.5 FT)	B-3 180-2792-3 Sediment (0 to 4.5 FT)	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil -to-Groundwater	Anticipated Typical Concentrations
Ingoranic Metals								
Aluminum	mg/kg	8000	21000	5100	7800	100000		19000
Chromium	mg/kg	27	57	15	23	310	42	30
Iron	mg/kg	18000	38000	26000	5500	72000		26000
Indicates Generic MDE Clean-up Standards								
Exceeds MDE Residential Clean-up Standards								

Semivolatile Organic Compounds (SVOC's) and PAH's

The Semivolatile Organic Compounds (SVOC's) also include the sub-group of Polycyclic Aromatic Hydrocarbon (PAH) compounds. A SVOC is an organic compound which has a boiling point higher than water and which may vaporize when exposed to temperatures above room temperatures. Many SVOC's are human-made and produced in the manufacturing industry (e.g. in plastic, pharmaceutical and pesticide manufacturing). The health effects can vary greatly from those that are highly toxic, to those which, at present, have no known health effects. Many SVOC's are suspected to be cancer causing in humans and have been linked to asthma, allergies, and other bronchial irritations. Table 5 shows the five (5) SVOC's that exceed the MDE Residential Clean-up Standard; Benzo[a]anthracene, benzo[b]fluoranthene, benzo[a]pyrene, dibenz(a,h)anthracene and indeno[1,2,3-cd]pyrene. Dibenz(a,h)anthracene exceeds the residential standard by ten (10) times, but does not exceed the industrial standard. Benzo[a]pyrene exceeds both the residential standard by one hundred (100) times, as well as the industrial standard. Sources of Benzo[a]pyrene include coal tar, automobile exhaust fumes (especially from diesel engines), and smoke resulting from combustion of organic material (including cigarette smoke). The screening level for benzo[a]pyrene set by the EPA for carcinogenic risk is established as 0.02 mg/kg for ingestion. The dermal screening level is set at 0.053 mg/kg and the inhalation level established as 1200 mg/kg. Indeno[1,2,3-cd]pyrene exceeds the residential standard, but does not exceed the industrial standard however. Refer to Attachment #5 for the complete results of SVOC's.

Table 5 – SVOC's Exceeding MDE Standards

Chemical Constituent	Units				USEPA Soil Screening		MDE Soil Standards		
Lab Sample ID		B-1 180-2792-1 Sediment (0 to 4.5 FT)	B-2 180-2792-2 Sediment (0 to 0.5 FT)	B-3 180-2792-3 Sediment (0 to 4.5 FT)	Residential Soil	Industrial Soil	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil -to-Groundwater
Semivolatile Organic Compounds									
(SVOCs)									
Benzo [a] anthracene*	mg/kg	1.7	0.97	0.28	0.15	2.1	0.22	3.90	0.48
Benzo[a]pyrene*	mg/kg	1.8	1.6	0.36	0.015	0.21	0.022	0.39	0.12
Benzo[b]fluoranthene*	mg/kg	2.1	2.3	0.38	0.15	2.1	0.22	3.90	1.5
Dibenz(a,h)anthracene*	mg/kg	0.21	0.27	0.052	0.015	0.21	0.022	0.39	0.46
Indeno[1,2,3-cd]pyrene*	mg/kg	0.99	1.3	0.23	0.15	0.21	0.2	3.90	4.2
Indicates Generic MDE Clean-up Standards									
Exceeds MDE Residential Clean-up Standards and USPA Residental Soil Screening Levels									
PAH Compounds									

Dioxins

Dioxins are a class of chemical that are formed of various industrial processes and regarded as highly toxic compounds that are environmental pollutants and persistent organic pollutants. There are 75 Polychlorinated Dibenzo-p-dioxins (PCDDs), seven (7) of which are specifically toxic. There are 135 congeners (derivatives differing only in the number and location of the chlorine atoms). Dioxin emissions have been reduced 90 percent since 1987 throughout the US. The most toxic dioxin is 2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD) and is used as a reference. The highest environmental concentrations of dioxin are usually found in soil and sediment, with much lower levels found in air and water. Dioxins are of concern because of their highly toxic potential. Once dioxins have entered the body, they endure a long time due to their chemical stability and their ability to be adsorbed by fat tissue. Dioxins are mainly by-products of industrial processes including smelting and chlorine bleaching. In terms of dioxin release into the environment, uncontrolled waste incinerators (solid waste and hospital waste) are often the worst culprits, due to incomplete burning. The EPA and MDE have not established a reference dose for 2,3,7,8 TCDD for (noncancer) Chronic Effects. The average daily intake of TCDD for a US adult is estimated at 23 picograms (pg), of which approximately 50 percent comes from daily food sources. The existing exposure of 0.44 pg/g for sample B-2 in Table 6, appears insignificant when compared to the average daily intake. According to the Food and Drug Administration however, the minimum standard for bottled water is 0.03 pg. Refer to Attachment #6 for a summary of the Dioxins.

Table 6 – TCDD Summary

DIOXINS	UNITS	LAB SAMPLE ID		
		B-1	B-2	B-3
2,3,7,8- TCDD	pg/g	0.25	0.44	ND

PCB's

The analytical results for the three (3) samples were below the PCB total level of 0.32 mg/kg indicated in the MDE Generic Numeric Clean-up Standard. PCB's were widely used as dielectric and coolant fluids, for example in transformers, capacitors, and electric motors. Other uses include oil-based paint, floor finish, caulking and plastics. Due to PCB's toxicity and classification as a persistent organic pollutant, PCB production was

banned by the United States Congress in 1979 and by the Stockholm Convention on Persistent Organic Pollutants in 2001. Concerns about the toxicity of PCBs are largely based on compounds within this group that share a structural similarity with other compounds and Dioxins. PCBs are a very stable compound and do not decompose readily. PCB's have been demonstrated to cause cancer, as well as a variety of other adverse affects. PCB's can accumulate in the leaves and above-ground parts of plants and food crops. They are also taken up into the bodies of small organisms and fish. As a result, people who ingest fish may be exposed to PCBs that have bio-accumulated in the fish they are ingesting. Due to the inability of PCB's to oxidize and reduce in the natural environment, their ability to break down is quite difficult.

MDE does not have standards for the individual PCB compounds, but evaluates the compounds in total. The total of 0.32 mg/kg is indicated for the Residential Clean-Up Standard. The sum of the total of the detectable limits for the specific tests are SB-1 (0.00085 mg/kg), SB-2 (0.00744 mg/kg), and SB-3 (0.00016 mg/kg), which are all below the threshold. A summary of the PCB results is included in Attachment #6.

Nutrient Analysis

The agricultural nutrient levels were analyzed to determine the desirable levels of nitrogen, potassium, phosphorus, and sulfur of the dredge sediments. The nutrient levels of the sediments could affect potential beneficial reuse and/or land application of dredged sediments.

The soil pH ranges between 5.75 to 6.44 for the site. The optimum pH range for most plants is between 6 and 7.5. Soil pH specifically affects plant nutrient availability by controlling the chemical that forms the nutrient. A pH below 7 is acidic and above 7 is basic. The soil is slightly acidic and limestone should be added to the ground surface to establish a good turf cover. The results for Total Organic Carbon, Phosphorus P04 and Nitrogen, are similar for B-1 and B-3, but are elevated for B-2 however. The Total Organic Carbon (TOC) is material derived from decaying vegetation, bacterial growth, and metabolic activities of living organisms or chemicals. The finer grained samples of B-2 contained higher nutrient levels than the coarser grained soils of B-1 and B-2.

Conductivity is useful as a general measure of stream water quality. Established studies indicating streams that support good fisheries range between 150 and 500 umhos/cm. The results on this site were in the range of 310 to 570 umhos/cm.

The results for Phosphorus on site are higher than the soil used for agricultural use and lawns. Purdue University indicates normal Phosphorus levels to be between 13 and 25 ppm. The sample results for B-2 were 2600 ppm for Phosphorus, which is indicative of urban runoff and receiving waters that contain siltation runoff.

The MDE Residential Cleanup Standards do not indicate acceptable levels of Phosphorus because these standards are variable in native soils. However, the results are high and may be a result of over application of fertilizers or excessive amounts of sewage or wastes.

Table 7 – Nutrient Analysis Summary

		Site Location		
Analyte	**Units**	**B-1**	**B-2**	**B-3**
Ammonia, distilled	mg/kg	77	41	4.6
pH	SU	6.44 (6.39 water)	6.32 (6.39 water)	5.75 (5.66 water)
Total Organic Carbon (TOC)	mg/kg	13000	56000	17000
Phosphorus P04	mg/kg	950	2600	480
Nitrogen, Kjeldahl	mg/kg	290	4400	250
General Chemistry- Soluble				
Chloride	mg/kg	55	120	25
Nitrate as N	mg/kg	ND	1.8	ND
Orthophosphate	mg/kg	ND	ND	ND
Specific Conductance	umhos/cm/	310	570	210

4.3 Biological Analysis (Fecal Coliform)

Increased levels of fecal coliforms, in general, provide a warning of failure in water treatment, a break in the integrity of the distribution system, and possible contamination with pathogens. When levels are high, there may be an elevated risk of waterborne gastroenteris. The presence of fecal coliform in aquatic environments may indicate that the water has been contaminated with fecal material of humans or other animals. Fecal coliform can enter rivers through direct discharge of waste from mammals and birds, from agricultural and storm runoff, and from human sewage. Untreated organic matter that contains fecal coliform can be harmful to the environment. Aerobic decomposition of this material can reduce dissolved oxygen levels if discharged into rivers or waterways. This may reduce the oxygen level enough to kill fish and other aquatic life.

Testing for Pathogens (coliforms) was performed by ALS fixed laboratory from the three (3) samples taken in the field on January 31, 2012. The Microbiology method SM20-9222D was used for the detection of fecal coliform using a membrane filtration procedure.

The results in Table 8 indicate that fecal coliforms were not detected in the three microbiology samples. Therefore, the human hazards that coincide with fecal contamination which include ear infections, dysentery, typhoid fever, viral and bacterial gastroenteritis and Hepatitis A, are not an issue for this lake. Refer to Attachment #6 for the ALS Environmental Laboratory-Bio Test Report.

Table 8 – Fecal Coliform

BACTERIOLOGICAL	**UNITS**	**LAB SAMPLE ID**		
		B-1	**B-2**	**B-3**
Wet Chemistry				
Moisture	%	46.9	71.3	22.2
Total Solids	%	53.1	28.7	77.8
Microbiology				
Fecal Coliform	MPN/gm	ND	ND	ND

4.4 Environmental and Health Impacts

This investigation was limited to a screening-level sampling investigation and did not include collection and laboratory analysis for statistical analysis to support an ecological or human health risk assessment. The US EPA Mid-Atlantic Risk Assessment Regional Screening Level dated May 2012, was utilized as an assessment tool to evaluate contamination levels associated with pedestrian pathways and possible human ingestion. The MDE Generic Numeric Cleanup Standards were evaluated where applicable.

Polycyclic Aromatic Hydrocarbins (PAHs)

There are five (5) PAH's and three (3) inorganic metals identified as exceeding the MDE Residential Clean-up Standard for this study. PAH's are a subgroup of SVOCs which involve natural crude oil and coal deposits. Benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenze(a,h)anthracene and indeno[1,2,3-cd]pyrene all exceed the MDE Residential Standards. When adding the PAH contaminates together, an adult would reach the chronic toxicity (non-cancerous) with an ingestion of approximately **0.1 mg/kg or 0.1 ppm** of impacted soil per day over an extended period of time.

The PAH compounds presented the most serious issues of all the compounds tested for use with pedestrian pathways and open space play areas. Benzo[a]pyrene is typical for all the PAH compounds with specific screening levels mentioned below.

Ingestion Screening Level - 0.0200 mg/kg or 0.0200 ppm
Dermal Screening Level - 0.0530 mg/kg or 0.0530 ppm
Inhalation Screening Level - 1200 mg/kg or 1200 ppm
Carcinogenic Screening Level- 0.0150 mg/kg or 0.0150 ppm

The elevated PAH's are representative of areas with significant runoff from urban areas. The United States Geological Survey (USGS) indications have identified coal-tar-based pavement seal coat as a major source of elevated PAHs and property owners are being other types a pavement surfacing rubber based and polymer based seal coating.

Metals

Analysis indicated that three (3) metals exceeding both the MDE Residential Cleanup Standards and ATC Standards include Aluminum, Chromium, and Iron. The ATC standards have been applied to Central Maryland soils and appear typical for the area and only slightly exceed the ATC standards. The ATC standards are higher than the general Generic Numeric Standards for Groundwater Soil for metals and are based on previous soil sampling throughout Maryland. Arsenic exceeds the Residential Cleanup Standards but does not exceed the ATC standard. The high metal concentration appears typical of soils throughout the area.

Nutrients

Runoff water from developed areas can result in excessive amounts of Phosphorus and Nitrogen, which are nutrients essential to plant growth, but harmful to humans and animals in high doses. Excess nutrients in receiving waters can stimulate algae growth and, as a result, deplete the supply of oxygen necessary to fish and disrupt the aquatic food chain.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This Dredge Material Testing and Evaluation was prepared under the guidelines as directed by Montgomery County and the USACE Technical Note DOER-C2 for dredged material. The scope for this project was limited to three (3) soil boring locations with six (6) samples taken at each location. This report documents conditions existing in the field when environmental testing was conducted on December 10, 2011. The chemical sampling included Inorganic Metals, Bacteriological, Dioxins, PCB Congers and Organic Pesticides. The purpose of the sampling was to determine the feasibility of utilizing the lake dredge material for this project for open space areas.

Quality assurance and quality control procedures were provided by TAI and ALS utilizing matrix spikes and split sample procedures.

The sediment sampling results indicate that aluminum, chromium and iron were above the MDE Cleanup Standards and ATC. Five (5) PAHs, including Benzo[a] anthracene, benzo[b]fluoranthene, benzo[a]pyrene, dibenz[a,h]anthracene and indeno[1,2,3-d]pyrene, were found in sediment samples above the Residential MDE Cleanup Standards for Soil and Groundwater, however below the Non-Residential Standards except for benzo[a]pyrene. US EPA is addressing the issue with PAHs in the environment through their document titled "Final Rule to Reduce Air Toxics Emissions From Area Source Asphalt Refining and Asphalt Roofing Manufacturing Facilities Action," dated November 16, 2009. The USEPA document involves restrictions related to materials and methods contractors utilize with the anticipation that PAHs will be reduced, which involves utilizing asphalt based parking lot coatings compared to coal based parking lot surface coatings.

In situations where natural cycles become overwhelmed by an excess of one or more of the following nutrients such as nitrate, phosphate, or organic waste, usually a result of human activity and development appears to cause an imbalance in the ecosystem. The system reacts by producing more phytoplankton/vegetation than can be consumed by the ecosystem. This overproduction can lead to a variety of problems ranging from anoxic waters to toxic algal blooms and a decrease in diversity, food supply and habitat destruction.

Physically, there does not appear to be restrictions to the dredge material based on the field and laboratory test report prepared by ABC, related to the sediment classification. The sediment classification indicated the soils to be silty and with little gravel to sandy silt with a trace of clay and organics.

Approximately 85% of the dredge material will be available for fill considering the losses during construction. Considering the amount of soil involved, shipping the dredge to a hazardous waste site would be expensive. It is unknown if after removing the dredge material and then grading and compacting the soil on site, will change its chemical properties. This project is adjacent to high density housing and has been considered as a residential use due to its proximity to pedestrian pathways and recreational areas. The borings indicate elevated readings for PAHs above the EPA SSL and MDE Cleanup

Standards for Residential use. Capping the dredge spoil with 18-24 inches of topsoil could be considered as an effective solution in dealing with the dredge material placed on site.

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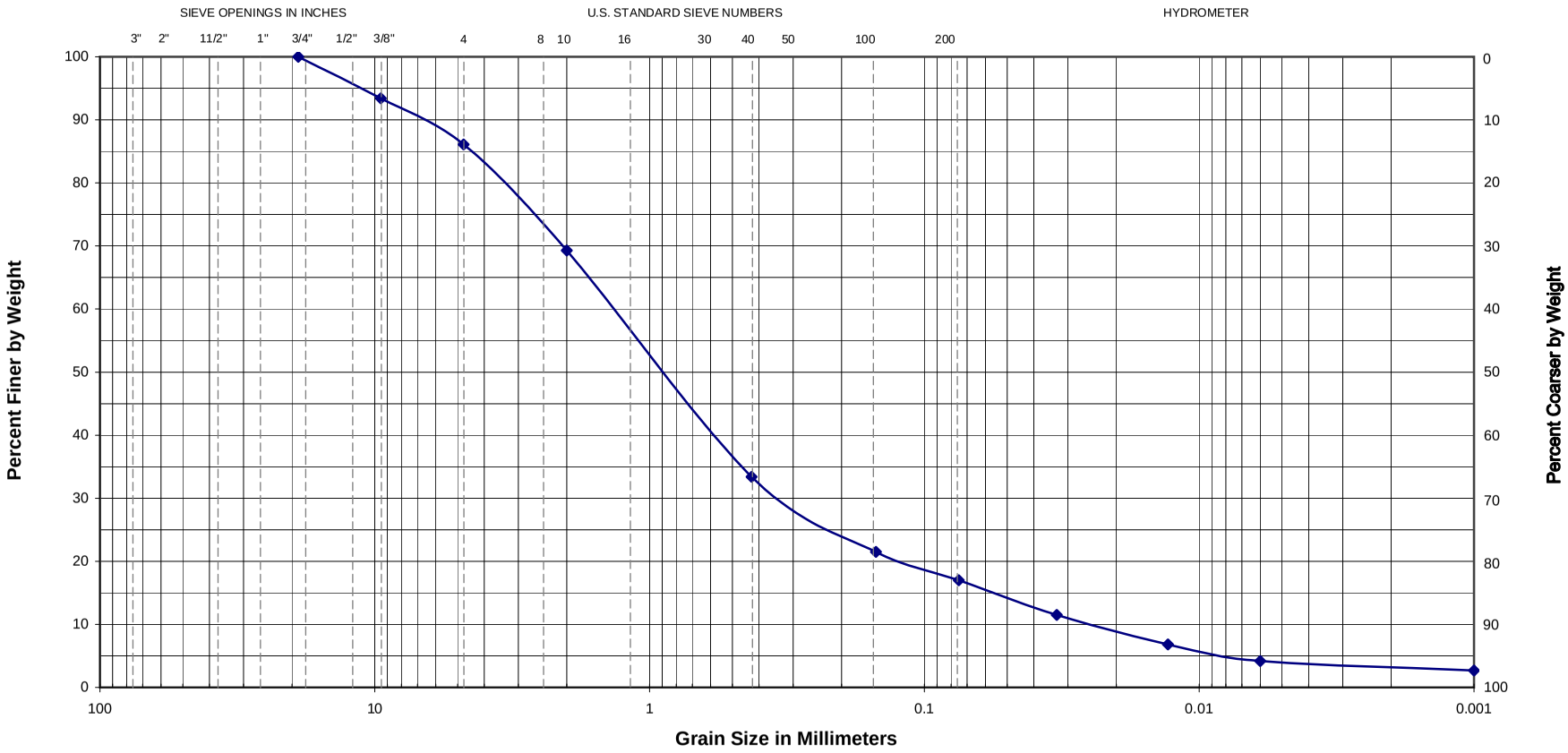
ATTACHMENT 1

AB CONSULTANTS, INC. – SIEVE ANALYSIS RESULTS

SIEVE ANALYSIS RESULTS

(ASTM D422 / AASHTO T88 or ASTM C136)



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Opening	Sieve Size	Spec. Min. Limits	Percent Passing	Spec. Max. Limits
19.000	3/4"		100.0	
9.500	3/8"		93.4	
4.750	#4		86.1	
2.000	#10		69.3	
0.425	#40		33.4	
0.150	#100		21.5	
0.075	#200		17.0	
0.033			11.5	
0.013			6.8	
0.006			4.2	
0.001			2.7	

Soil Engineering Properties:

Liquid Limit -
Plastic Limit -
Plasticity Index -
Specific Gravity -

Note: Percent passing based on weight of dry specimen.

Dashed Lines Represent Gradation Limits For:
No specification is provided

Sample Description: Gray silty sand with little gravel

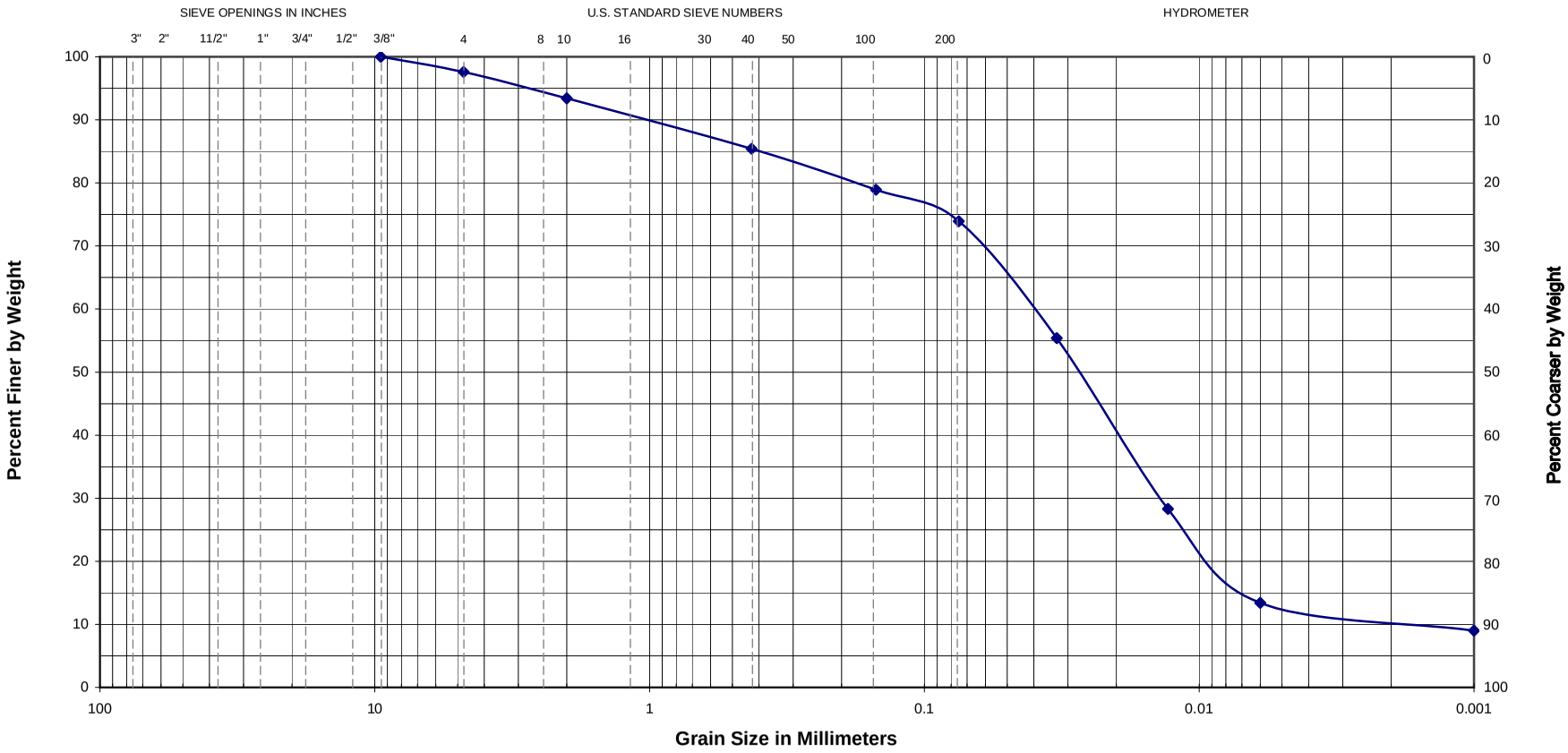
Classification: SM / A-1-b

AB CONSULTANTS, INC.
9450 Annapolis Road
Lanham, Maryland 20706
Tel: 301-306-3091
Fax: 301-306-3092

Job No.: 11-261
Project: Gunners Lake
Sample No.: S-1 (0 to 4.5 ft)
Sample Location: B-1
Test Date: 12/10/2011

SIEVE ANALYSIS RESULTS

(ASTM D422 / AASHTO T88 or ASTM C136)



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Opening	Sieve Size	Spec. Min. Limits	Percent Passing	Spec. Max. Limits
9.500	3/8"		100.0	
4.750	#4		97.6	
2.000	#10		93.4	
0.425	#40		85.4	
0.150	#100		78.9	
0.075	#200		73.9	
0.033			55.4	
0.013			28.3	
0.006			13.4	
0.001			9.0	

Soil Engineering Properties:

Liquid Limit	-
Plastic Limit	-
Plasticity Index	-
Specific Gravity	-

Note: Percent passing based on weight of dry specimen.

Dashed Lines Represent Gradation Limits For:
No specification is provided

Sample Description: Gray sandy silt with trace of clay and organics

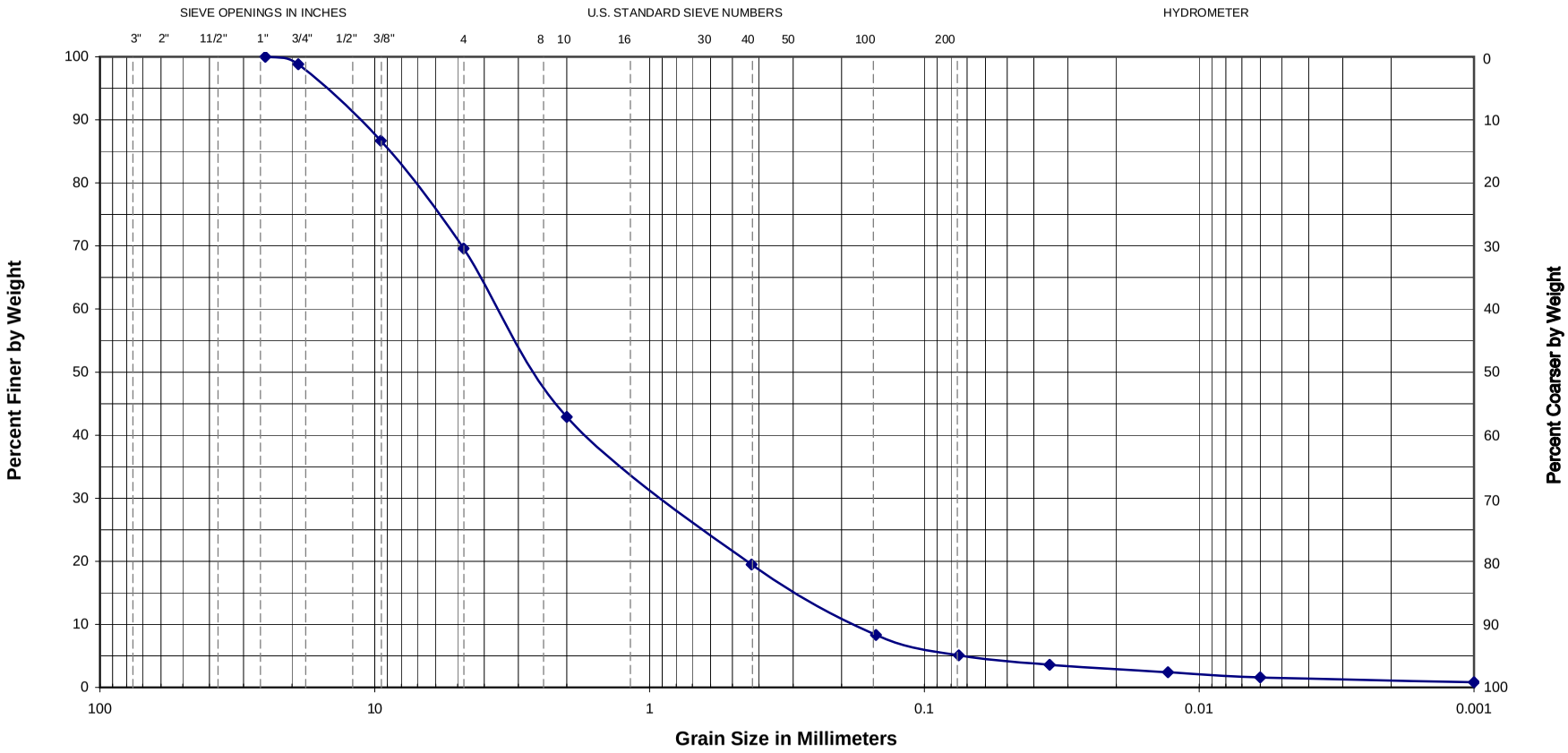
Classification: ML / A-4

AB CONSULTANTS, INC.
9450 Annapolis Road
Lanham, Maryland 20706
Tel: 301-306-3091
Fax: 301-306-3092

Job No.:	11-261
Project:	Gunners Lake
Sample No.:	S-1 (0 to 0.5 ft)
Sample Location:	B-2
Test Date:	12/10/2011

SIEVE ANALYSIS RESULTS

(ASTM D422 / AASHTO T88 or ASTM C136)



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Opening	Sieve Size	Spec. Min. Limits	Percent Passing	Spec. Max. Limits
25.000	1"		100.0	
19.000	3/4"		98.8	
9.500	3/8"		86.7	
4.750	#4		69.6	
2.000	#10		42.9	
0.425	#40		19.5	
0.150	#100		8.3	
0.075	#200		5.1	
0.035			3.6	
0.013			2.4	
0.006			1.6	
0.001			0.8	

Soil Engineering Properties:

Liquid Limit -
Plastic Limit -
Plasticity Index -
Specific Gravity -

Note: Percent passing based on weight of dry specimen.

Dashed Lines Represent Gradation Limits For:
No specification is provided

Sample Description: Brown and gray silty sand with some gravel

Classification: SW-SM / A-1-a

AB CONSULTANTS, INC.
9450 Annapolis Road
Lanham, Maryland 20706
Tel: 301-306-3091
Fax: 301-306-3092

Job No.: 11-261
Project: Gunners Lake
Sample No.: S-1 (0 to 4.5 ft)
Sample Location: B-3
Test Date: 12/10/2011

ATTACHMENT 2

TEST AMERICA, INC. – ANALYICAL REPORT 1

TAI JOB ID : 180-6792-1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 180-6792-1
Client Project/Site: Gunner Lake Sediments, Germantown MD

For:
AB Consultants, Inc.
9450 Annapolis Road
Lanham, Maryland 20706

Attn: Graham T Hubbard

Authorized for release by:
1/16/2012 4:07:34 PM
Jill Colussy
Project Mgmt. Assistant
jill.colussy@testamericainc.com

Designee for

Carrie Gamber
Project Manager II
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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Job ID: 180-6792-1

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: AB Consultants, Inc.

Project: Gunner Lake Sediments, Germantown MD

Report Number: 180-6792-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/14/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.1 C.

PCB CONGENERS
No difficulties were encountered during the PCB Congeners analyses.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Due to the concentration of target compounds detected, samples B-1 (0 TO 4.5 FT) (180-6792-1)[10X], B-2 (0 TO 0.5 FT) (180-6792-2) [20X] and B-3 (0 TO 4.5 FT) (180-6792-3)[10X] were analyzed at a dilution. The reporting limits have been adjusted accordingly. Sample B-2 (0 TO 0.5 FT) (180-6792-2) had the surrogates diluted out.

The MS/MSD of sample B-1 (0 TO 4.5 FT) (180-6792-1) recovered outside of the control limits for several compounds. Several compounds were also outside of the RPD limits.

PESTICIDES
Due to matrix, samples B-1 (0 TO 4.5 FT) (180-6792-1)[10X], B-2 (0 TO 0.5 FT) (180-6792-2)[10X] and B-3 (0 TO 4.5 FT) (180-6792-3)[10X] were analyzed at a dilution. The reporting limits have been adjusted accordingly. These samples had surrogtes recover outside of the control limits. The SOP allows for surrogates to recover outside of the control limit on diluted analyses.

The MS/MSD of sample B-3 (0 TO 4.5 FT) (180-6792-3) recovered outside of the control limits for several compounds. Several compounds were also outside of the RPD limits.

METALS
Several analytes were detected in method blank MB 180-24102/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been “B” flagged.

The MS/MSD of sample B-1 (0 TO 4.5 FT) (180-6792-1) recovered outside of the control limits for several analytes.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Job ID: 180-6792-1 (Continued)

Laboratory: TestAmerica Pittsburgh (Continued)

GENERAL CHEMISTRY

Please note that the reporting limit for Lloyd Kahn TOC analysis is a nominal value and does not reflect adjustments in sample mass processed on an individual basis.

Samples B-1 (1 TO 4.5 FT) (180-6792-4)[50X], B-2 (0 TO 0.5 FT) (180-6792-5)[50X] and B-3 (0 TO 4.5 FT) (180-6792-6)[50X] were analyzed at a dilution for phosphorus. The reporting limits have been adjusted accordingly.

SUBCONTRACTED WORK

Method Calcium Carbonate Equivalents, CEC, Salinity, SAR, Carbon:Nitrogen Ratio, Sulfur: This method was subcontracted to A&L Analytical Laboratories-Memphis,TN. The subcontract certification is different from those listed on the TestAmerica cover page of this final report.

Method 1613B, Dioxins/Furans: This method was subcontracted to TestAmerica West Sacramento. The subcontract certification is different from those listed on the TestAmerica cover page of this final report.

Case Narrative

TestAmerica West Sacramento Project Number G1L190413

SOLID, 1613B, Dioxins/Furans
Samples: 1, 2, 3
Some analytes for these samples & the method blank have been qualified with a "Q" flag since their ion abundance ratios did not meet acceptance criteria. These analytes have been reported as "estimated maximum possible concentrations" (EMPCs) since their quantitation was based on theoretical ion abundance ratios.

Sample: 2
A larger sample size of approximately 20 grams was extracted for this sample since it contained a large amount of moisture.

Sample: 2
The OCDD result for this sample exceeded the upper calibration limit (but did not saturate the instrument detector) and has been flagged with an “E” qualifier. Historical data indicates that for this isotope dilution method, re-analysis at a dilution will not produce significantly different results from those reported with the “E" qualifier.

There are no other anomalies associated with this project.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	RPD of the MS and MSD exceeds the control limits
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

GC Semi VOA

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

DIOXIN

Qualifier	Qualifier Description
J	Estimated result. Result is less than the reporting limit.
Q	Estimated maximum possible concentration (EMPC).
B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
E	Estimated result. Result concentration exceeds the calibration range.

Metals

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

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Certification Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	ACLASS	DoD ELAP		ADE-1422
TestAmerica Pittsburgh	Arkansas	State Program	6	88-0690
TestAmerica Pittsburgh	California	NELAC	9	4224CA
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAC	1	203011
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	New York	NELAC	2	11182
TestAmerica Pittsburgh	North Carolina	North Carolina DENR	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	USDA		P330-10-00139
TestAmerica Pittsburgh	USDA	USDA		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia	West Virginia DEP	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800
TestAmerica Buffalo	Arkansas	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	Georgia EPD	4	N/A
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	Kentucky UST	4	30
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY0044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Hampshire	NELAC	1	68-00281
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
TestAmerica Buffalo	USDA	USDA		P330-08-00242
TestAmerica Buffalo	Virginia	NELAC Secondary AB	3	460185
TestAmerica Buffalo	Virginia	State Program	3	278
TestAmerica Buffalo	Washington	State Program	10	C1677
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Certification Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica North Canton	ACLASS	DoD ELAP		ADE-1437
TestAmerica North Canton	California	NELAC	9	01144CA
TestAmerica North Canton	Connecticut	State Program	1	PH-0590
TestAmerica North Canton	Florida	NELAC	4	E87225
TestAmerica North Canton	Georgia	Georgia EPD	4	N/A
TestAmerica North Canton	Illinois	NELAC	5	200004
TestAmerica North Canton	Kansas	NELAC	7	E-10336
TestAmerica North Canton	Kentucky	State Program	4	58
TestAmerica North Canton	Minnesota	NELAC	5	039-999-348
TestAmerica North Canton	Nevada	State Program	9	OH-000482008A
TestAmerica North Canton	New Jersey	NELAC	2	OH001
TestAmerica North Canton	New York	NELAC	2	10975
TestAmerica North Canton	Ohio	OVAP	5	CL0024
TestAmerica North Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica North Canton	USDA	USDA		P330-11-00328
TestAmerica North Canton	Virginia	NELAC Secondary AB	3	460175
TestAmerica North Canton	Washington	State Program	10	C971
TestAmerica North Canton	West Virginia	West Virginia DEP	3	210
TestAmerica North Canton	Wisconsin	State Program	5	999518190
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

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

Sample Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-6792-1	B-1 (0 TO 4.5 FT)	Sediment	12/10/11 10:30	12/14/11 10:00
180-6792-2	B-2 (0 TO 0.5 FT)	Sediment	12/10/11 11:30	12/14/11 10:00
180-6792-3	B-3 (0 TO 4.5 FT)	Sediment	12/10/11 12:30	12/14/11 10:00
180-6792-4	B-1 (1 TO 4.5 FT)	Solid	12/10/11 10:30	12/14/11 10:00
180-6792-5	B-2 (0 TO 0.5 FT)	Solid	12/10/11 11:30	12/14/11 10:00
180-6792-6	B-3 (0 TO 4.5 FT)	Solid	12/10/11 12:30	12/14/11 10:00

Method Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Method	Method Description	Protocol	Laboratory
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL PIT
8081A	Organochlorine Pesticides (GC)	SW846	TAL PIT
8082A	PCB Congeners (GC)	SW846	TAL PIT
1613B	Dioxins/Furans, HRGC/HRMS (1613B)	EPA-5	TAL WSC
6020	Metals (ICP/MS)	SW846	TAL PIT
7471A	Mercury (CVAA)	SW846	TAL PIT
350.1	Nitrogen, Ammonia	MCAWW	TAL PIT
9045C	pH	SW846	TAL PIT
9056A	Anions, Ion Chromatography	SW846	TAL PIT
D 2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	TAL PIT
Moisture	Percent Moisture	EPA	TAL PIT
Moisture	Percent Moisture	EPA	TAL BUF
SM 2510B	Conductivity, Specific Conductance	SM	TAL PIT
SM 4500 Norg C	Nitrogen-Total Kjeldahl	SM	TAL NC
SM 4500 P E	Phosphorus	SM	TAL BUF
Calcium Carbonate Equivalents, CEC, Sali	General Sub Contract Method	NONE	A&L Analyt

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
EPA-5 = EPA-5
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NONE = NONE
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

A&L Analyt = A&L Analytical Laboratories-Memphis,TN, 2790 Whitten Road, Memphis, TN 38133, TEL (901)213-2400
TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058
TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-1 (0 TO 4.5 FT)

Date Collected: 12/10/11 10:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-1

Matrix: Sediment
Percent Solids: 75.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzidine	ND		4400	920	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
1,2-Dichlorobenzene	ND		220	23	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
1,3-Dichlorobenzene	ND		220	17	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
1,4-Dichlorobenzene	ND		220	16	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzoic acid	ND		1100	91	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzyl alcohol	ND		220	26	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Bis(2-chloroethyl)ether	ND		44	5.9	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Bis(2-chloroethoxy)methane	ND		220	14	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Bis(2-ethylhexyl) phthalate	**490**		440	35	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
4-Bromophenyl phenyl ether	ND		220	19	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Butyl benzyl phthalate	**190**	**J**	220	30	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
4-Chloro-3-methylphenol	ND		220	20	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2-Chloronaphthalene	ND		44	4.6	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2-Chlorophenol	ND		220	18	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
4-Chlorophenyl phenyl ether	ND		220	24	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Dibenzofuran	**67**	**J**	220	22	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Di-n-butyl phthalate	ND		220	27	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
3,3'-Dichlorobenzidine	ND		220	23	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,4-Dichlorophenol	ND		44	4.4	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Diethyl phthalate	**25**	**J**	220	24	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
4,6-Dinitro-2-methylphenol	ND		1100	88	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,4-Dimethylphenol	ND		220	34	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Dimethyl phthalate	ND		220	24	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,4-Dinitrophenol	ND		1100	260	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,4-Dinitrotoluene	ND		220	18	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,6-Dinitrotoluene	ND		220	23	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
1,2-Diphenylhydrazine(as Azobenzene)	ND		220	28	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Di-n-octyl phthalate	ND		220	23	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Hexachlorobenzene	ND		44	4.7	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Hexachlorobutadiene	ND		44	4.9	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Hexachloroethane	ND		220	16	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Hexachlorocyclopentadiene	ND		220	24	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Isophorone	ND		220	16	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2-Methylphenol	ND		220	15	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Methylphenol, 3 & 4	ND		220	21	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Nitrobenzene	ND		440	18	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2-Nitrophenol	ND		220	24	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
4-Nitrophenol	ND		1100	80	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
N-Nitrosodiphenylamine	ND		220	20	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
N-Nitrosodimethylamine	ND		220	19	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
N-Nitrosodi-n-propylamine	ND		44	5.1	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,2'-oxybis[1-chloropropane]	ND		44	4.7	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Pentachlorophenol	ND		220	20	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Phenol	ND		44	5.2	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
1,2,4-Trichlorobenzene	ND		220	12	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2,4,6-Trichlorophenol	ND		220	33	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
2-Methylnaphthalene	**4.6**	**J**	44	3.9	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
1-Methylnaphthalene	ND		44	4.7	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Naphthalene	**25**	**J**	44	3.8	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-1 (0 TO 4.5 FT)

Date Collected: 12/10/11 10:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-1

Matrix: Sediment
Percent Solids: 75.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	11	J	44	5.0	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Acenaphthene	110		44	4.2	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Fluorene	200		44	5.8	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Phenanthrene	2700		44	7.0	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Anthracene	460		44	4.3	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Fluoranthene	4200		44	4.7	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Pyrene	3700		44	4.4	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzo[a]anthracene	1700		44	5.5	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Chrysene	2000		44	5.2	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzo[b]fluoranthene	2100		44	6.9	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzo[k]fluoranthene	750		44	8.8	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzo[a]pyrene	1800		44	4.4	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Indeno[1,2,3-cd]pyrene	990		44	4.5	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Dibenz(a,h)anthracene	210		44	4.9	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10
Benzo[g,h,i]perylene	1100		44	4.4	ug/Kg	☼	12/15/11 03:40	12/15/11 15:29	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*59*		*21 - 116*	*12/15/11 03:40*	*12/15/11 15:29*	*10*
2-Fluorobiphenyl	*68*		*28 - 108*	*12/15/11 03:40*	*12/15/11 15:29*	*10*
2-Fluorophenol	*67*		*28 - 107*	*12/15/11 03:40*	*12/15/11 15:29*	*10*
Nitrobenzene-d5	*65*		*27 - 110*	*12/15/11 03:40*	*12/15/11 15:29*	*10*
Phenol-d5	*75*		*30 - 112*	*12/15/11 03:40*	*12/15/11 15:29*	*10*
Terphenyl-d14	*72*		*21 - 130*	*12/15/11 03:40*	*12/15/11 15:29*	*10*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.55	0.072	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
4,4'-DDE	ND		0.55	0.083	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
4,4'-DDT	ND		0.55	0.082	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Aldrin	ND		0.55	0.098	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
alpha-BHC	ND		0.55	0.089	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
beta-BHC	ND		0.55	0.14	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Chlordane (technical)	ND		5.5	0.24	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Chlorobenside	ND		0.55	0.29	ug/Kg	☼	12/15/11 03:50	12/21/11 17:31	10
DCPA	ND		0.55	0.083	ug/Kg	☼	12/15/11 03:50	12/21/11 17:31	10
delta-BHC	ND		0.55	0.084	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Dieldrin	ND		0.55	0.091	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Endosulfan I	ND		0.55	0.10	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Endosulfan II	ND		0.55	0.096	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Endosulfan sulfate	ND		0.55	0.057	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Endrin	ND		0.55	0.11	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Endrin aldehyde	ND		0.55	0.11	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
gamma-BHC (Lindane)	ND		0.55	0.096	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Heptachlor	ND		0.55	0.12	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Heptachlor epoxide	ND		0.55	0.11	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Methoxychlor	ND		1.1	0.11	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10
Mirex	ND		0.55	0.051	ug/Kg	☼	12/15/11 03:50	12/21/11 17:31	10
Toxaphene	ND		22	3.7	ug/Kg	☼	12/15/11 03:50	12/20/11 22:04	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*34*	*X*	*45 - 140*	*12/15/11 03:50*	*12/20/11 22:04*	*10*

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-1 (0 TO 4.5 FT)

Date Collected: 12/10/11 10:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-1

Matrix: Sediment
Percent Solids: 75.9

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	32	X	45 - 140	12/15/11 03:50	12/20/11 22:04	10
DCB Decachlorobiphenyl (Surr)	116		45 - 140	12/15/11 03:50	12/20/11 22:04	10
DCB Decachlorobiphenyl (Surr)	76		45 - 140	12/15/11 03:50	12/20/11 22:04	10

Method: 8082A - PCB Congeners (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 8	**0.17**	**J p**	0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 18	**0.24**	**J p**	0.65	0.089	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 28	**0.28**	**J p**	0.65	0.15	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 44	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 49	ND		0.65	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 52	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 66	ND		0.65	0.11	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 77	ND		0.65	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 87	**0.16**	**J p**	0.65	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 90	ND		0.65	0.099	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 101	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 105	ND		0.65	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 118	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 126	ND		0.65	0.17	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 128	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 138	ND		0.65	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 153	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 156	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 169	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 170	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 180	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:33	1
PCB 209	ND		0.65	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 183	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 184	ND		0.65	0.11	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 187	ND		0.65	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 195	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1
PCB 206	ND		0.65	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 11:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		35 - 140	12/15/11 04:01	12/19/11 11:33	1
Tetrachloro-m-xylene	90		35 - 140	12/15/11 04:01	12/19/11 11:58	1
PCB 205	95		35 - 140	12/15/11 04:01	12/19/11 11:33	1
PCB 205	94		35 - 140	12/15/11 04:01	12/19/11 11:58	1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.25**	**J Q**	1.7	0.15	1	0.25	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total TCDD	**1.2**		1.7	0.15			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,7,8-PeCDD	**0.37**	**J Q**	8.4	0.14	0.5	0.19	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total PeCDD	**2.0**		8.4	0.14			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,4,7,8-HxCDD	**0.46**	**J Q**	8.4	0.17	0.1	0.046	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,6,7,8-HxCDD	**0.93**	**J Q**	8.4	0.14	0.1	0.093	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,7,8,9-HxCDD	**1.8**	**J**	8.4	0.14	0.1	0.18	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total HxCDD	**15**		8.4	0.15			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-1 (0 TO 4.5 FT)

Date Collected: 12/10/11 10:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-1

Matrix: Sediment
Percent Solids: 57

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	37	B	8.4	0.68	0.01	0.37	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total HpCDD	92		8.4	0.68			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
OCDD	2100	B	17	3.6	0.001	2.1	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
2,3,7,8-TCDF	0.61	J	1.7	0.14	0.1	0.061	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total TCDF	1.4		1.7	0.14			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,7,8-PeCDF	0.59	J B	8.4	0.19	0.05	0.030	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
2,3,4,7,8-PeCDF	0.30	J	8.4	0.22	0.5	0.15	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total PeCDF	1.8		8.4	0.21			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,4,7,8-HxCDF	1.2	J B	8.4	0.17	0.1	0.12	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,6,7,8-HxCDF	0.54	J B	8.4	0.15	0.1	0.054	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
2,3,4,6,7,8-HxCDF	0.20	J Q B	8.4	0.15	0.1	0.020	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,7,8,9-HxCDF	ND		8.4	0.18	0.1		pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total HxCDF	5.6		8.4	0.16			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,4,6,7,8-HpCDF	4.4	J B	8.4	0.19	0.01	0.044	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
1,2,3,4,7,8,9-HpCDF	0.76	J B	8.4	0.25	0.01	0.0076	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total HpCDF	11		8.4	0.22			pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
OCDF	14	J B	17	0.33	0.001	0.014	pg/g	☼	12/21/11 17:15	12/30/11 13:58	0.96
Total TEQ (EPA 1989)						3.7					

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*73*		*35 - 197*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*

Internal Standard	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*62*		*25 - 164*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,7,8-PeCDD	*59*		*25 - 181*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,4,7,8-HxCDD	*51*		*32 - 141*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,6,7,8-HxCDD	*65*		*28 - 130*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-OCDD	*64*		*17 - 157*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-2,3,4,6,7,8-HxCDF	*59*		*28 - 136*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*28 - 143*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,4,7,8,9-HpCDF	*60*		*26 - 138*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*
13C-1,2,3,4,7,8-HxCDF	*49*		*26 - 152*	*12/21/11 17:15*	*12/30/11 13:58*	*0.96*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8000		1.9	0.18	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Antimony	0.21		0.13	0.0017	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Arsenic	1.7		0.064	0.012	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Beryllium	0.53		0.064	0.0048	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Cadmium	0.27		0.064	0.0045	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Chromium	27	B	0.13	0.0039	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Cobalt	11		0.032	0.00096	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Copper	23		0.13	0.021	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Iron	18000	B	3.2	0.23	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-1 (0 TO 4.5 FT)

Date Collected: 12/10/11 10:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-1
Matrix: Sediment
Percent Solids: 75.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	16	B	0.064	0.0024	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Manganese	210	B	0.32	0.0066	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Nickel	29		0.064	0.0073	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Selenium	0.43		0.32	0.032	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Potassium	740		6.4	0.87	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Silver	0.030	J	0.064	0.0025	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Thallium	0.087		0.064	0.0013	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Tin	0.96		0.32	0.038	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Zinc	100	B	0.32	0.042	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1
Sodium	87	B	6.4	0.88	mg/Kg	☼	12/20/11 11:47	01/03/12 19:41	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.031		0.022	0.0071	mg/Kg	☼	12/16/11 09:30	12/16/11 16:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	77		6.4	2.9	mg/Kg	☼	12/28/11 14:30	12/29/11 10:21	1
pH	6.44		0.100	0.100	SU			12/17/11 11:25	1
Percent Moisture	43.1		0.10	0.10	%			12/22/11 06:00	1
Total Organic Carbon - Duplicates	13000		1300	330	mg/Kg	☼		12/20/11 16:29	1
Percent Moisture	24		0.10	0.10	%			12/21/11 11:19	1
Nitrogen, Kjeldahl	290		200	67	mg/Kg	☼	12/28/11 06:30	12/28/11 13:02	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.64	0.19	mg/Kg	☼		01/03/12 16:21	1
Chloride	55		13	2.8	mg/Kg	☼		01/03/12 16:21	1
Nitrite as N	ND		0.64	0.21	mg/Kg	☼		01/03/12 16:21	1
Orthophosphate	ND		6.4	0.77	mg/Kg	☼		01/03/12 16:21	1
Specific Conductance	310		10	10	umhos/cm			12/21/11 13:30	1

Client Sample ID: B-2 (0 TO 0.5 FT)

Date Collected: 12/10/11 11:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-2
Matrix: Sediment
Percent Solids: 28.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzidine	ND		23000	4800	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
1,2-Dichlorobenzene	ND		1100	120	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
1,3-Dichlorobenzene	ND		1100	90	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
1,4-Dichlorobenzene	ND		1100	83	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzoic acid	ND		5900	480	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzyl alcohol	ND		1100	140	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Bis(2-chloroethyl)ether	ND		230	31	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Bis(2-chloroethoxy)methane	ND		1100	76	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Bis(2-ethylhexyl) phthalate	3200		2300	190	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
4-Bromophenyl phenyl ether	ND		1100	100	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Butyl benzyl phthalate	1000	J	1100	160	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
4-Chloro-3-methylphenol	ND		1100	110	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-2 (0 TO 0.5 FT)
Date Collected: 12/10/11 11:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-2
Matrix: Sediment
Percent Solids: 28.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		230	24	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2-Chlorophenol	ND		1100	94	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Dibenzofuran	ND		1100	110	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Di-n-butyl phthalate	ND		1100	140	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
3,3'-Dichlorobenzidine	ND		1100	120	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,4-Dichlorophenol	ND		230	23	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Diethyl phthalate	ND		1100	130	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
4,6-Dinitro-2-methylphenol	ND		5900	460	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,4-Dimethylphenol	ND		1100	180	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Dimethyl phthalate	ND		1100	130	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,4-Dinitrophenol	ND		5900	1400	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,4-Dinitrotoluene	ND		1100	93	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,6-Dinitrotoluene	ND		1100	120	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
1,2-Diphenylhydrazine(as Azobenzene)	ND		1100	150	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Di-n-octyl phthalate	**170**	**J**	1100	120	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Hexachlorobenzene	ND		230	25	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Hexachlorobutadiene	ND		230	26	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Hexachloroethane	ND		1100	83	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Hexachlorocyclopentadiene	ND		1100	120	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Isophorone	ND		1100	87	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2-Methylphenol	ND		1100	81	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Methylphenol, 3 & 4	**260**	**J**	1100	110	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Nitrobenzene	ND		2300	96	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2-Nitrophenol	ND		1100	130	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
4-Nitrophenol	ND		5900	420	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
N-Nitrosodiphenylamine	ND		1100	110	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
N-Nitrosodimethylamine	ND		1100	99	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
N-Nitrosodi-n-propylamine	ND		230	27	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,2'-oxybis[1-chloropropane]	ND		230	25	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Pentachlorophenol	ND		1100	100	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Phenol	ND		230	27	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
1,2,4-Trichlorobenzene	ND		1100	64	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2,4,6-Trichlorophenol	ND		1100	170	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
2-Methylnaphthalene	ND		230	21	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
1-Methylnaphthalene	ND		230	25	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Naphthalene	**190**	**J**	230	20	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Acenaphthylene	ND		230	26	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Acenaphthene	ND		230	22	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Fluorene	ND		230	30	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Phenanthrene	**720**		230	37	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Anthracene	**97**	**J**	230	23	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Fluoranthene	**2700**		230	25	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Pyrene	**2100**		230	23	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzo[a]anthracene	**970**		230	29	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Chrysene	**1800**		230	27	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzo[b]fluoranthene	**2300**		230	36	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzo[k]fluoranthene	**1000**		230	47	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzo[a]pyrene	**1600**		230	23	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-2 (0 TO 0.5 FT)

Date Collected: 12/10/11 11:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-2

Matrix: Sediment
Percent Solids: 28.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**1300**		230	24	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Dibenz(a,h)anthracene	**270**		230	26	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20
Benzo[g,h,i]perylene	**1500**		230	23	ug/Kg	☼	12/15/11 03:40	12/15/11 16:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*102*	*D*	*21 - 116*	*12/15/11 03:40*	*12/15/11 16:34*	*20*
2-Fluorobiphenyl	*103*	*D*	*28 - 108*	*12/15/11 03:40*	*12/15/11 16:34*	*20*
2-Fluorophenol	*103*	*D*	*28 - 107*	*12/15/11 03:40*	*12/15/11 16:34*	*20*
Nitrobenzene-d5	*97*	*D*	*27 - 110*	*12/15/11 03:40*	*12/15/11 16:34*	*20*
Phenol-d5	*109*	*D*	*30 - 112*	*12/15/11 03:40*	*12/15/11 16:34*	*20*
Terphenyl-d14	*102*	*D*	*21 - 130*	*12/15/11 03:40*	*12/15/11 16:34*	*20*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.4	0.19	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
4,4'-DDE	ND		1.4	0.22	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
4,4'-DDT	ND		1.4	0.22	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Aldrin	ND		1.4	0.26	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
alpha-BHC	ND		1.4	0.23	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
beta-BHC	ND		1.4	0.37	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Chlordane (technical)	ND		14	0.63	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Chlorobenside	ND		1.4	0.75	ug/Kg	☼	12/15/11 03:50	12/21/11 17:51	10
DCPA	ND		1.4	0.22	ug/Kg	☼	12/15/11 03:50	12/21/11 17:51	10
delta-BHC	ND		1.4	0.22	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Dieldrin	ND		1.4	0.24	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Endosulfan I	ND		1.4	0.27	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Endosulfan II	ND		1.4	0.25	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Endosulfan sulfate	ND		1.4	0.15	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Endrin	ND		1.4	0.28	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Endrin aldehyde	ND		1.4	0.28	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
gamma-BHC (Lindane)	**2.6**		1.4	0.25	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Heptachlor	ND		1.4	0.32	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Heptachlor epoxide	ND		1.4	0.28	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Methoxychlor	ND		2.9	0.30	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10
Mirex	ND		1.4	0.13	ug/Kg	☼	12/15/11 03:50	12/21/11 17:51	10
Toxaphene	ND		57	9.6	ug/Kg	☼	12/15/11 03:50	12/20/11 22:23	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*35*	*X*	*45 - 140*	*12/15/11 03:50*	*12/20/11 22:23*	*10*
Tetrachloro-m-xylene	*38*	*X*	*45 - 140*	*12/15/11 03:50*	*12/20/11 22:23*	*10*
DCB Decachlorobiphenyl (Surr)	*159*	*X*	*45 - 140*	*12/15/11 03:50*	*12/20/11 22:23*	*10*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 140*	*12/15/11 03:50*	*12/20/11 22:23*	*10*

Method: 8082A - PCB Congeners (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 8	**2.2**	**p**	1.7	0.36	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 18	**0.71**	**J p**	1.7	0.24	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 28	**0.44**	**J p**	1.7	0.39	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 44	ND		1.7	0.36	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 49	ND		1.7	0.36	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 52	ND		1.7	0.34	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-2 (0 TO 0.5 FT)

Date Collected: 12/10/11 11:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-2

Matrix: Sediment
Percent Solids: 28.8

Method: 8082A - PCB Congeners (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 66	ND		1.7	0.28	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 77	ND		1.7	0.38	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 87	ND		1.7	0.32	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 90	ND		1.7	0.26	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 101	**0.49**	**J**	1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 105	ND		1.7	0.36	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 118	ND		1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 126	ND		1.7	0.45	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 128	**0.94**	**J**	1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 138	**1.7**	**p**	1.7	0.37	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 153	**1.9**		1.7	0.36	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 156	**0.36**	**J p**	1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 169	ND		1.7	0.34	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 170	**1.1**	**J**	1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 180	**1.2**	**J p**	1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 209	ND		1.7	0.37	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 183	**0.53**	**J p**	1.7	0.34	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 184	ND		1.7	0.30	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 187	**0.60**	**J p**	1.7	0.37	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 195	ND		1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1
PCB 206	ND		1.7	0.35	ug/Kg	☼	12/15/11 04:01	12/19/11 12:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*94*		*35 - 140*	*12/15/11 04:01*	*12/19/11 12:49*	*1*
Tetrachloro-m-xylene	*85*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:14*	*1*
PCB 205	*92*		*35 - 140*	*12/15/11 04:01*	*12/19/11 12:49*	*1*
PCB 205	*89*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:14*	*1*

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.44**	**J Q**	1.4	0.14	1	0.44	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total TCDD	**3.6**		1.4	0.14			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,7,8-PeCDD	**1.4**	**J**	6.9	0.32	0.5	0.70	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total PeCDD	**7.3**		6.9	0.32			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,4,7,8-HxCDD	**2.5**	**J**	6.9	0.27	0.1	0.25	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,6,7,8-HxCDD	**3.3**	**J**	6.9	0.20	0.1	0.33	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,7,8,9-HxCDD	**6.1**	**J**	6.9	0.21	0.1	0.61	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total HxCDD	**50**		6.9	0.22			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,4,6,7,8-HpCDD	**150**	**B**	6.9	1.5	0.01	1.5	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total HpCDD	**350**		6.9	1.5			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
OCDD	**8000**	**E B**	14	7.7	0.001	8.0	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
2,3,7,8-TCDF	**1.2**	**J**	1.4	0.15	0.1	0.12	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total TCDF	**5.7**		1.4	0.15			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,7,8-PeCDF	**0.69**	**J Q B**	6.9	0.14	0.05	0.035	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
2,3,4,7,8-PeCDF	**0.69**	**J Q**	6.9	0.17	0.5	0.35	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total PeCDF	**6.3**		6.9	0.15			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,4,7,8-HxCDF	**2.3**	**J B**	6.9	0.16	0.1	0.23	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,6,7,8-HxCDF	**1.3**	**J B**	6.9	0.14	0.1	0.13	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
2,3,4,6,7,8-HxCDF	**0.93**	**J B**	6.9	0.13	0.1	0.093	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,7,8,9-HxCDF	ND		6.9	0.16	0.1		pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-2 (0 TO 0.5 FT)

Date Collected: 12/10/11 11:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-2

Matrix: Sediment
Percent Solids: 36

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDF	15		6.9	0.15			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,4,6,7,8-HpCDF	14	Q B	6.9	0.49	0.01	0.14	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
1,2,3,4,7,8,9-HpCDF	0.85	J Q B	6.9	0.64	0.01	0.0085	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total HpCDF	37		6.9	0.56			pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
OCDF	46	B	14	0.26	0.001	0.046	pg/g	☼	12/21/11 17:15	12/30/11 14:43	0.49
Total TEQ (EPA 1989)						13					

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*73*		*35 - 197*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*

Internal Standard	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,7,8-PeCDD	*53*		*25 - 181*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,4,7,8-HxCDD	*43*		*32 - 141*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,6,7,8-HxCDD	*58*		*28 - 130*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,4,6,7,8-HpCDD	*50*		*23 - 140*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-OCDD	*55*		*17 - 157*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-2,3,7,8-TCDF	*56*		*24 - 169*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,7,8-PeCDF	*53*		*24 - 185*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-2,3,4,7,8-PeCDF	*52*		*21 - 178*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,6,7,8-HxCDF	*53*		*26 - 123*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,7,8,9-HxCDF	*54*		*29 - 147*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,4,6,7,8-HpCDF	*50*		*28 - 143*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,4,7,8,9-HpCDF	*50*		*26 - 138*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*
13C-1,2,3,4,7,8-HxCDF	*42*		*26 - 152*	*12/21/11 17:15*	*12/30/11 14:43*	*0.49*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	21000		5.1	0.49	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Antimony	1.1		0.34	0.0044	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Arsenic	4.3		0.17	0.031	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Beryllium	1.1		0.17	0.013	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Cadmium	0.50		0.17	0.012	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Chromium	57	B	0.34	0.010	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Cobalt	20		0.086	0.0026	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Copper	66		0.34	0.056	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Iron	38000	B	8.6	0.61	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Lead	34	B	0.17	0.0065	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Manganese	770	B	0.86	0.018	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Nickel	54		0.17	0.019	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Selenium	1.1		0.86	0.086	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Potassium	1800		17	2.3	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Silver	0.092	J	0.17	0.0067	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Thallium	0.24		0.17	0.0034	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Tin	2.8		0.86	0.10	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Zinc	210	B	0.86	0.11	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1
Sodium	240	B	17	2.3	mg/Kg	☼	12/20/11 11:47	01/03/12 20:16	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-2 (0 TO 0.5 FT)

Date Collected: 12/10/11 11:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-2
Matrix: Sediment
Percent Solids: 28.8

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.056	0.018	mg/Kg	☼	12/16/11 09:30	12/16/11 16:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	41		17	7.4	mg/Kg	☼	12/28/11 14:30	12/29/11 10:23	1
pH	6.32		0.100	0.100	SU			12/17/11 11:26	1
Percent Moisture	64.2		0.10	0.10	%			12/22/11 06:00	1
Total Organic Carbon - Duplicates	56000		3500	870	mg/Kg	☼		12/19/11 16:36	1
Percent Moisture	71		0.10	0.10	%			12/21/11 11:19	1
Nitrogen, Kjeldahl	4400		530	180	mg/Kg	☼	12/28/11 06:30	12/28/11 13:02	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8		1.7	0.50	mg/Kg	☼		01/03/12 16:35	1
Chloride	120		34	7.5	mg/Kg	☼		01/03/12 16:35	1
Nitrite as N	ND		1.7	0.55	mg/Kg	☼		01/03/12 16:35	1
Orthophosphate	ND		17	2.1	mg/Kg	☼		01/03/12 16:35	1
Specific Conductance	570		10	10	umhos/cm			12/21/11 13:30	1

Client Sample ID: B-3 (0 TO 4.5 FT)

Date Collected: 12/10/11 12:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-3
Matrix: Sediment
Percent Solids: 82.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzidine	ND		4100	850	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
1,2-Dichlorobenzene	ND		200	21	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
1,3-Dichlorobenzene	ND		200	16	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
1,4-Dichlorobenzene	ND		200	14	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzoic acid	ND		1000	84	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzyl alcohol	ND		200	24	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Bis(2-chloroethyl)ether	ND		41	5.4	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Bis(2-chloroethoxy)methane	ND		200	13	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Bis(2-ethylhexyl) phthalate	82	J	400	33	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
4-Bromophenyl phenyl ether	ND		200	18	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Butyl benzyl phthalate	53	J	200	28	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
4-Chloro-3-methylphenol	ND		200	19	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2-Chloronaphthalene	ND		41	4.2	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2-Chlorophenol	ND		200	17	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
4-Chlorophenyl phenyl ether	ND		200	22	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Dibenzofuran	ND		200	20	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Di-n-butyl phthalate	ND		200	25	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
3,3'-Dichlorobenzidine	ND		200	21	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2,4-Dichlorophenol	ND		41	4.1	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Diethyl phthalate	ND		200	22	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
4,6-Dinitro-2-methylphenol	ND		1000	81	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2,4-Dimethylphenol	ND		200	32	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Dimethyl phthalate	ND		200	22	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2,4-Dinitrophenol	ND		1000	240	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2,4-Dinitrotoluene	ND		200	16	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-3 (0 TO 4.5 FT)

Date Collected: 12/10/11 12:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-3

Matrix: Sediment
Percent Solids: 82.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		200	21	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
1,2-Diphenylhydrazine(as Azobenzene)	ND		200	26	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Di-n-octyl phthalate	ND		200	21	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Hexachlorobenzene	ND		41	4.3	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Hexachlorobutadiene	ND		41	4.5	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Hexachloroethane	ND		200	15	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Hexachlorocyclopentadiene	ND		200	22	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Isophorone	ND		200	15	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2-Methylphenol	ND		200	14	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Methylphenol, 3 & 4	ND		200	20	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Nitrobenzene	ND		400	17	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2-Nitrophenol	ND		200	22	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
4-Nitrophenol	ND		1000	74	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
N-Nitrosodiphenylamine	ND		200	19	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
N-Nitrosodimethylamine	ND		200	17	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
N-Nitrosodi-n-propylamine	ND		41	4.7	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2,2'-oxybis[1-chloropropane]	ND		41	4.4	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Pentachlorophenol	ND		200	18	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Phenol	ND		41	4.8	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
1,2,4-Trichlorobenzene	ND		200	11	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2,4,6-Trichlorophenol	ND		200	30	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
2-Methylnaphthalene	ND		41	3.6	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
1-Methylnaphthalene	ND		41	4.3	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Naphthalene	**35**	**J**	41	3.5	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Acenaphthylene	ND		41	4.6	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Acenaphthene	ND		41	3.9	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Fluorene	**18**	**J**	41	5.3	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Phenanthrene	**300**		41	6.4	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Anthracene	**41**		41	4.0	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Fluoranthene	**750**		41	4.3	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Pyrene	**600**		41	4.1	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzo[a]anthracene	**280**		41	5.1	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Chrysene	**400**		41	4.8	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzo[b]fluoranthene	**380**		41	6.3	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzo[k]fluoranthene	**200**		41	8.2	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzo[a]pyrene	**360**		41	4.0	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Indeno[1,2,3-cd]pyrene	**230**		41	4.2	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Dibenz(a,h)anthracene	**52**		41	4.5	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10
Benzo[g,h,i]perylene	**280**		41	4.0	ug/Kg	☼	12/15/11 03:40	12/15/11 16:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*21 - 116*	*12/15/11 03:40*	*12/15/11 16:55*	*10*
2-Fluorobiphenyl	*83*		*28 - 108*	*12/15/11 03:40*	*12/15/11 16:55*	*10*
2-Fluorophenol	*87*		*28 - 107*	*12/15/11 03:40*	*12/15/11 16:55*	*10*
Nitrobenzene-d5	*81*		*27 - 110*	*12/15/11 03:40*	*12/15/11 16:55*	*10*
Phenol-d5	*94*		*30 - 112*	*12/15/11 03:40*	*12/15/11 16:55*	*10*
Terphenyl-d14	*89*		*21 - 130*	*12/15/11 03:40*	*12/15/11 16:55*	*10*

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-3 (0 TO 4.5 FT)

Date Collected: 12/10/11 12:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-3

Matrix: Sediment
Percent Solids: 82.3

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.50	0.066	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
4,4'-DDE	ND		0.50	0.076	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
4,4'-DDT	ND		0.50	0.075	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Aldrin	ND		0.50	0.090	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
alpha-BHC	ND		0.50	0.082	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
beta-BHC	ND		0.50	0.13	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Chlordane (technical)	ND		5.0	0.22	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Chlorobenside	ND		0.50	0.26	ug/Kg	☼	12/15/11 03:50	12/21/11 18:25	10
DCPA	ND		0.50	0.077	ug/Kg	☼	12/15/11 03:50	12/21/11 18:25	10
delta-BHC	ND		0.50	0.077	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Dieldrin	ND		0.50	0.084	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Endosulfan I	ND		0.50	0.095	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Endosulfan II	ND		0.50	0.089	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Endosulfan sulfate	ND		0.50	0.052	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Endrin	ND		0.50	0.098	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Endrin aldehyde	ND		0.50	0.098	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
gamma-BHC (Lindane)	ND		0.50	0.088	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Heptachlor	ND		0.50	0.11	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Heptachlor epoxide	ND		0.50	0.098	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Methoxychlor	ND		1.0	0.10	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10
Mirex	ND		0.50	0.046	ug/Kg	☼	12/15/11 03:50	12/21/11 18:25	10
Toxaphene	ND		20	3.4	ug/Kg	☼	12/15/11 03:50	12/20/11 22:42	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*26*	*X*	*45 - 140*	*12/15/11 03:50*	*12/20/11 22:42*	*10*
Tetrachloro-m-xylene	*25*	*X*	*45 - 140*	*12/15/11 03:50*	*12/20/11 22:42*	*10*
DCB Decachlorobiphenyl (Surr)	*81*		*45 - 140*	*12/15/11 03:50*	*12/20/11 22:42*	*10*
DCB Decachlorobiphenyl (Surr)	*61*		*45 - 140*	*12/15/11 03:50*	*12/20/11 22:42*	*10*

Method: 8082A - PCB Congeners (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 8	**0.16**	**J p**	0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 18	ND		0.60	0.083	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 28	ND		0.60	0.14	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 44	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 49	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 52	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 66	ND		0.60	0.099	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 77	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 87	ND		0.60	0.11	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 90	ND		0.60	0.092	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 101	ND	*	0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 105	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 118	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 126	ND		0.60	0.16	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 128	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 138	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 153	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 156	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 169	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 170	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-3 (0 TO 4.5 FT)

Date Collected: 12/10/11 12:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-3

Matrix: Sediment
Percent Solids: 82.3

Method: 8082A - PCB Congeners (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 180	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 209	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 183	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 184	ND		0.60	0.10	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 187	ND		0.60	0.13	ug/Kg	☼	12/15/11 04:01	12/19/11 13:39	1
PCB 195	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1
PCB 206	ND		0.60	0.12	ug/Kg	☼	12/15/11 04:01	12/19/11 13:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*99*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:14*	*1*
Tetrachloro-m-xylene	*91*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:39*	*1*
PCB 205	*97*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:14*	*1*
PCB 205	*93*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:39*	*1*

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.1	0.097	1		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total TCDD	ND		1.1	0.097			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,7,8-PeCDD	ND		5.5	0.12	0.5		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total PeCDD	ND		5.5	0.12			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,4,7,8-HxCDD	ND		5.5	0.13	0.1		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,6,7,8-HxCDD	ND		5.5	0.11	0.1		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,7,8,9-HxCDD	**0.41**	**J**	5.5	0.11	0.1	0.041	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total HxCDD	**1.6**		5.5	0.11			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,4,6,7,8-HpCDD	**4.4**	**J B**	5.5	0.30	0.01	0.044	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total HpCDD	**8.3**		5.5	0.30			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
OCDD	**210**	**B**	11	0.64	0.001	0.21	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
2,3,7,8-TCDF	**0.085**	**J Q**	1.1	0.082	0.1	0.0085	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total TCDF	**0.085**		1.1	0.082			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,7,8-PeCDF	**0.27**	**J B**	5.5	0.095	0.05	0.014	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
2,3,4,7,8-PeCDF	ND		5.5	0.12	0.5		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total PeCDF	**0.27**		5.5	0.11			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,4,7,8-HxCDF	**0.38**	**J Q B**	5.5	0.078	0.1	0.038	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,6,7,8-HxCDF	**0.082**	**J Q B**	5.5	0.066	0.1	0.0082	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
2,3,4,6,7,8-HxCDF	ND		5.5	0.060	0.1		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,7,8,9-HxCDF	ND		5.5	0.074	0.1		pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total HxCDF	**0.89**		5.5	0.069			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,4,6,7,8-HpCDF	**0.25**	**J Q B**	5.5	0.17	0.01	0.0025	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
1,2,3,4,7,8,9-HpCDF	**0.22**	**J B**	5.5	0.21	0.01	0.0022	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total HpCDF	**0.88**		5.5	0.19			pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
OCDF	**0.74**	**J Q B**	11	0.20	0.001	0.00074	pg/g	☼	12/21/11 17:15	12/30/11 15:27	0.93
Total TEQ	***(EPA 1989)***					**0.37**					

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*74*		*35 - 197*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*

Internal Standard	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,7,8-PeCDD	*56*		*25 - 181*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,4,7,8-HxCDD	*46*		*32 - 141*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Client Sample ID: B-3 (0 TO 4.5 FT)

Date Collected: 12/10/11 12:30
Date Received: 12/14/11 10:00

Lab Sample ID: 180-6792-3

Matrix: Sediment
Percent Solids: 85

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Internal Standard	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-OCDD	*57*		*17 - 157*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,7,8-PeCDF	*56*		*24 - 185*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-2,3,4,7,8-PeCDF	*52*		*21 - 178*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,6,7,8-HxCDF	*50*		*26 - 123*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,7,8,9-HxCDF	*59*		*29 - 147*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,4,6,7,8-HpCDF	*53*		*28 - 143*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,4,7,8,9-HpCDF	*55*		*26 - 138*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*
13C-1,2,3,4,7,8-HxCDF	*42*		*26 - 152*	*12/21/11 17:15*	*12/30/11 15:27*	*0.93*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5100		1.8	0.17	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Antimony	0.044	J	0.12	0.0016	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Arsenic	3.2		0.060	0.011	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Beryllium	0.39		0.060	0.0045	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Cadmium	0.13		0.060	0.0042	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Chromium	15	B	0.12	0.0037	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Cobalt	11		0.030	0.00090	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Copper	17		0.12	0.020	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Iron	26000	B	3.0	0.21	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Lead	13	B	0.060	0.0023	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Manganese	200	B	0.30	0.0062	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Nickel	15		0.060	0.0068	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Selenium	0.21	J	0.30	0.030	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Potassium	360		6.0	0.82	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Silver	0.010	J	0.060	0.0023	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Thallium	0.034	J	0.060	0.0012	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Tin	1.2		0.30	0.036	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Zinc	120	B	0.30	0.039	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1
Sodium	36	B	6.0	0.82	mg/Kg	☼	12/20/11 11:47	01/03/12 20:20	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.021		0.020	0.0066	mg/Kg	☼	12/16/11 09:30	12/16/11 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	4.6	J	6.0	2.7	mg/Kg	☼	12/28/11 14:30	12/29/11 10:24	1
pH	5.75		0.100	0.100	SU			12/17/11 11:27	1
Percent Moisture	14.8		0.10	0.10	%			12/22/11 06:00	1
Total Organic Carbon - Duplicates	17000		1200	300	mg/Kg	☼		12/22/11 16:04	1
Percent Moisture	18		0.10	0.10	%			12/21/11 11:19	1
Nitrogen, Kjeldahl	250		190	66	mg/Kg	☼	12/28/11 06:30	12/28/11 13:02	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.60	0.18	mg/Kg	☼		01/03/12 16:49	1

Client Sample ID: B-3 (0 TO 4.5 FT)

Lab Sample ID: 180-6792-3
Date Collected: 12/10/11 12:30
Matrix: Sediment
Date Received: 12/14/11 10:00
Percent Solids: 82.3

General Chemistry - Soluble (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25		12	2.6	mg/Kg	☼		01/03/12 16:49	1
Nitrite as N	ND		0.60	0.19	mg/Kg	☼		01/03/12 16:49	1
Orthophosphate	ND		6.0	0.73	mg/Kg	☼		01/03/12 16:49	1
Specific Conductance	210		10	10	umhos/cm			12/21/11 13:30	1

Client Sample ID: B-1 (1 TO 4.5 FT)

Lab Sample ID: 180-6792-4
Date Collected: 12/10/11 10:30
Matrix: Solid
Date Received: 12/14/11 10:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		0.10	0.10	%			01/05/12 12:35	1
Phosphorus as PO4	950		21	8.3	mg/Kg	☼	01/04/12 13:00	01/04/12 12:56	50

Client Sample ID: B-2 (0 TO 0.5 FT)

Lab Sample ID: 180-6792-5
Date Collected: 12/10/11 11:30
Matrix: Solid
Date Received: 12/14/11 10:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	51		0.10	0.10	%			01/05/12 12:35	1
Phosphorus as PO4	2600		35	14	mg/Kg	☼	01/04/12 13:05	01/04/12 12:57	50

Client Sample ID: B-3 (0 TO 4.5 FT)

Lab Sample ID: 180-6792-6
Date Collected: 12/10/11 12:30
Matrix: Solid
Date Received: 12/14/11 10:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12		0.10	0.10	%			01/05/12 12:35	1
Phosphorus as PO4	480		19	7.5	mg/Kg	☼	01/04/12 13:10	01/04/12 12:59	50

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

Lab Sample ID: MB 180-23592/1-A
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23592

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzidine	ND		340	70	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
1,2-Dichlorobenzene	ND		17	1.7	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
1,3-Dichlorobenzene	ND		17	1.3	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
1,4-Dichlorobenzene	ND		17	1.2	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzoic acid	ND		85	6.9	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzyl alcohol	ND		17	2.0	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Bis(2-chloroethyl)ether	ND		3.4	0.45	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Bis(2-chloroethoxy)methane	ND		17	1.1	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Bis(2-ethylhexyl) phthalate	ND		33	2.7	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
4-Bromophenyl phenyl ether	ND		17	1.5	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Butyl benzyl phthalate	ND		17	2.3	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
4-Chloro-3-methylphenol	ND		17	1.5	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2-Chloronaphthalene	ND		3.4	0.35	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2-Chlorophenol	ND		17	1.4	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
4-Chlorophenyl phenyl ether	ND		17	1.9	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Dibenzofuran	ND		17	1.6	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Di-n-butyl phthalate	ND		17	2.1	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
3,3'-Dichlorobenzidine	ND		17	1.8	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,4-Dichlorophenol	ND		3.4	0.33	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Diethyl phthalate	ND		17	1.8	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
4,6-Dinitro-2-methylphenol	ND		85	6.7	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,4-Dimethylphenol	ND		17	2.6	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Dimethyl phthalate	ND		17	1.8	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,4-Dinitrophenol	ND		85	20	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,4-Dinitrotoluene	ND		17	1.3	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,6-Dinitrotoluene	ND		17	1.7	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		17	2.1	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Di-n-octyl phthalate	ND		17	1.8	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Hexachlorobenzene	ND		3.4	0.36	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Hexachlorobutadiene	ND		3.4	0.37	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Hexachloroethane	ND		17	1.2	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Hexachlorocyclopentadiene	ND		17	1.8	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Isophorone	ND		17	1.3	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2-Methylphenol	ND		17	1.2	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Methylphenol, 3 & 4	ND		17	1.6	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Nitrobenzene	ND		33	1.4	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2-Nitrophenol	ND		17	1.8	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
4-Nitrophenol	ND		85	6.1	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
N-Nitrosodiphenylamine	ND		17	1.5	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
N-Nitrosodimethylamine	ND		17	1.4	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
N-Nitrosodi-n-propylamine	ND		3.4	0.39	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,2'-oxybis[1-chloropropane]	ND		3.4	0.36	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Pentachlorophenol	ND		17	1.5	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Phenol	ND		3.4	0.39	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
1,2,4-Trichlorobenzene	ND		17	0.92	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2,4,6-Trichlorophenol	ND		17	2.5	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
2-Methylnaphthalene	ND		3.4	0.30	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
1-Methylnaphthalene	ND		3.4	0.36	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Naphthalene	ND		3.4	0.29	ug/Kg		12/15/11 03:40	12/15/11 14:47	1

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

Lab Sample ID: MB 180-23592/1-A
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23592

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		3.4	0.38	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Acenaphthene	ND		3.4	0.32	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Fluorene	ND		3.4	0.44	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Phenanthrene	ND		3.4	0.53	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Anthracene	ND		3.4	0.33	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Fluoranthene	ND		3.4	0.36	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Pyrene	ND		3.4	0.34	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzo[a]anthracene	ND		3.4	0.42	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Chrysene	ND		3.4	0.40	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzo[b]fluoranthene	ND		3.4	0.52	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzo[k]fluoranthene	ND		3.4	0.67	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzo[a]pyrene	ND		3.4	0.33	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Indeno[1,2,3-cd]pyrene	ND		3.4	0.34	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Dibenz(a,h)anthracene	ND		3.4	0.37	ug/Kg		12/15/11 03:40	12/15/11 14:47	1
Benzo[g,h,i]perylene	ND		3.4	0.33	ug/Kg		12/15/11 03:40	12/15/11 14:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*21 - 116*	*12/15/11 03:40*	*12/15/11 14:47*	*1*
2-Fluorobiphenyl	*81*		*28 - 108*	*12/15/11 03:40*	*12/15/11 14:47*	*1*
2-Fluorophenol	*94*		*28 - 107*	*12/15/11 03:40*	*12/15/11 14:47*	*1*
Nitrobenzene-d5	*89*		*27 - 110*	*12/15/11 03:40*	*12/15/11 14:47*	*1*
Phenol-d5	*101*		*30 - 112*	*12/15/11 03:40*	*12/15/11 14:47*	*1*
Terphenyl-d14	*96*		*21 - 130*	*12/15/11 03:40*	*12/15/11 14:47*	*1*

Lab Sample ID: LCS 180-23592/2-A
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23592

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzidine	333	ND		ug/Kg		17	10 - 150
1,2-Dichlorobenzene	333	181		ug/Kg		54	40 - 102
1,3-Dichlorobenzene	333	183		ug/Kg		55	41 - 100
1,4-Dichlorobenzene	333	178		ug/Kg		53	41 - 101
Benzoic acid	333	199		ug/Kg		60	10 - 93
Benzyl alcohol	333	201		ug/Kg		60	18 - 129
Bis(2-chloroethyl)ether	333	186		ug/Kg		56	40 - 100
Bis(2-chloroethoxy)methane	333	190		ug/Kg		57	42 - 103
Bis(2-ethylhexyl) phthalate	333	209		ug/Kg		63	41 - 121
4-Bromophenyl phenyl ether	333	178		ug/Kg		53	43 - 111
Butyl benzyl phthalate	333	217		ug/Kg		65	40 - 117
4-Chloro-3-methylphenol	333	203		ug/Kg		61	43 - 110
2-Chloronaphthalene	333	179		ug/Kg		54	40 - 104
2-Chlorophenol	333	188		ug/Kg		56	40 - 105
4-Chlorophenyl phenyl ether	333	192		ug/Kg		58	42 - 111
Dibenzofuran	333	183		ug/Kg		55	42 - 106
Di-n-butyl phthalate	333	194		ug/Kg		58	44 - 120
3,3'-Dichlorobenzidine	333	104		ug/Kg		31	24 - 113
2,4-Dichlorophenol	333	194		ug/Kg		58	44 - 110
Diethyl phthalate	333	196		ug/Kg		59	44 - 113

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

Lab Sample ID: LCS 180-23592/2-A
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23592

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,6-Dinitro-2-methylphenol	333	175		ug/Kg		53	28 - 130
2,4-Dimethylphenol	333	187		ug/Kg		56	39 - 106
Dimethyl phthalate	333	196		ug/Kg		59	44 - 111
2,4-Dinitrophenol	333	187		ug/Kg		56	19 - 140
2,4-Dinitrotoluene	333	209		ug/Kg		63	48 - 118
2,6-Dinitrotoluene	333	203		ug/Kg		61	47 - 119
1,2-Diphenylhydrazine(as Azobenzene)	333	182		ug/Kg		55	29 - 110
Di-n-octyl phthalate	333	245		ug/Kg		74	35 - 129
Hexachlorobenzene	333	181		ug/Kg		54	42 - 110
Hexachlorobutadiene	333	179		ug/Kg		54	40 - 114
Hexachloroethane	333	186		ug/Kg		56	40 - 102
Hexachlorocyclopentadiene	333	181		ug/Kg		54	10 - 150
Isophorone	333	199		ug/Kg		60	39 - 114
2-Methylphenol	333	195		ug/Kg		59	41 - 104
Methylphenol, 3 & 4	667	415		ug/Kg		62	43 - 107
Nitrobenzene	333	183		ug/Kg		55	40 - 109
2-Nitrophenol	333	200		ug/Kg		60	45 - 112
4-Nitrophenol	333	195		ug/Kg		58	27 - 131
N-Nitrosodiphenylamine	333	185		ug/Kg		55	41 - 110
N-Nitrosodimethylamine	333	186		ug/Kg		56	33 - 116
N-Nitrosodi-n-propylamine	333	206		ug/Kg		62	42 - 108
2,2'-oxybis[1-chloropropane]	333	191		ug/Kg		57	37 - 105
Pentachlorophenol	333	179		ug/Kg		54	18 - 125
Phenol	333	190		ug/Kg		57	39 - 105
1,2,4-Trichlorobenzene	333	177		ug/Kg		53	41 - 105
2,4,6-Trichlorophenol	333	196		ug/Kg		59	43 - 111
2-Methylnaphthalene	333	187		ug/Kg		56	43 - 105
1-Methylnaphthalene	333	195		ug/Kg		58	10 - 140
Naphthalene	333	187		ug/Kg		56	42 - 104
Acenaphthylene	333	202		ug/Kg		60	43 - 117
Acenaphthene	333	188		ug/Kg		56	42 - 104
Fluorene	333	193		ug/Kg		58	43 - 110
Phenanthrene	333	182		ug/Kg		55	41 - 107
Anthracene	333	183		ug/Kg		55	43 - 111
Fluoranthene	333	174		ug/Kg		52	40 - 118
Pyrene	333	215		ug/Kg		64	39 - 113
Benzo[a]anthracene	333	198		ug/Kg		60	45 - 110
Chrysene	333	179		ug/Kg		54	44 - 108
Benzo[b]fluoranthene	333	203		ug/Kg		61	37 - 108
Benzo[k]fluoranthene	333	173		ug/Kg		52	39 - 115
Benzo[a]pyrene	333	199		ug/Kg		60	42 - 114
Indeno[1,2,3-cd]pyrene	333	170		ug/Kg		51	34 - 130
Dibenz(a,h)anthracene	333	175		ug/Kg		53	34 - 131
Benzo[g,h,i]perylene	333	174		ug/Kg		52	35 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*72*		*21 - 116*
2-Fluorobiphenyl	*62*		*28 - 108*

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

Lab Sample ID: LCS 180-23592/2-A
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23592

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol	*69*		*28 - 107*
Nitrobenzene-d5	*64*		*27 - 110*
Phenol-d5	*71*		*30 - 112*
Terphenyl-d14	*74*		*21 - 130*

Lab Sample ID: 180-6792-1 MS
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: B-1 (0 TO 4.5 FT)
Prep Type: Total/NA
Prep Batch: 23592

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzidine	ND		436	ND		ug/Kg	☼	NC	10 - 150
1,2-Dichlorobenzene	ND		436	321		ug/Kg	☼	74	40 - 102
1,3-Dichlorobenzene	ND		436	314		ug/Kg	☼	72	41 - 100
1,4-Dichlorobenzene	ND		436	311		ug/Kg	☼	71	41 - 101
Benzoic acid	ND		436	95.5	J	ug/Kg	☼	22	10 - 93
Benzyl alcohol	ND		436	358		ug/Kg	☼	82	18 - 129
Bis(2-chloroethyl)ether	ND		436	342		ug/Kg	☼	79	40 - 100
Bis(2-chloroethoxy)methane	ND		436	353		ug/Kg	☼	81	42 - 103
Bis(2-ethylhexyl) phthalate	490		436	1110	F	ug/Kg	☼	142	41 - 121
4-Bromophenyl phenyl ether	ND		436	360		ug/Kg	☼	83	43 - 111
Butyl benzyl phthalate	190	J	436	678		ug/Kg	☼	111	40 - 117
4-Chloro-3-methylphenol	ND		436	354		ug/Kg	☼	81	43 - 110
2-Chloronaphthalene	ND		436	348		ug/Kg	☼	80	40 - 104
2-Chlorophenol	ND		436	351		ug/Kg	☼	80	40 - 105
4-Chlorophenyl phenyl ether	ND		436	328		ug/Kg	☼	75	42 - 111
Dibenzofuran	67	J	436	369		ug/Kg	☼	69	42 - 106
Di-n-butyl phthalate	ND		436	480		ug/Kg	☼	110	44 - 120
3,3'-Dichlorobenzidine	ND		436	141	J	ug/Kg	☼	32	24 - 113
2,4-Dichlorophenol	ND		436	354		ug/Kg	☼	81	44 - 110
Diethyl phthalate	25	J	436	384		ug/Kg	☼	82	44 - 113
4,6-Dinitro-2-methylphenol	ND		436	219	J	ug/Kg	☼	50	28 - 130
2,4-Dimethylphenol	ND		436	366		ug/Kg	☼	84	39 - 106
Dimethyl phthalate	ND		436	382		ug/Kg	☼	88	44 - 111
2,4-Dinitrophenol	ND		436	ND	F	ug/Kg	☼	0	19 - 140
2,4-Dinitrotoluene	ND		436	337		ug/Kg	☼	77	48 - 118
2,6-Dinitrotoluene	ND		436	365		ug/Kg	☼	84	47 - 119
1,2-Diphenylhydrazine(as Azobenzene)	ND		436	377		ug/Kg	☼	86	29 - 110
Di-n-octyl phthalate	ND		436	467		ug/Kg	☼	107	35 - 129
Hexachlorobenzene	ND		436	323		ug/Kg	☼	74	42 - 110
Hexachlorobutadiene	ND		436	321		ug/Kg	☼	74	40 - 114
Hexachloroethane	ND		436	316		ug/Kg	☼	72	40 - 102
Hexachlorocyclopentadiene	ND		436	144	J	ug/Kg	☼	33	10 - 150
Isophorone	ND		436	364		ug/Kg	☼	83	39 - 114
2-Methylphenol	ND		436	357		ug/Kg	☼	82	41 - 104
Methylphenol, 3 & 4	ND		872	764		ug/Kg	☼	88	43 - 107
Nitrobenzene	ND		436	356	J	ug/Kg	☼	82	40 - 109
2-Nitrophenol	ND		436	343		ug/Kg	☼	79	45 - 112
4-Nitrophenol	ND		436	313	J	ug/Kg	☼	72	27 - 131
N-Nitrosodiphenylamine	ND		436	388		ug/Kg	☼	89	41 - 110

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

Lab Sample ID: 180-6792-1 MS — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23751 — **Prep Batch: 23592**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodimethylamine	ND		436	314		ug/Kg	☼	72	33 - 116
N-Nitrosodi-n-propylamine	ND		436	376		ug/Kg	☼	86	42 - 108
2,2'-oxybis[1-chloropropane]	ND		436	370		ug/Kg	☼	85	37 - 105
Pentachlorophenol	ND		436	372		ug/Kg	☼	85	18 - 125
Phenol	ND		436	348		ug/Kg	☼	80	39 - 105
1,2,4-Trichlorobenzene	ND		436	331		ug/Kg	☼	76	41 - 105
2,4,6-Trichlorophenol	ND		436	324		ug/Kg	☼	74	43 - 111
2-Methylnaphthalene	4.6	J	436	357		ug/Kg	☼	81	43 - 105
1-Methylnaphthalene	ND		436	361		ug/Kg	☼	83	10 - 140
Naphthalene	25	J	436	384		ug/Kg	☼	82	42 - 104
Acenaphthylene	11	J	436	394		ug/Kg	☼	88	43 - 117
Acenaphthene	110		436	391		ug/Kg	☼	65	42 - 104
Fluorene	200		436	428		ug/Kg	☼	53	43 - 110
Phenanthrene	2700		436	1230	4	ug/Kg	☼	-329	41 - 107
Anthracene	460		436	512	F	ug/Kg	☼	13	43 - 111
Fluoranthene	4200		436	2640	4	ug/Kg	☼	-363	40 - 118
Pyrene	3700		436	2330	4	ug/Kg	☼	-307	39 - 113
Benzo[a]anthracene	1700		436	1450	F	ug/Kg	☼	-54	45 - 110
Chrysene	2000		436	1550	4	ug/Kg	☼	-95	44 - 108
Benzo[b]fluoranthene	2100		436	1780	4	ug/Kg	☼	-66	37 - 108
Benzo[k]fluoranthene	750		436	727	F	ug/Kg	☼	-5	39 - 115
Benzo[a]pyrene	1800		436	1470	4	ug/Kg	☼	-74	42 - 114
Indeno[1,2,3-cd]pyrene	990		436	1020	F	ug/Kg	☼	6	34 - 130
Dibenz(a,h)anthracene	210		436	515		ug/Kg	☼	69	34 - 131
Benzo[g,h,i]perylene	1100		436	1150	F	ug/Kg	☼	4	35 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*81*		*21 - 116*
2-Fluorobiphenyl	*78*		*28 - 108*
2-Fluorophenol	*82*		*28 - 107*
Nitrobenzene-d5	*78*		*27 - 110*
Phenol-d5	*88*		*30 - 112*
Terphenyl-d14	*86*		*21 - 130*

Lab Sample ID: 180-6792-1 MSD — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23751 — **Prep Batch: 23592**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzidine	ND		436	ND		ug/Kg	☼	NC	10 - 150	NC	30
1,2-Dichlorobenzene	ND		436	267		ug/Kg	☼	61	40 - 102	18	25
1,3-Dichlorobenzene	ND		436	250		ug/Kg	☼	57	41 - 100	23	32
1,4-Dichlorobenzene	ND		436	254		ug/Kg	☼	58	41 - 101	20	32
Benzoic acid	ND		436	ND	F	ug/Kg	☼	0	10 - 93	NC	36
Benzyl alcohol	ND		436	293		ug/Kg	☼	67	18 - 129	20	41
Bis(2-chloroethyl)ether	ND		436	287		ug/Kg	☼	66	40 - 100	18	33
Bis(2-chloroethoxy)methane	ND		436	289		ug/Kg	☼	66	42 - 103	20	35
Bis(2-ethylhexyl) phthalate	490		436	894		ug/Kg	☼	92	41 - 121	21	31
4-Bromophenyl phenyl ether	ND		436	283	F	ug/Kg	☼	65	43 - 111	24	20

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

Lab Sample ID: 180-6792-1 MSD
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: B-1 (0 TO 4.5 FT)
Prep Type: Total/NA
Prep Batch: 23592

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Butyl benzyl phthalate	190	J	436	580		ug/Kg	☼	89	40 - 117	16	34
4-Chloro-3-methylphenol	ND		436	296		ug/Kg	☼	68	43 - 110	18	31
2-Chloronaphthalene	ND		436	281		ug/Kg	☼	64	40 - 104	21	34
2-Chlorophenol	ND		436	284		ug/Kg	☼	65	40 - 105	21	37
4-Chlorophenyl phenyl ether	ND		436	289		ug/Kg	☼	66	42 - 111	12	37
Dibenzofuran	67	J	436	300		ug/Kg	☼	53	42 - 106	21	33
Di-n-butyl phthalate	ND		436	342		ug/Kg	☼	78	44 - 120	34	34
3,3'-Dichlorobenzidine	ND		436	157	J	ug/Kg	☼	36	24 - 113	10	30
2,4-Dichlorophenol	ND		436	269		ug/Kg	☼	62	44 - 110	27	27
Diethyl phthalate	25	J	436	317		ug/Kg	☼	67	44 - 113	19	32
4,6-Dinitro-2-methylphenol	ND		436	191	J	ug/Kg	☼	44	28 - 130	14	35
2,4-Dimethylphenol	ND		436	295		ug/Kg	☼	68	39 - 106	21	42
Dimethyl phthalate	ND		436	308		ug/Kg	☼	71	44 - 111	22	34
2,4-Dinitrophenol	ND		436	ND	F	ug/Kg	☼	0	19 - 140	NC	43
2,4-Dinitrotoluene	ND		436	290		ug/Kg	☼	66	48 - 118	15	33
2,6-Dinitrotoluene	ND		436	290		ug/Kg	☼	67	47 - 119	23	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		436	311		ug/Kg	☼	71	29 - 110	19	33
Di-n-octyl phthalate	ND		436	393		ug/Kg	☼	90	35 - 129	17	33
Hexachlorobenzene	ND		436	271		ug/Kg	☼	62	42 - 110	18	29
Hexachlorobutadiene	ND		436	257		ug/Kg	☼	59	40 - 114	22	25
Hexachloroethane	ND		436	235		ug/Kg	☼	54	40 - 102	29	34
Hexachlorocyclopentadiene	ND		436	87.0	J F	ug/Kg	☼	20	10 - 150	49	33
Isophorone	ND		436	304		ug/Kg	☼	70	39 - 114	18	33
2-Methylphenol	ND		436	284		ug/Kg	☼	65	41 - 104	23	37
Methylphenol, 3 & 4	ND		872	613		ug/Kg	☼	70	43 - 107	22	36
Nitrobenzene	ND		436	280	J	ug/Kg	☼	64	40 - 109	24	31
2-Nitrophenol	ND		436	275		ug/Kg	☼	63	45 - 112	22	30
4-Nitrophenol	ND		436	247	J	ug/Kg	☼	57	27 - 131	24	33
N-Nitrosodiphenylamine	ND		436	314		ug/Kg	☼	72	41 - 110	21	32
N-Nitrosodimethylamine	ND		436	251		ug/Kg	☼	58	33 - 116	22	30
N-Nitrosodi-n-propylamine	ND		436	303		ug/Kg	☼	70	42 - 108	21	32
2,2'-oxybis[1-chloropropane]	ND		436	307		ug/Kg	☼	70	37 - 105	19	31
Pentachlorophenol	ND		436	334		ug/Kg	☼	77	18 - 125	11	34
Phenol	ND		436	277		ug/Kg	☼	63	39 - 105	23	40
1,2,4-Trichlorobenzene	ND		436	267		ug/Kg	☼	61	41 - 105	22	36
2,4,6-Trichlorophenol	ND		436	287		ug/Kg	☼	66	43 - 111	12	36
2-Methylnaphthalene	4.6	J	436	284		ug/Kg	☼	64	43 - 105	23	34
1-Methylnaphthalene	ND		436	294		ug/Kg	☼	67	10 - 140	20	30
Naphthalene	25	J	436	302		ug/Kg	☼	64	42 - 104	24	25
Acenaphthylene	11	J	436	324		ug/Kg	☼	72	43 - 117	20	36
Acenaphthene	110		436	318		ug/Kg	☼	49	42 - 104	21	34
Fluorene	200		436	336	F	ug/Kg	☼	32	43 - 110	24	37
Phenanthrene	2700		436	685	4 F	ug/Kg	☼	-453	41 - 107	57	20
Anthracene	460		436	364	F	ug/Kg	☼	-21	43 - 111	34	35
Fluoranthene	4200		436	1410	4 F	ug/Kg	☼	-645	40 - 118	61	23
Pyrene	3700		436	1190	4 F	ug/Kg	☼	-569	39 - 113	65	28
Benzo[a]anthracene	1700		436	700	F	ug/Kg	☼	-227	45 - 110	70	31
Chrysene	2000		436	870	4 F	ug/Kg	☼	-250	44 - 108	56	31
Benzo[b]fluoranthene	2100		436	939	F	ug/Kg	☼	-153	37 - 108	62	28

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

Lab Sample ID: 180-6792-1 MSD
Matrix: Sediment
Analysis Batch: 23751

Client Sample ID: B-1 (0 TO 4.5 FT)
Prep Type: Total/NA
Prep Batch: 23592

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene	750		436	491	F	ug/Kg	☼	-185	39 - 115	39	42
Benzo[a]pyrene	1800		436	800	4 F	ug/Kg	☼	-228	42 - 114	59	31
Indeno[1,2,3-cd]pyrene	990		436	592	F	ug/Kg	☼	-91	34 - 130	53	30
Dibenz(a,h)anthracene	210		436	370	F	ug/Kg	☼	36	34 - 131	33	32
Benzo[g,h,i]perylene	1100		436	675	F	ug/Kg	☼	-105	35 - 127	52	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*63*		*21 - 116*
2-Fluorobiphenyl	*64*		*28 - 108*
2-Fluorophenol	*68*		*28 - 107*
Nitrobenzene-d5	*64*		*27 - 110*
Phenol-d5	*73*		*30 - 112*
Terphenyl-d14	*67*		*21 - 130*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 180-23594/1-B
Matrix: Sediment
Analysis Batch: 24171

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.042	0.0055	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
4,4'-DDE	ND		0.042	0.0063	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
4,4'-DDT	ND		0.042	0.0063	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Aldrin	ND		0.042	0.0075	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
alpha-BHC	ND		0.042	0.0068	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
beta-BHC	ND		0.042	0.011	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Chlordane (technical)	ND		0.42	0.018	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
delta-BHC	ND		0.042	0.0064	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Dieldrin	ND		0.042	0.0070	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Endosulfan I	ND		0.042	0.0079	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Endosulfan II	ND		0.042	0.0074	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Endosulfan sulfate	ND		0.042	0.0044	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Endrin	ND		0.042	0.0081	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Endrin aldehyde	ND		0.042	0.0081	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
gamma-BHC (Lindane)	ND		0.042	0.0073	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Heptachlor	ND		0.042	0.0093	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Heptachlor epoxide	ND		0.042	0.0081	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Methoxychlor	ND		0.083	0.0087	ug/Kg		12/15/11 03:50	12/20/11 23:58	1
Toxaphene	ND		1.7	0.28	ug/Kg		12/15/11 03:50	12/20/11 23:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*74*		*45 - 140*	*12/15/11 03:50*	*12/20/11 23:58*	*1*
Tetrachloro-m-xylene	*77*		*45 - 140*	*12/15/11 03:50*	*12/20/11 23:58*	*1*
DCB Decachlorobiphenyl (Surr)	*79*		*45 - 140*	*12/15/11 03:50*	*12/20/11 23:58*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*45 - 140*	*12/15/11 03:50*	*12/20/11 23:58*	*1*

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

Lab Sample ID: MB 180-23594/1-B — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24338 — **Prep Batch: 23594**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenside	ND		0.042	0.022	ug/Kg		12/15/11 03:50	12/21/11 18:44	1
DCPA	ND		0.042	0.0064	ug/Kg		12/15/11 03:50	12/21/11 18:44	1
Mirex	ND		0.042	0.0039	ug/Kg		12/15/11 03:50	12/21/11 18:44	1

Lab Sample ID: LCS 180-23594/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24171 — **Prep Batch: 23594**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	1.67	1.30		ug/Kg		78	50 - 150
4,4'-DDE	1.67	1.37		ug/Kg		82	50 - 150
4,4'-DDT	1.67	1.36		ug/Kg		82	50 - 150
Aldrin	1.67	1.37		ug/Kg		82	50 - 150
alpha-BHC	1.67	1.35		ug/Kg		81	50 - 150
beta-BHC	1.67	1.35		ug/Kg		81	50 - 150
delta-BHC	1.67	1.42		ug/Kg		85	20 - 124
Dieldrin	1.67	1.37		ug/Kg		82	50 - 150
Endosulfan I	1.67	1.37		ug/Kg		82	50 - 150
Endosulfan II	1.67	1.45		ug/Kg		87	50 - 150
Endosulfan sulfate	1.67	1.43		ug/Kg		86	44 - 140
Endrin	1.67	1.39		ug/Kg		83	50 - 150
Endrin aldehyde	1.67	1.15		ug/Kg		69	50 - 150
gamma-BHC (Lindane)	1.67	1.32		ug/Kg		79	50 - 150
Heptachlor	1.67	1.38		ug/Kg		83	50 - 150
Heptachlor epoxide	1.67	1.34		ug/Kg		81	50 - 150
Methoxychlor	1.67	1.26		ug/Kg		75	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*84*		*45 - 140*
DCB Decachlorobiphenyl (Surr)	*90*		*45 - 140*

Lab Sample ID: 180-6792-3 MS — **Client Sample ID: B-3 (0 TO 4.5 FT)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24171 — **Prep Batch: 23594**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		2.01	1.50		ug/Kg	☼	75	50 - 150
4,4'-DDE	ND		2.01	1.23		ug/Kg	☼	61	50 - 150
4,4'-DDT	ND		2.01	0.895	F	ug/Kg	☼	45	50 - 150
Aldrin	ND		2.01	1.10		ug/Kg	☼	55	50 - 150
alpha-BHC	ND		2.01	0.889	F	ug/Kg	☼	44	50 - 150
beta-BHC	ND		2.01	0.590	p F	ug/Kg	☼	29	50 - 150
delta-BHC	ND		2.01	1.09		ug/Kg	☼	54	20 - 124
Dieldrin	ND		2.01	0.700	p F	ug/Kg	☼	35	50 - 150
Endosulfan I	ND		2.01	0.900	p F	ug/Kg	☼	45	50 - 150
Endosulfan II	ND		2.01	1.08	p	ug/Kg	☼	54	50 - 150
Endosulfan sulfate	ND		2.01	1.08		ug/Kg	☼	54	44 - 140
Endrin	ND		2.01	1.17		ug/Kg	☼	58	50 - 150
Endrin aldehyde	ND		2.01	ND	F	ug/Kg	☼	0	50 - 150

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

Lab Sample ID: 180-6792-3 MS — **Client Sample ID: B-3 (0 TO 4.5 FT)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24171 — **Prep Batch: 23594**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
gamma-BHC (Lindane)	ND		2.01	1.92	p	ug/Kg	☼	95	50 - 150
Heptachlor	ND		2.01	1.32		ug/Kg	☼	66	50 - 150
Heptachlor epoxide	ND		2.01	1.11		ug/Kg	☼	55	50 - 150
Methoxychlor	ND		2.01	1.42	p	ug/Kg	☼	71	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*35*	*X*	*45 - 140*
Tetrachloro-m-xylene	*42*	*X*	*45 - 140*
DCB Decachlorobiphenyl (Surr)	*236*	*X*	*45 - 140*
DCB Decachlorobiphenyl (Surr)	*81*	*p*	*45 - 140*

Lab Sample ID: 180-6792-3 MSD — **Client Sample ID: B-3 (0 TO 4.5 FT)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24171 — **Prep Batch: 23594**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		2.01	1.50		ug/Kg	☼	75	50 - 150	0	20
4,4'-DDE	ND		2.01	1.29		ug/Kg	☼	64	50 - 150	5	20
4,4'-DDT	ND		2.01	1.15		ug/Kg	☼	57	50 - 150	25	37
Aldrin	ND		2.01	1.20		ug/Kg	☼	60	50 - 150	9	20
alpha-BHC	ND		2.01	1.20	F	ug/Kg	☼	60	50 - 150	30	20
beta-BHC	ND		2.01	1.18	F	ug/Kg	☼	58	50 - 150	66	20
delta-BHC	ND		2.01	0.981	p	ug/Kg	☼	49	20 - 124	11	20
Dieldrin	ND		2.01	0.878	p F	ug/Kg	☼	44	50 - 150	23	20
Endosulfan I	ND		2.01	1.73	F	ug/Kg	☼	86	50 - 150	63	23
Endosulfan II	ND		2.01	1.16	p	ug/Kg	☼	58	50 - 150	7	33
Endosulfan sulfate	ND		2.01	1.12		ug/Kg	☼	56	44 - 140	4	26
Endrin	ND		2.01	1.36		ug/Kg	☼	68	50 - 150	15	20
Endrin aldehyde	ND		2.01	ND	F	ug/Kg	☼	0	50 - 150	NC	20
gamma-BHC (Lindane)	ND		2.01	2.17	p	ug/Kg	☼	108	50 - 150	12	20
Heptachlor	ND		2.01	1.62		ug/Kg	☼	80	50 - 150	20	20
Heptachlor epoxide	ND		2.01	1.19		ug/Kg	☼	59	50 - 150	7	20
Methoxychlor	ND		2.01	1.31	p	ug/Kg	☼	65	50 - 150	8	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*47*		*45 - 140*
Tetrachloro-m-xylene	*48*		*45 - 140*
DCB Decachlorobiphenyl (Surr)	*243*	*X*	*45 - 140*
DCB Decachlorobiphenyl (Surr)	*88*	*p*	*45 - 140*

Method: 8082A - PCB Congeners (GC)

Lab Sample ID: MB 180-23596/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24062 — **Prep Batch: 23596**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 8	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 13:39	1

Method: 8082A - PCB Congeners (GC) (Continued)

Lab Sample ID: MB 180-23596/1-A
Matrix: Sediment
Analysis Batch: 24062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23596

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*100*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:39*	*1*
PCB 205	*99*		*35 - 140*	*12/15/11 04:01*	*12/19/11 13:39*	*1*

Lab Sample ID: MB 180-23596/1-A
Matrix: Sediment
Analysis Batch: 24061

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23596

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB 18	ND		0.50	0.069	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 28	ND		0.50	0.11	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 44	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 49	ND		0.50	0.11	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 52	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 66	ND		0.50	0.082	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 77	ND		0.50	0.11	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 87	ND		0.50	0.094	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 90	ND		0.50	0.077	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 101	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 105	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 118	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 126	ND		0.50	0.13	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 128	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 138	ND		0.50	0.11	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 153	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 156	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 169	ND		0.50	0.099	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 170	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 180	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 209	ND		0.50	0.11	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 183	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 184	ND		0.50	0.086	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 187	ND		0.50	0.11	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 195	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1
PCB 206	ND		0.50	0.10	ug/Kg		12/15/11 04:01	12/19/11 14:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*96*		*35 - 140*	*12/15/11 04:01*	*12/19/11 14:04*	*1*
PCB 205	*96*		*35 - 140*	*12/15/11 04:01*	*12/19/11 14:04*	*1*

Lab Sample ID: LCS 180-23596/2-A
Matrix: Sediment
Analysis Batch: 24062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23596

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB 8	10.0	7.99		ug/Kg		80	50 - 140
PCB 18	10.0	8.64		ug/Kg		86	50 - 140
PCB 28	10.0	7.96		ug/Kg		80	50 - 140
PCB 44	10.0	8.69		ug/Kg		87	50 - 140
PCB 49	10.0	8.58		ug/Kg		86	50 - 140

Method: 8082A - PCB Congeners (GC) (Continued)

Lab Sample ID: LCS 180-23596/2-A
Matrix: Sediment
Analysis Batch: 24062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23596

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB 52	10.0	8.07		ug/Kg		81	50 - 140
PCB 66	10.0	9.22		ug/Kg		92	50 - 140
PCB 77	10.0	9.63		ug/Kg		96	50 - 140
PCB 87	10.0	10.4		ug/Kg		104	50 - 140
PCB 101	10.0	5.57		ug/Kg		56	50 - 140
PCB 105	10.0	8.90		ug/Kg		89	50 - 140
PCB 126	10.0	8.10		ug/Kg		81	50 - 140
PCB 128	10.0	8.71		ug/Kg		87	50 - 140
PCB 138	10.0	8.62		ug/Kg		86	50 - 140
PCB 153	10.0	8.25		ug/Kg		82	50 - 140
PCB 156	10.0	8.87		ug/Kg		89	50 - 140
PCB 169	10.0	9.32		ug/Kg		93	50 - 140
PCB 170	10.0	9.27		ug/Kg		93	50 - 140
PCB 209	10.0	9.16		ug/Kg		92	50 - 140
PCB 183	10.0	8.89		ug/Kg		89	50 - 140
PCB 187	10.0	8.74		ug/Kg		87	50 - 140
PCB 195	10.0	9.32		ug/Kg		93	50 - 140
PCB 206	10.0	8.50		ug/Kg		85	50 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*101*		*35 - 140*
PCB 205	*104*		*35 - 140*

Lab Sample ID: LCS 180-23596/2-A
Matrix: Sediment
Analysis Batch: 24061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23596

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB 118	10.0	8.73		ug/Kg		87	50 - 140
PCB 180	10.0	7.43		ug/Kg		74	50 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*99*		*35 - 140*
PCB 205	*99*		*35 - 140*

Lab Sample ID: 180-6792-1 MS
Matrix: Sediment
Analysis Batch: 24062

Client Sample ID: B-1 (0 TO 4.5 FT)
Prep Type: Total/NA
Prep Batch: 23596

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB 8	1.9		13.2	12.4		ug/Kg	☼	80	50 - 140
PCB 18	0.60		13.2	12.4		ug/Kg	☼	90	50 - 140
PCB 44	0.14		13.2	11.9		ug/Kg	☼	90	50 - 140
PCB 49	ND		13.2	11.6		ug/Kg	☼	88	50 - 140
PCB 52	ND		13.2	11.0		ug/Kg	☼	83	50 - 140
PCB 66	ND		13.2	13.9		ug/Kg	☼	105	50 - 140
PCB 77	ND		13.2	15.3		ug/Kg	☼	116	50 - 140
PCB 87	0.61		13.2	14.2		ug/Kg	☼	103	50 - 140
PCB 101	ND		13.2	7.49		ug/Kg	☼	57	50 - 140

Method: 8082A - PCB Congeners (GC) (Continued)

Lab Sample ID: 180-6792-1 MS — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24062 — **Prep Batch: 23596**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB 105	ND		13.2	12.5		ug/Kg	☼	95	50 - 140
PCB 126	ND		13.2	11.8		ug/Kg	☼	89	50 - 140
PCB 128	ND		13.2	11.3		ug/Kg	☼	85	50 - 140
PCB 138	1.2		13.2	11.3		ug/Kg	☼	77	50 - 140
PCB 153	ND		13.2	10.6		ug/Kg	☼	80	50 - 140
PCB 156	ND		13.2	12.0		ug/Kg	☼	91	50 - 140
PCB 169	ND		13.2	12.4		ug/Kg	☼	94	50 - 140
PCB 170	ND		13.2	11.6		ug/Kg	☼	88	50 - 140
PCB 209	0.26		13.2	11.7		ug/Kg	☼	87	50 - 140
PCB 183	ND		13.2	11.1		ug/Kg	☼	85	50 - 140
PCB 187	ND		13.2	11.1		ug/Kg	☼	84	50 - 140
PCB 195	ND		13.2	11.5		ug/Kg	☼	88	50 - 140
PCB 206	ND		13.2	10.2		ug/Kg	☼	77	50 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*102*		*35 - 140*
PCB 205	*100*		*35 - 140*

Lab Sample ID: 180-6792-1 MS — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24061 — **Prep Batch: 23596**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB 28	0.28	J p	13.2	11.7		ug/Kg	☼	87	50 - 140
PCB 118	0.28		13.2	11.6		ug/Kg	☼	86	50 - 140
PCB 180	0.42		13.2	10.0		ug/Kg	☼	73	50 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*91*		*35 - 140*
PCB 205	*94*		*35 - 140*

Lab Sample ID: 180-6792-1 MSD — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24062 — **Prep Batch: 23596**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB 8	1.9		13.0	12.5		ug/Kg	☼	81	50 - 140	0	40
PCB 18	0.60		13.0	12.2		ug/Kg	☼	89	50 - 140	2	40
PCB 44	0.14		13.0	11.5		ug/Kg	☼	87	50 - 140	3	40
PCB 49	ND		13.0	11.2		ug/Kg	☼	86	50 - 140	3	40
PCB 52	ND		13.0	10.6		ug/Kg	☼	82	50 - 140	3	40
PCB 66	ND		13.0	13.7		ug/Kg	☼	105	50 - 140	1	40
PCB 77	ND		13.0	15.3		ug/Kg	☼	117	50 - 140	0	40
PCB 87	0.61		13.0	13.9		ug/Kg	☼	102	50 - 140	2	40
PCB 101	ND		13.0	7.32		ug/Kg	☼	56	50 - 140	2	40
PCB 105	ND		13.0	12.3		ug/Kg	☼	94	50 - 140	1	40
PCB 126	ND		13.0	11.8		ug/Kg	☼	91	50 - 140	1	40
PCB 128	ND		13.0	11.1		ug/Kg	☼	85	50 - 140	1	40
PCB 138	1.2		13.0	11.0		ug/Kg	☼	76	50 - 140	2	40

Method: 8082A - PCB Congeners (GC) (Continued)

Lab Sample ID: 180-6792-1 MSD — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24062 — **Prep Batch: 23596**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB 153	ND		13.0	10.4		ug/Kg	☼	80	50 - 140	2	40
PCB 156	ND		13.0	11.8		ug/Kg	☼	90	50 - 140	2	40
PCB 169	ND		13.0	12.3		ug/Kg	☼	94	50 - 140	1	40
PCB 170	ND		13.0	11.4		ug/Kg	☼	87	50 - 140	2	40
PCB 209	0.26		13.0	11.5		ug/Kg	☼	86	50 - 140	2	40
PCB 183	ND		13.0	10.9		ug/Kg	☼	83	50 - 140	2	40
PCB 187	ND		13.0	10.8		ug/Kg	☼	83	50 - 140	3	40
PCB 195	ND		13.0	11.4		ug/Kg	☼	87	50 - 140	2	40
PCB 206	ND		13.0	10.2		ug/Kg	☼	78	50 - 140	0	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*100*		*35 - 140*
PCB 205	*95*		*35 - 140*

Lab Sample ID: 180-6792-1 MSD — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24061 — **Prep Batch: 23596**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB 28	0.28		13.0	11.5	p	ug/Kg	☼	86	50 - 140	NC	40
PCB 118	0.28		13.0	11.1		ug/Kg	☼	83	50 - 140	5	40
PCB 180	0.42		13.0	9.22		ug/Kg	☼	68	50 - 140	NC	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*91*		*35 - 140*
PCB 205	*93*		*35 - 140*

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Lab Sample ID: G1L210000076B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total**
Analysis Batch: 1355076 — **Prep Batch: 1355076_P**

Analyte	MB Result	MB Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.096	1		pg/g		12/21/11 17:15	12/30/11 13:14	1
Total TCDD	ND		1.0	0.096			pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,7,8-PeCDD	ND		5.0	0.096	0.5		pg/g		12/21/11 17:15	12/30/11 13:14	1
Total PeCDD	ND		5.0	0.096			pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.078	0.1		pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.063	0.1		pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.064	0.1		pg/g		12/21/11 17:15	12/30/11 13:14	1
Total HxCDD	ND		5.0	0.10			pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,4,6,7,8-HpCDD	0.34	J	5.0	0.083	0.01	0.0034	pg/g		12/21/11 17:15	12/30/11 13:14	1
Total HpCDD	0.58		5.0	0.083			pg/g		12/21/11 17:15	12/30/11 13:14	1
OCDD	3.7	J	10	0.13	0.001	0.0037	pg/g		12/21/11 17:15	12/30/11 13:14	1
2,3,7,8-TCDF	ND		1.0	0.070	0.1		pg/g		12/21/11 17:15	12/30/11 13:14	1
Total TCDF	ND		1.0	0.070			pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,7,8-PeCDF	0.26	J	5.0	0.11	0.05	0.013	pg/g		12/21/11 17:15	12/30/11 13:14	1
2,3,4,7,8-PeCDF	ND		5.0	0.13	0.5		pg/g		12/21/11 17:15	12/30/11 13:14	1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Lab Sample ID: G1L210000076B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total**
Analysis Batch: 1355076 — **Prep Batch: 1355076_P**

Analyte	MB Result	MB Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDF	0.26		5.0	0.12			pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,4,7,8-HxCDF	0.50	J	5.0	0.044	0.1	0.050	pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,6,7,8-HxCDF	0.17	J	5.0	0.039	0.1	0.017	pg/g		12/21/11 17:15	12/30/11 13:14	1
2,3,4,6,7,8-HxCDF	0.095	J	5.0	0.037	0.1	0.0095	pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,7,8,9-HxCDF	0.072	J	5.0	0.048	0.1	0.0072	pg/g		12/21/11 17:15	12/30/11 13:14	1
Total HxCDF	0.94		5.0	0.041			pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,4,6,7,8-HpCDF	0.23	J Q	5.0	0.052	0.01	0.0023	pg/g		12/21/11 17:15	12/30/11 13:14	1
1,2,3,4,7,8,9-HpCDF	0.18	J Q	5.0	0.076	0.01	0.0018	pg/g		12/21/11 17:15	12/30/11 13:14	1
Total HpCDF	0.58		5.0	0.063			pg/g		12/21/11 17:15	12/30/11 13:14	1
OCDF	0.60	J	10	0.14	0.001	0.00060	pg/g		12/21/11 17:15	12/30/11 13:14	1
Total TEQ						**0.11**					

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*75*		*35 - 197*	*12/21/11 17:15*	*12/30/11 13:14*	*1*

Internal Standard	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,4,7,8-HxCDD	*50*		*32 - 141*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,6,7,8-HxCDD	*67*		*28 - 130*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-OCDD	*53*		*17 - 157*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,7,8-PeCDF	*56*		*24 - 185*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-2,3,4,7,8-PeCDF	*56*		*21 - 178*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,6,7,8-HxCDF	*60*		*26 - 123*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-2,3,4,6,7,8-HxCDF	*59*		*28 - 136*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*54*		*26 - 138*	*12/21/11 17:15*	*12/30/11 13:14*	*1*
13C-1,2,3,4,7,8-HxCDF	*47*		*26 - 152*	*12/21/11 17:15*	*12/30/11 13:14*	*1*

Lab Sample ID: G1L210000076C — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total**
Analysis Batch: 1355076 — **Prep Batch: 1355076_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.6		pg/g		108	67 - 158
1,2,3,7,8-PeCDD	100	108		pg/g		108	70 - 142
1,2,3,4,7,8-HxCDD	100	115		pg/g		115	70 - 164
1,2,3,6,7,8-HxCDD	100	96.5		pg/g		96	76 - 134
1,2,3,7,8,9-HxCDD	100	116		pg/g		116	64 - 162
1,2,3,4,6,7,8-HpCDD	100	108		pg/g		108	70 - 140
OCDD	200	224		pg/g		112	78 - 144
2,3,7,8-TCDF	20.0	22.6		pg/g		113	75 - 158
1,2,3,7,8-PeCDF	100	115		pg/g		115	80 - 134
2,3,4,7,8-PeCDF	100	117		pg/g		117	68 - 160
1,2,3,4,7,8-HxCDF	100	117		pg/g		117	72 - 134
1,2,3,6,7,8-HxCDF	100	119		pg/g		119	84 - 130

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Lab Sample ID: G1L210000076C
Matrix: Solid
Analysis Batch: 1355076

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 1355076_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,4,6,7,8-HxCDF	100	112		pg/g		112	70 - 156
1,2,3,7,8,9-HxCDF	100	111		pg/g		111	78 - 130
1,2,3,4,6,7,8-HpCDF	100	115		pg/g		115	82 - 122
1,2,3,4,7,8,9-HpCDF	100	118		pg/g		118	78 - 138
OCDF	200	240		pg/g		120	63 - 170

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*77*		*31 - 191*

Internal Standard	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*63*		*20 - 175*
13C-1,2,3,7,8-PeCDD	*61*		*21 - 227*
13C-1,2,3,4,7,8-HxCDD	*54*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*62*		*25 - 163*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*26 - 166*
13C-OCDD	*60*		*13 - 199*
13C-2,3,7,8-TCDF	*64*		*22 - 152*
13C-1,2,3,7,8-PeCDF	*59*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*59*		*13 - 328*
13C-1,2,3,6,7,8-HxCDF	*58*		*21 - 159*
13C-2,3,4,6,7,8-HxCDF	*60*		*22 - 176*
13C-1,2,3,7,8,9-HxCDF	*63*		*17 - 205*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*58*		*20 - 186*
13C-1,2,3,4,7,8-HxCDF	*51*		*19 - 202*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-24102/1-A
Matrix: Sediment
Analysis Batch: 25138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24102

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		1.5	0.14	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Antimony	ND		0.10	0.0013	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Arsenic	ND		0.050	0.0091	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Beryllium	ND		0.050	0.0038	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Cadmium	ND		0.050	0.0035	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Chromium	0.0118	J	0.10	0.0031	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Cobalt	ND		0.025	0.00075	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Copper	ND		0.10	0.017	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Iron	1.09	J	2.5	0.18	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Lead	0.00675	J	0.050	0.0019	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Manganese	0.0136	J	0.25	0.0052	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Nickel	ND		0.050	0.0057	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Selenium	ND		0.25	0.025	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Potassium	ND		5.0	0.68	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Silver	ND		0.050	0.0020	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Thallium	ND		0.050	0.0010	mg/Kg		12/20/11 11:47	01/03/12 19:26	1

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

Lab Sample ID: MB 180-24102/1-A
Matrix: Sediment
Analysis Batch: 25138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24102

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	ND		0.25	0.030	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Zinc	0.0533	J	0.25	0.032	mg/Kg		12/20/11 11:47	01/03/12 19:26	1
Sodium	0.748	J	5.0	0.68	mg/Kg		12/20/11 11:47	01/03/12 19:26	1

Lab Sample ID: LCS 180-24102/2-A
Matrix: Sediment
Analysis Batch: 25138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24102

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	111		mg/Kg		111	80 - 120
Antimony	25.0	25.9		mg/Kg		104	80 - 120
Arsenic	2.00	1.81		mg/Kg		91	80 - 120
Beryllium	2.50	2.42		mg/Kg		97	80 - 120
Cadmium	2.50	2.52		mg/Kg		101	80 - 120
Chromium	10.0	9.75		mg/Kg		98	80 - 120
Cobalt	25.0	23.8		mg/Kg		95	80 - 120
Copper	12.5	12.4		mg/Kg		99	80 - 120
Iron	50.0	55.2		mg/Kg		110	80 - 120
Lead	1.00	1.01		mg/Kg		101	80 - 120
Manganese	25.0	24.4		mg/Kg		98	80 - 120
Nickel	25.0	24.1		mg/Kg		97	80 - 120
Selenium	0.500	0.445		mg/Kg		89	80 - 120
Potassium	2500	2580		mg/Kg		103	80 - 120
Silver	2.50	2.51		mg/Kg		100	80 - 120
Thallium	2.50	2.48		mg/Kg		99	80 - 120
Tin	100	112		mg/Kg		112	80 - 120
Zinc	25.0	24.1		mg/Kg		96	80 - 120
Sodium	2500	2590		mg/Kg		104	80 - 120

Lab Sample ID: 180-6792-1 MS
Matrix: Sediment
Analysis Batch: 25138

Client Sample ID: B-1 (0 TO 4.5 FT)
Prep Type: Total/NA
Prep Batch: 24102

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8000		132	12700	4	mg/Kg	☼	3557	75 - 125
Antimony	0.21		32.9	22.9	F	mg/Kg	☼	69	75 - 125
Arsenic	1.7		2.63	3.96		mg/Kg	☼	85	75 - 125
Beryllium	0.53		3.29	3.68		mg/Kg	☼	96	75 - 125
Cadmium	0.27		3.29	3.39		mg/Kg	☼	95	75 - 125
Chromium	27	B	13.2	44.0	F	mg/Kg	☼	129	75 - 125
Cobalt	11		32.9	37.6		mg/Kg	☼	81	75 - 125
Copper	23		16.5	35.0		mg/Kg	☼	75	75 - 125
Iron	18000	B	65.8	18500	4	mg/Kg	☼	393	75 - 125
Lead	16	B	1.32	16.5	4	mg/Kg	☼	47	75 - 125
Manganese	210	B	32.9	212	4	mg/Kg	☼	21	75 - 125
Nickel	29		32.9	56.7		mg/Kg	☼	84	75 - 125
Selenium	0.43		0.658	0.894	F	mg/Kg	☼	70	75 - 125
Potassium	740		3290	3930		mg/Kg	☼	97	75 - 125
Silver	0.030	J	3.29	3.13		mg/Kg	☼	94	75 - 125
Thallium	0.087		3.29	3.14		mg/Kg	☼	93	75 - 125

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

Lab Sample ID: 180-6792-1 MS — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 25138 — **Prep Batch: 24102**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Tin	0.96		132	139		mg/Kg	☼	105	75 - 125
Zinc	100	B	32.9	121	F	mg/Kg	☼	58	75 - 125
Sodium	87	B	3290	3330		mg/Kg	☼	99	75 - 125

Lab Sample ID: 180-6792-1 MSD — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 25138 — **Prep Batch: 24102**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	8000		128	13500	4	mg/Kg	☼	4300	75 - 125	6	20
Antimony	0.21		32.1	22.4	F	mg/Kg	☼	69	75 - 125	2	20
Arsenic	1.7		2.57	3.73		mg/Kg	☼	78	75 - 125	6	20
Beryllium	0.53		3.21	3.73		mg/Kg	☼	100	75 - 125	2	20
Cadmium	0.27		3.21	3.33		mg/Kg	☼	95	75 - 125	2	20
Chromium	27	B	12.8	39.1		mg/Kg	☼	94	75 - 125	12	20
Cobalt	11		32.1	39.0		mg/Kg	☼	88	75 - 125	4	20
Copper	23		16.1	36.4		mg/Kg	☼	86	75 - 125	4	20
Iron	18000	B	64.2	19200	4	mg/Kg	☼	1560	75 - 125	4	20
Lead	16	B	1.28	18.2	4	mg/Kg	☼	180	75 - 125	10	20
Manganese	210	B	32.1	251	4	mg/Kg	☼	141	75 - 125	17	20
Nickel	29		32.1	59.0		mg/Kg	☼	93	75 - 125	4	20
Selenium	0.43		0.642	0.932		mg/Kg	☼	78	75 - 125	4	20
Potassium	740		3210	4010		mg/Kg	☼	102	75 - 125	2	20
Silver	0.030	J	3.21	3.10		mg/Kg	☼	96	75 - 125	1	20
Thallium	0.087		3.21	3.10		mg/Kg	☼	94	75 - 125	1	20
Tin	0.96		128	138		mg/Kg	☼	107	75 - 125	0	20
Zinc	100	B	32.1	124	F	mg/Kg	☼	66	75 - 125	2	20
Sodium	87	B	3210	3320		mg/Kg	☼	101	75 - 125	0	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 180-23775/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23882 — **Prep Batch: 23775**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0055	mg/Kg		12/16/11 09:30	12/16/11 15:56	1

Lab Sample ID: LCS 180-23775/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23882 — **Prep Batch: 23775**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.208	0.216		mg/Kg		104	80 - 120

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-6765-B-5-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23882 — **Prep Batch: 23775**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.31		0.160	0.521	F	mg/Kg	☼	134	75 - 125

Lab Sample ID: 180-6765-B-5-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23882 — **Prep Batch: 23775**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.31		0.165	0.525	F	mg/Kg	☼	132	75 - 125	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-24758/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24879 — **Prep Batch: 24758**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	ND		5.0	2.2	mg/Kg		12/28/11 14:30	12/29/11 10:04	1

Lab Sample ID: LCS 180-24758/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24879 — **Prep Batch: 24758**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	100	95.6		mg/Kg		96	90 - 110

Lab Sample ID: 180-6701-C-33-D MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24879 — **Prep Batch: 24758**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	6.7		116	117		mg/Kg	☼	95	90 - 110

Lab Sample ID: 180-6701-C-33-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24879 — **Prep Batch: 24758**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia, distilled	6.7		117	115		mg/Kg	☼	93	90 - 110	2	20

Method: 9045C - pH

Lab Sample ID: 180-6771-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23903

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.52		8.550		SU		0.4	2

QC Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-25123/6 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 25123

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.015	mg/Kg			01/03/12 13:56	1
Chloride	ND		1.0	0.22	mg/Kg			01/03/12 13:56	1
Nitrite as N	ND		0.050	0.016	mg/Kg			01/03/12 13:56	1
Orthophosphate	ND		0.50	0.061	mg/Kg			01/03/12 13:56	1

Lab Sample ID: LCS 180-25123/5 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 25123

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.51		mg/Kg		100	80 - 120
Chloride	50.0	50.8		mg/Kg		102	80 - 120
Nitrite as N	2.50	2.53		mg/Kg		101	80 - 120
Orthophosphate	2.50	2.46		mg/Kg		98	80 - 120

Lab Sample ID: LB3 180-25057/5-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 25123

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.15	mg/Kg			01/03/12 17:45	1
Chloride	ND		10	2.2	mg/Kg			01/03/12 17:45	1
Nitrite as N	ND		0.50	0.16	mg/Kg			01/03/12 17:45	1
Orthophosphate	ND		5.0	0.61	mg/Kg			01/03/12 17:45	1

Lab Sample ID: 180-6792-3 MS — **Client Sample ID: B-3 (0 TO 4.5 FT)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25123

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	ND		15.0	15.2		mg/Kg	☼	101	80 - 120
Chloride	25		300	317		mg/Kg	☼	97	80 - 120
Nitrite as N	ND		15.0	16.3		mg/Kg	☼	109	80 - 120
Orthophosphate	ND		15.0	14.8		mg/Kg	☼	99	80 - 120

Lab Sample ID: 180-6792-3 MSD — **Client Sample ID: B-3 (0 TO 4.5 FT)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 25123

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	ND		15.0	15.2		mg/Kg	☼	101	80 - 120	0	20
Chloride	25		300	315		mg/Kg	☼	97	80 - 120	1	20
Nitrite as N	ND		15.0	16.3		mg/Kg	☼	109	80 - 120	0	20
Orthophosphate	ND		15.0	13.1		mg/Kg	☼	87	80 - 120	12	20

Method: D 2216-90 - Moisture, Percent (D2216-90) - AFCEE

Lab Sample ID: G1L160504013X — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Total**
Analysis Batch: 1354060

Analyte	Sample Result	Sample Qualifier		LR1 Result	LR1 Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	24.0			23.8		%				1.2	20

Method: Lloyd Kahn - Organic Carbon, Total (TOC)

Lab Sample ID: MB 180-24029/3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	250	mg/Kg			12/19/11 11:40	1

Lab Sample ID: LCS 180-24029/4 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24029

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates			22900	22400		mg/Kg		98	75 - 125		

Lab Sample ID: LCSD 180-24029/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates			22900	23200		mg/Kg		102	75 - 125	4	20

Lab Sample ID: 180-6701-B-9 MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24029

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates	7800		28900	39600		mg/Kg	☼	110	75 - 125		

Lab Sample ID: 180-6701-B-9 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24029

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	7800		28500	35800		mg/Kg	☼	98	75 - 125	10	20

Lab Sample ID: 180-6701-B-9 DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24029

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Duplicates	7800			9080		mg/Kg	☼			15	20

Method: Lloyd Kahn - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 180-24178/3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	250	mg/Kg			12/20/11 14:37	1

Lab Sample ID: LCS 180-24178/4 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	22900	23400		mg/Kg		102	75 - 125

Lab Sample ID: LCSD 180-24178/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24178

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	22900	23900		mg/Kg		104	75 - 125	2	20

Lab Sample ID: 180-6867-J-3 MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24178

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	18000		48800	62900		mg/Kg	☼	92	75 - 125

Lab Sample ID: 180-6867-J-3 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24178

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	18000		49500	61100		mg/Kg	☼	87	75 - 125	3	20

Lab Sample ID: 180-6867-J-3 DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24178

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Duplicates	18000		17400		mg/Kg	☼	3	20

Lab Sample ID: MB 180-24824/3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24824

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	250	mg/Kg			12/22/11 13:10	1

Method: Lloyd Kahn - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 180-24824/4 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	22900	20600		mg/Kg		90	75 - 125

Lab Sample ID: LCSD 180-24824/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24824

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	22900	25200		mg/Kg		110	75 - 125	20	20

Lab Sample ID: 180-6899-E-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24824

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	26000		43700	69100		mg/Kg	☼	100	75 - 125

Lab Sample ID: 180-6899-E-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24824

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	26000		46000	59900		mg/Kg	☼	75	75 - 125	14	20

Lab Sample ID: 180-6899-E-1 DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24824

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Duplicates	26000		22200		mg/Kg	☼	14	20

Method: Moisture - Percent Moisture

Lab Sample ID: 180-6792-1 DU — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24217

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	24		24		%		2	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 180-24248/2 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 24248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			12/21/11 13:30	1

Lab Sample ID: LB3 180-24247/1-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 24248

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umhos/cm			12/21/11 13:30	1

Lab Sample ID: 180-6792-1 DU — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 24248

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	310			307		umhos/cm				0	20

Method: SM 4500 Norg C - Nitrogen-Total Kjeldahl

Lab Sample ID: MB 240-28294/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 28419 — **Prep Batch: 28294**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		150	50	mg/Kg		12/28/11 06:30	12/28/11 13:02	1

Lab Sample ID: LCS 240-28294/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 28419 — **Prep Batch: 28294**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrogen, Kjeldahl			633	613		mg/Kg		97	70 - 133		

Lab Sample ID: 180-6792-1 MS — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 28419 — **Prep Batch: 28294**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrogen, Kjeldahl	290		1240	1460		mg/Kg	☼	94	50 - 120		

Lab Sample ID: 180-6792-1 MSD — **Client Sample ID: B-1 (0 TO 4.5 FT)**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 28419 — **Prep Batch: 28294**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	290		1290	1440		mg/Kg	☼	90	50 - 120	1	50

QC Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

Method: SM 4500 P E - Phosphorus

Lab Sample ID: MB 480-46790/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46866 — **Prep Batch: 46790**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as PO4	ND		0.011	0.0042	mg/Kg		01/04/12 12:50	01/04/12 13:02	1

Lab Sample ID: LCS 480-46790/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46866 — **Prep Batch: 46790**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus as PO4	1830	1720		mg/Kg		94	55 - 144

QC Association Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments, Germantown MD

TestAmerica Job ID: 180-6792-1

GC/MS Semi VOA

Prep Batch: 23592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	3541	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
LCS 180-23592/2-A	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-23592/1-A	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 23751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8270C LL	23592
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8270C LL	23592
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8270C LL	23592
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	8270C LL	23592
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	8270C LL	23592
LCS 180-23592/2-A	Lab Control Sample	Total/NA	Sediment	8270C LL	23592
MB 180-23592/1-A	Method Blank	Total/NA	Sediment	8270C LL	23592

GC Semi VOA

Prep Batch: 23594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	3541	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-3 MS	B-3 (0 TO 4.5 FT)	Total/NA	Solid	3541	
180-6792-3 MSD	B-3 (0 TO 4.5 FT)	Total/NA	Solid	3541	
LCS 180-23594/2-B	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-23594/1-B	Method Blank	Total/NA	Sediment	3541	

Prep Batch: 23596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	3541	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	3541	
LCS 180-23596/2-A	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-23596/1-A	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 24061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
LCS 180-23596/2-A	Lab Control Sample	Total/NA	Sediment	8082A	23596
MB 180-23596/1-A	Method Blank	Total/NA	Sediment	8082A	23596

GC Semi VOA (Continued)

Analysis Batch: 24062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	8082A	23596
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	8082A	23596
LCS 180-23596/2-A	Lab Control Sample	Total/NA	Sediment	8082A	23596
MB 180-23596/1-A	Method Blank	Total/NA	Sediment	8082A	23596

Analysis Batch: 24171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8081A	23594
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	8081A	23594
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	8081A	23594
180-6792-3 MS	B-3 (0 TO 4.5 FT)	Total/NA	Solid	8081A	23594
180-6792-3 MSD	B-3 (0 TO 4.5 FT)	Total/NA	Solid	8081A	23594
LCS 180-23594/2-B	Lab Control Sample	Total/NA	Sediment	8081A	23594
MB 180-23594/1-B	Method Blank	Total/NA	Sediment	8081A	23594

Analysis Batch: 24338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	8081A	23594
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	8081A	23594
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	8081A	23594
MB 180-23594/1-B	Method Blank	Total/NA	Sediment	8081A	23594

Specialty Organics

Analysis Batch: 1355076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total	Sediment	1613B	
180-6792-2	B-2 (0 TO 0.5 FT)	Total	Sediment	1613B	
180-6792-3	B-3 (0 TO 4.5 FT)	Total	Sediment	1613B	
G1L210000076B	Method Blank	Total	Solid	1613B	
G1L210000076C	Lab Control Sample	Total	Solid	1613B	

Prep Batch: 1355076_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total	Sediment	1613B	
180-6792-2	B-2 (0 TO 0.5 FT)	Total	Sediment	1613B	
180-6792-3	B-3 (0 TO 4.5 FT)	Total	Sediment	1613B	
G1L210000076B	Method Blank	Total	Solid	1613B	
G1L210000076C	Lab Control Sample	Total	Solid	1613B	

Metals

Prep Batch: 23775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6765-B-5-A MS	Matrix Spike	Total/NA	Sediment	7471A	
180-6765-B-5-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	7471A	
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	7471A	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	7471A	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	7471A	

Metals (Continued)

Prep Batch: 23775 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-23775/2-A	Lab Control Sample	Total/NA	Sediment	7471A	
MB 180-23775/1-A	Method Blank	Total/NA	Sediment	7471A	

Analysis Batch: 23882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6765-B-5-A MS	Matrix Spike	Total/NA	Sediment	7471A	23775
180-6765-B-5-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	7471A	23775
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	7471A	23775
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	7471A	23775
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	7471A	23775
LCS 180-23775/2-A	Lab Control Sample	Total/NA	Sediment	7471A	23775
MB 180-23775/1-A	Method Blank	Total/NA	Sediment	7471A	23775

Prep Batch: 24102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3050B	
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3050B	
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	3050B	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	3050B	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	3050B	
LCS 180-24102/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
MB 180-24102/1-A	Method Blank	Total/NA	Sediment	3050B	

Analysis Batch: 25138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	6020	24102
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	6020	24102
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	6020	24102
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	6020	24102
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	6020	24102
LCS 180-24102/2-A	Lab Control Sample	Total/NA	Sediment	6020	24102
MB 180-24102/1-A	Method Blank	Total/NA	Sediment	6020	24102

General Chemistry

Analysis Batch: 23903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6771-A-1 DU	Duplicate	Total/NA	Sediment	9045C	
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	9045C	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	9045C	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	9045C	
LCS 180-23903/1	Lab Control Sample	Total/NA	Sediment	9045C	

Analysis Batch: 24029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6701-B-9 DU	Duplicate	Total/NA	Sediment	Lloyd Kahn	
180-6701-B-9 MS	Matrix Spike	Total/NA	Sediment	Lloyd Kahn	
180-6701-B-9 MSD	Matrix Spike Duplicate	Total/NA	Sediment	Lloyd Kahn	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	Lloyd Kahn	
LCS 180-24029/4	Lab Control Sample	Total/NA	Sediment	Lloyd Kahn	
LCSD 180-24029/5	Lab Control Sample Dup	Total/NA	Sediment	Lloyd Kahn	
MB 180-24029/3	Method Blank	Total/NA	Sediment	Lloyd Kahn	

General Chemistry (Continued)

Analysis Batch: 24178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	Lloyd Kahn	
180-6867-J-3 DU	Duplicate	Total/NA	Sediment	Lloyd Kahn	
180-6867-J-3 MS	Matrix Spike	Total/NA	Sediment	Lloyd Kahn	
180-6867-J-3 MSD	Matrix Spike Duplicate	Total/NA	Sediment	Lloyd Kahn	
LCS 180-24178/4	Lab Control Sample	Total/NA	Sediment	Lloyd Kahn	
LCSD 180-24178/5	Lab Control Sample Dup	Total/NA	Sediment	Lloyd Kahn	
MB 180-24178/3	Method Blank	Total/NA	Sediment	Lloyd Kahn	

Analysis Batch: 24217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	Moisture	
180-6792-1 DU	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	Moisture	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	Moisture	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	Moisture	

Leach Batch: 24247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Soluble	Sediment	DI Leach	
180-6792-1 DU	B-1 (0 TO 4.5 FT)	Soluble	Sediment	DI Leach	
180-6792-2	B-2 (0 TO 0.5 FT)	Soluble	Sediment	DI Leach	
180-6792-3	B-3 (0 TO 4.5 FT)	Soluble	Sediment	DI Leach	
LB3 180-24247/1-A LB3	Method Blank	Soluble	Sediment	DI Leach	

Analysis Batch: 24248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Soluble	Sediment	SM 2510B	
180-6792-1 DU	B-1 (0 TO 4.5 FT)	Soluble	Sediment	SM 2510B	
180-6792-2	B-2 (0 TO 0.5 FT)	Soluble	Sediment	SM 2510B	
180-6792-3	B-3 (0 TO 4.5 FT)	Soluble	Sediment	SM 2510B	
LB3 180-24247/1-A LB3	Method Blank	Soluble	Sediment	SM 2510B	
LCS 180-24248/1	Lab Control Sample	Total/NA	Sediment	SM 2510B	
MB 180-24248/2	Method Blank	Total/NA	Sediment	SM 2510B	

Prep Batch: 24758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6701-C-33-D MS	Matrix Spike	Total/NA	Sediment	Distill/Ammonia	
180-6701-C-33-E MSD	Matrix Spike Duplicate	Total/NA	Sediment	Distill/Ammonia	
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	Distill/Ammonia	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	Distill/Ammonia	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	Distill/Ammonia	
LCS 180-24758/2-A	Lab Control Sample	Total/NA	Sediment	Distill/Ammonia	
MB 180-24758/1-A	Method Blank	Total/NA	Sediment	Distill/Ammonia	

Analysis Batch: 24824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	Lloyd Kahn	
180-6899-E-1 DU	Duplicate	Total/NA	Sediment	Lloyd Kahn	
180-6899-E-1 MS	Matrix Spike	Total/NA	Sediment	Lloyd Kahn	
180-6899-E-1 MSD	Matrix Spike Duplicate	Total/NA	Sediment	Lloyd Kahn	
LCS 180-24824/4	Lab Control Sample	Total/NA	Sediment	Lloyd Kahn	
LCSD 180-24824/5	Lab Control Sample Dup	Total/NA	Sediment	Lloyd Kahn	
MB 180-24824/3	Method Blank	Total/NA	Sediment	Lloyd Kahn	

General Chemistry (Continued)

Analysis Batch: 24879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6701-C-33-D MS	Matrix Spike	Total/NA	Sediment	350.1	24758
180-6701-C-33-E MSD	Matrix Spike Duplicate	Total/NA	Sediment	350.1	24758
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	350.1	24758
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	350.1	24758
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	350.1	24758
LCS 180-24758/2-A	Lab Control Sample	Total/NA	Sediment	350.1	24758
MB 180-24758/1-A	Method Blank	Total/NA	Sediment	350.1	24758

Leach Batch: 25057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Soluble	Sediment	DI Leach	
180-6792-2	B-2 (0 TO 0.5 FT)	Soluble	Sediment	DI Leach	
180-6792-3	B-3 (0 TO 4.5 FT)	Soluble	Sediment	DI Leach	
180-6792-3 MS	B-3 (0 TO 4.5 FT)	Soluble	Solid	DI Leach	
180-6792-3 MSD	B-3 (0 TO 4.5 FT)	Soluble	Solid	DI Leach	
LB3 180-25057/5-A LB3	Method Blank	Soluble	Sediment	DI Leach	

Analysis Batch: 25123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Soluble	Sediment	9056A	
180-6792-2	B-2 (0 TO 0.5 FT)	Soluble	Sediment	9056A	
180-6792-3	B-3 (0 TO 4.5 FT)	Soluble	Sediment	9056A	
180-6792-3 MS	B-3 (0 TO 4.5 FT)	Soluble	Solid	9056A	
180-6792-3 MSD	B-3 (0 TO 4.5 FT)	Soluble	Solid	9056A	
LB3 180-25057/5-A LB3	Method Blank	Soluble	Sediment	9056A	
LCS 180-25123/5	Lab Control Sample	Total/NA	Sediment	9056A	
MB 180-25123/6	Method Blank	Total/NA	Sediment	9056A	

Prep Batch: 28294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	SM4500Norg_C	
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	SM4500Norg_C	
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	SM4500Norg_C	
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	SM4500Norg_C	
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	SM4500Norg_C	
LCS 240-28294/2-A	Lab Control Sample	Total/NA	Sediment	SM4500Norg_C	
MB 240-28294/1-A	Method Blank	Total/NA	Sediment	SM4500Norg_C	

Analysis Batch: 28419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	SM 4500 Norg C	28294
180-6792-1 MS	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	SM 4500 Norg C	28294
180-6792-1 MSD	B-1 (0 TO 4.5 FT)	Total/NA	Sediment	SM 4500 Norg C	28294
180-6792-2	B-2 (0 TO 0.5 FT)	Total/NA	Sediment	SM 4500 Norg C	28294
180-6792-3	B-3 (0 TO 4.5 FT)	Total/NA	Sediment	SM 4500 Norg C	28294
LCS 240-28294/2-A	Lab Control Sample	Total/NA	Sediment	SM 4500 Norg C	28294
MB 240-28294/1-A	Method Blank	Total/NA	Sediment	SM 4500 Norg C	28294

Prep Batch: 46790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-4	B-1 (1 TO 4.5 FT)	Total/NA	Solid	SM 4500 P B	
180-6792-5	B-2 (0 TO 0.5 FT)	Total/NA	Solid	SM 4500 P B	

General Chemistry (Continued)

Prep Batch: 46790 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-6	B-3 (0 TO 4.5 FT)	Total/NA	Solid	SM 4500 P B	
LCS 480-46790/2-A	Lab Control Sample	Total/NA	Solid	SM 4500 P B	
MB 480-46790/1-A	Method Blank	Total/NA	Solid	SM 4500 P B	

Analysis Batch: 46866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-4	B-1 (1 TO 4.5 FT)	Total/NA	Solid	SM 4500 P E	46790
180-6792-5	B-2 (0 TO 0.5 FT)	Total/NA	Solid	SM 4500 P E	46790
180-6792-6	B-3 (0 TO 4.5 FT)	Total/NA	Solid	SM 4500 P E	46790
LCS 480-46790/2-A	Lab Control Sample	Total/NA	Solid	SM 4500 P E	46790
MB 480-46790/1-A	Method Blank	Total/NA	Solid	SM 4500 P E	46790

Analysis Batch: 46967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-4	B-1 (1 TO 4.5 FT)	Total/NA	Solid	Moisture	
180-6792-5	B-2 (0 TO 0.5 FT)	Total/NA	Solid	Moisture	
180-6792-6	B-3 (0 TO 4.5 FT)	Total/NA	Solid	Moisture	

Analysis Batch: 1354060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-6792-1	B-1 (0 TO 4.5 FT)	Total	Sediment	D 2216-90	
180-6792-2	B-2 (0 TO 0.5 FT)	Total	Sediment	D 2216-90	
180-6792-3	B-3 (0 TO 4.5 FT)	Total	Sediment	D 2216-90	
G1L160504013X	Duplicate	Total	Solid	D 2216-90	

Report Number
11-350-0207 **Page:** 1 of 4

Account Number
08077

Send To: Test America Labs
Ms. Carrie Gamber
301 Alpha Drive
Pittsburgh , PA 15238

http://www.allabs.com

A&L Analytical Laboratories, Inc.

2790 Whitten Rd. Memphis, TN 38133 • Phone (901) 213-2400 • Fax (901) 213-2440

The One Source.

Purchase Order :
Report Date : 01/13/2012
Date Received : 12/16/2011

Project : Gunner Lake Sediments
Germantown, MD
Project #18008891
Job #180-6792-1

REPORT OF ANALYSIS

Date Sampled : 12/10/2011

Lab Number: 90511
Sample Id : B-1 (0 to 4.5 Ft) (180-6792-1)

Analysis	Result	Quantitation Limit	Method	Date and Time Test Started	Analyst
C/N RATIO , Ratio	7:1		CALCULATION	01/12/2012 16:50	JRF
Cation Exchange Capacity , meq/100g	12.5	0.100	SW-9081	01/05/2012 13:25	SNS
Conductivity (Saturated Paste) , mmhos/cm	0.700		SATURATED PASTE	01/05/2012 09:00	AEH
Neutralizing Value (%CCE) , %	15.1	0.1	AOAC 1.1.04	01/10/2012 11:19	AYG
Sodium Adsorption Ratio , Calc	3.33		SATURATED PASTE	01/05/2012 09:00	AEH
Total Sulfur , mg/Kg	129	5.00	6010B	01/12/2012 10:52	JTR
Calcium , ppm	4.88	0.050	SATURATED PASTE	01/05/2012 09:00	AEH
Carbon, Total , %	0.7	0.1	LECO	01/12/2012 12:45	TDJ
Magnesium , ppm	10.4	0.050	SATURATED PASTE	01/05/2012 09:00	AEH
Total N (Inorg+Org) , %	0.1	0.1	LECO	01/12/2012 12:45	TDJ
Sodium , ppm	56.8	0.050	SATURATED PASTE	01/05/2012 09:00	AEH

Sample results are reported 'as received' and are not moisture corrected unless noted.

Jimmy R. Ferguson, Assistant Technical Director

Report Number
11-350-0207 **Page:** 2 of 4

Account Number
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Ms. Carrie Gamber
301 Alpha Drive
Pittsburgh , PA 15238

Purchase Order :
Report Date : 01/13/2012
Date Received : 12/16/2011

Project : Gunner Lake Sediments
Germantown, MD
Project #18008891
Job #180-6792-1

REPORT OF ANALYSIS

Date Sampled : 12/10/2011

Lab Number: 90511
Sample Id : B-1 (0 to 4.5 Ft) (180-6792-1)

Analysis	Result	Quantitation Limit	Method	Date and Time Test Started	Analyst

Method Reference:
Calculation from lab derived data.
Methods for Chemical Analysis , EPA-600/4-79-020.
Methods of Soil Analysis, Part 3 - Chemical Methods, 2nd Ed. Rev. Soil Science Society of America, Black, C.A et al. 1982, p. 420.
Official Methods of Analysis of AOAC International, 17th Edition, 1998
USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed. Current Revision
Comments:

Sample results are reported 'as received' and are not moisture corrected unless noted.

Jimmy R. Ferguson, Assistant Technical Director

Report Number
11-350-0207 **Page:** 3 of 4

Account Number
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Purchase Order :
Report Date : 01/13/2012
Date Received : 12/16/2011

Project : Gunner Lake Sediments
Germantown, MD
Project #18008891
Job #180-6792-1

REPORT OF ANALYSIS

Date Sampled : 12/10/2011

Lab Number: 90512
Sample Id : B-2 (0 to 0.5 Ft) (180-6792-2)

Analysis	Result	Quantitation Limit	Method	Date and Time Test Started	Analyst
C/N RATIO , Ratio	8:1		CALCULATION	01/12/2012 16:50	JRF
Cation Exchange Capacity , meq/100g	40.2	0.100	SW-9081	01/05/2012 13:25	SNS
Conductivity (Saturated Paste) , mmhos/cm	1.00		SATURATED PASTE	01/05/2012 09:00	AEH
Neutralizing Value (%CCE) , %	13.4	0.1	AOAC 1.1.04	01/10/2012 11:19	AYG
Sodium Adsorption Ratio , Calc	0.882		SATURATED PASTE	01/05/2012 09:00	AEH
Total Sulfur , mg/Kg	578	5.00	6010B	01/12/2012 10:53	JTR
Calcium , ppm	97.3	0.050	SATURATED PASTE	01/05/2012 09:00	AEH
Carbon, Total , %	7.3	0.1	LECO	01/12/2012 12:53	TDJ
Magnesium , ppm	33.6	0.050	SATURATED PASTE	01/05/2012 09:00	AEH
Total N (Inorg+Org) , %	0.9	0.1	LECO	01/12/2012 12:53	TDJ
Sodium , ppm	39.6	0.050	SATURATED PASTE	01/05/2012 09:00	AEH

Sample results are reported 'as received' and are not moisture corrected unless noted.

Jimmy R. Ferguson, Assistant Technical Director

Report Number
11-350-0207 **Page:** 4 of 4

Account Number
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Ms. Carrie Gamber
301 Alpha Drive
Pittsburgh , PA 15238

Purchase Order :
Report Date : 01/13/2012
Date Received : 12/16/2011

Project : Gunner Lake Sediments
Germantown, MD
Project #18008891
Job #180-6792-1

REPORT OF ANALYSIS

Date Sampled : 12/10/2011

Lab Number: 90512
Sample Id : B-2 (0 to 0.5 Ft) (180-6792-2)

Analysis	Result	Quantitation Limit	Method	Date and Time Test Started	Analyst

Method Reference:
Calculation from lab derived data.
Methods for Chemical Analysis , EPA-600/4-79-020.
Methods of Soil Analysis, Part 3 - Chemical Methods, 2nd Ed. Rev. Soil Science Society of America, Black, C.A et al. 1982, p. 420.
Official Methods of Analysis of AOAC International, 17th Edition, 1998
USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed. Current Revision
Comments:

Sample results are reported 'as received' and are not moisture corrected unless noted.

Jimmy R. Ferguson, Assistant Technical Director

Report Number
11-353-0276 **Page:** 1 of 2

Account Number
08077

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Send To: Test America Labs
Ms. Carrie Gamber
301 Alpha Drive
Pittsburgh , PA 15238

Purchase Order :
Report Date : 01/13/2012
Date Received : 12/19/2011

Project : Gunner Lake Sediments, Germantown MD
Project #18008891
Job #180-6792-1

REPORT OF ANALYSIS

Date Sampled : 12/10/2011

Lab Number: 90513
Sample Id : B-3 (0 to 4.5ft) (180-6792-3)

Analysis	Result	Quantitation Limit	Method	Date and Time Test Started	Analyst
C/N RATIO , Ratio	1:1		CALCULATION	01/12/2012 16:50	JRF
Cation Exchange Capacity , meq/100g	7.30	0.100	SW-9081	01/05/2012 13:25	SNS
Conductivity (Saturated Paste) , mmhos/cm	0.600		SATURATED PASTE	01/05/2012 09:00	AEH
Neutralizing Value (%CCE) , %	11.8	0.1	AOAC 1.1.04	01/10/2012 11:19	AYG
Sodium Adsorption Ratio , Calc	1.33		SATURATED PASTE	01/05/2012 09:00	AEH
Total Sulfur , mg/Kg	137	5.00	6010B	01/12/2012 10:53	JTR
Calcium , ppm	49.5	0.050	SATURATED PASTE	01/05/2012 09:00	AEH
Carbon, Total , %	0.1	0.1	LECO	01/12/2012 12:57	TDJ
Magnesium , ppm	11.6	0.050	SATURATED PASTE	01/05/2012 09:00	AEH
Total N (Inorg+Org) , %	<0.1	0.1	LECO	01/12/2012 12:57	TDJ
Sodium , ppm	39.9	0.050	SATURATED PASTE	01/05/2012 09:00	AEH

Sample results are reported 'as received' and are not moisture corrected unless noted.

Jimmy R. Ferguson, Assistant Technical Director

Report Number
11-353-0276 **Page:** 2 of 2

Account Number
08077

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Send To: Test America Labs
Ms. Carrie Gamber
301 Alpha Drive
Pittsburgh , PA 15238

Purchase Order :
Report Date : 01/13/2012
Date Received : 12/19/2011

Project : Gunner Lake Sediments, Germantown MD
Project #18008891
Job #180-6792-1

REPORT OF ANALYSIS

Date Sampled : 12/10/2011

Lab Number: 90513
Sample Id : B-3 (0 to 4.5ft) (180-6792-3)

Analysis	Result	Quantitation Limit	Method	Date and Time Test Started	Analyst

Method Reference:
Calculation from lab derived data.
Methods for Chemical Analysis , EPA-600/4-79-020.
Methods of Soil Analysis, Part 3 - Chemical Methods, 2nd Ed. Rev. Soil Science Society of America, Black, C.A et al. 1982, p. 420.
Official Methods of Analysis of AOAC International, 17th Edition, 1998
USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed. Current Revision
Comments:

Sample results are reported 'as received' and are not moisture corrected unless noted.

Jimmy R. Ferguson, Assistant Technical Director

Baltimore/Washington Service Center
5710 Executive Drive Suite 106
Baltimore, MD 21228
Phone (410) 869-0085 Fax (410) 869-0086

1-1 #5

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1/16/2012

Client Information

Client Contact: Graham T Hubbard
Company: AB Consultants, Inc.
Address: 9450 Annapolis Road
City: Lanham
State, Zip: MD, 20706
Phone: 301-306-3091(Tel)
Email: Graham.Hubbard@abconsultantsinc.com
Project Name: Project X Sediemnts (Gunner lake Sediemnts)
Site: GERMANTOWN, MARYLAND

Sampler:
Phone:
Lab PM: Gamber, Carrie L
E-Mail: carrie.gamber@testamericainc.com
Carrier Tracking No(s):
COC No: 180-3046-908.1
Page: Page 1 of 1
Job #:

Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 18008891
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Lloyd_Kahn_Mod - Organic Carbon, Total (TOC)	6020, 7471A, 8081A_LL, 8270C_LL, 9045C	9056A -	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	N	N	X	
B-1 (0 to 4.5 Ft)	12/12/11	10:30 Am	G	Sediment			/	/	/	6	SILTY Sand with gravel w/organic Brown and gray
B-2 (0 to 0.5 Ft)	"	11:30 Pm	G	Sediment			/	/	/	6	Fine Sandy Silty with organic gray
B-3 (0 to 4.5 Ft)	"	12:30 Pm	G	Sediment			/	/	/	6	SILTY Sand with gravel w organic Brown

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown ☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
LUELSEGED, MENGISTU	13/12/11 @ 10:00 AM	AB CONSU	[signature]	12/13/11 1000	Test America
[signature]	12/13/11 1010		[signature]	12/14/11 1000	TAB.H

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TestAmerica Pittsburg
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412)

Test America Labs
Gunner Lake Sediments

11-350-0207
08077
2011-12-16
11:00:42

n of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lab PM: Gamber, Carrie L
E-Mail: carrie.gamber@testamericainc.com
Carrier Tracking No(s):
COC No: 180-34301.1
Page: Page 1 of 1
Job #: 180-6792-1

Client Information (Sub C

Client Contact: Shipping/Receiving
Company: A&L Analytical Laboratories
Address: 2790 Whitten Road,
City: Memphis
State, Zip: TN, 38133
Phone: 901-213-2400(Tel)
Email:
Project Name: Gunner Lake Sediments, Germantown MD
Site:

Due Date Requested: 1/4/2012
TAT Requested (days):
PO #:
WO #:
Project #: 18008891
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ Calcium Carbonate Equivalents, CEC, Soil	SUBCONTRACT/ DTPA Metals, Wetland Conditions	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
B-1 (0 TO 4.5 FT) (180-6792-1)	12/10/11	10:30 Eastern		Sediment			X	X	1	
B-2 (0 TO 0.5 FT) (180-6792-2)	12/10/11	11:30 Eastern		Sediment			X	X	~~2~~ 1	CA 12/15/11

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	12/15/11 18[illegible]	TAPA			
			[signature]	12-16-11/0900	ETC

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1°C

Brooke Shoup - RE: Test America-Gunner Lake Sediments, Germantown, MD/Project #18008891

From: "Gamber, Carrie" <Carrie.Gamber@testamericainc.com>
To: "Brooke Shoup" <bshoup@lmpcorp.com>
Date: 12/19/2011 10:32 AM
Subject: RE: Test America-Gunner Lake Sediments, Germantown, MD/Project #18008891
CC: "Rebekah Barger" <rbarger@etcmemphis.com>, "Randy Thomas" <rthomas@etcme...

Hi Brooke,
I'm sorry about that, here is what I need:

11-350-0207
08077
2011-12-16
11:00:42
Test America Labs
Gunner Lake Sediments

calcium carbonate equivalent
CEC
salinity
SAR
carbon:nitrogen ratio
sulfur
DTPA metals using the wetland conditions

Let meknow if you have any additional questions.
Thanks, Carrie

From: Brooke Shoup [mailto:bshoup@lmpcorp.com]
Sent: Friday, December 16, 2011 12:09 PM
To: Gamber, Carrie
Cc: Rebekah Barger; Randy Thomas
Subject: Test America-Gunner Lake Sediments, Germantown, MD/Project #18008891

Carrie,

I believe some of your analysis requested were cut off on the chain of custody. Please take a look at the analysis requested and let me know what you need.

CCE/CEC/Sali
Metals-**I need to know specifically what metals you need**
Wetland conditions- **I do not know what this is, can you be more specific?**

Also, we received 3 samples for this site but sample B-1 & B-2 are listed on 1 chain of custody and sample B-3 is listed on a separate chain of custody. Do you want me to log these together or separate?

Please advise.

Thank you,

Brooke Shoup
Client Services/Log-In

TestAmerica Pittsburg
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412)

Test America Labs
Gunner Lake Sediments, Germantown MD

11-353-0276
03077
2011-12-19
13:17:07

n of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lab PM: Gamber, Carrie L
E-Mail: carrie.gamber@testamericainc.com
Carrier Tracking No(s):
COC No: 180-34304.1
Page: Page 1 of 1
Job #: 180-6792-1

Client Information (Sub C

Client Contact: Shipping/Receiving
Company: A&L Analytical Laboratories
Address: 2790 Whitten Road,
City: Memphis
State, Zip: TN, 38133
Phone: 901-213-2400(Tel)
Email:
Project Name: Gunner Lake Sediments, Germantown MD
Site:

Due Date Requested: 1/4/2012
TAT Requested (days):
PO #:
WO #:
Project #: 18008891
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ Calcium Carbonate Equivalents, CEC, Soil	SUBCONTRACT/ DTPA Metals, Wetland Conditions	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
B-3 (0 TO 4.5 FT) (180-6792-3)	12/10/11	12:30 Eastern		Sediment			X	X	1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify)

Method of Shipment:

Empty Kit Relinquished by: Date: Time:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	12/15/11 18:00	TAPA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			[signature]	12-16-11/09:00	ETC
Relinquished by:	Date/Time:	Company	Received by:		

Cooler Temperature(s) °C and Other Remarks: 10°C

Custody Seals Intact: Custody Seal No.:

Brooke Shoup - RE: Test America-Gunner Lake Sediments, Germantown, MD/Project #18008891

From: "Gamber, Carrie" <Carrie.Gamber@testamericainc.com>
To: "Brooke Shoup" <bshoup@lmpcorp.com>
Date: 12/19/2011 10:32 AM
Subject: RE: Test America-Gunner Lake Sediments, Germantown, MD/Project #18008891
CC: "Rebekah Barger" <rbarger@etcmemphis.com>, "Randy Thomas" <rthomas@etcme...

Hi Brooke,
I'm sorry about that, here is what I need:

Test America Labs
Gunner Lake Sediments, Germantown MD
11-353-0276
08077
2011-12-19
13:17:07

calcium carbonate equivalent
CEC
salinity
SAR
carbon:nitrogen ratio
sulfur
DTPA metals using the wetland conditions

Let meknow if you have any additional questions.
Thanks, Carrie

From: Brooke Shoup [mailto:bshoup@lmpcorp.com]
Sent: Friday, December 16, 2011 12:09 PM
To: Gamber, Carrie
Cc: Rebekah Barger; Randy Thomas
Subject: Test America-Gunner Lake Sediments, Germantown, MD/Project #18008891

Carrie,

I believe some of your analysis requested were cut off on the chain of custody. Please take a look at the analysis requested and let me know what you need.

CCE/CEC/Sali
Metals-**I need to know specifically what metals you need**
Wetland conditions- **I do not know what this is, can you be more specific?**

Also, we received 3 samples for this site but sample B-1 & B-2 are listed on 1 chain of custody and sample B-3 is listed on a separate chain of custody. Do you want me to log these together or separate?

Please advise.

Thank you,

Brooke Shoup
Client Services/Log-In

From: (410) 869-0085
Ken Ives
STL BALTIMORE
5710 Executive Drive
Suite 106
Baltimore, MD 21228

Origin ID: MTNA

FedEx Express

J112011080502 25

Ship Date: 13DEC11
ActWgt: 44.0 LB
CAD: 1030460/INET3210

Delivery Address Bar Code

SHIP TO: (412) 963-7058 BILL RECIPIENT

Sample Receiving
Test America Pittsburgh
301 ALPHA DR
RIDC PARK
PITTSBURGH, PA 15238

Ref # AB Consultants
Invoice #
PO #
Dept #

WED - 14 DEC A2
STANDARD OVERNIGHT

TRK# 7978 3560 9826
0201

ZP AGCA

15238
PA-US
PIT

50FG1/859F/F5F4

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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TestAmerica Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Gamber, Carrier L	Carrier Tracking No(s):	COC No: 180-34394.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: carrie.gamber@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 180-6792-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 1/4/2012			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #:			
Email:	WO #:			
Project Name: Gunner Lake Sediments, Germantown MD	Project #: 18008891			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 1613B, Dioxins/Furans	Total Number of containers	Special Instructions/Note:
				Preservation Code:					
B-1 (0 TO 4.5 FT) (180-6792-1)	12/10/11	10:30 Eastern		Sediment			X	1	
B-2 (0 TO 0.5 FT) (180-6792-2)	12/10/11	11:30 Eastern		Sediment			X	1	
B-3 (0 TO 4.5 FT) (180-6792-3)	12/10/11	12:30 Eastern		Sediment			X	1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time: 12/15/11 18:00	Company TAPA	Received by:	Date/Time: 12/16/11 1345	Company TAL WS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4°C

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL PITTSBURGH PM KD

LOT# (QUANTIMS ID) G1L190413 QUOTE# 89938 LOCATION W2A

Checked (✓)

DATE RECEIVED 12/16/11 TIME RECEIVED 900 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☐ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☐ TAL ☑ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☑ INTACT ☐ BROKEN ☐ N/A ☐ ☑

CUSTODY SEAL #(S) 407375

COC #(S) 180-34394.1 ☐ ☑

TEMPERATURE BLANK Observed: 0 Corrected: 1

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 2,2,2 Average 2 Corrected Average 2

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☑ #5 ☐ ☐ OTHER ☐ ☑

	Initials	Date
	JS	12/16/11

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... BJ ☑

LOGGED IN BY..... JS ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

	Initials	Date
	JS	12/16/11

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Bottle Lot Inventory

Lot ID: G1L190413

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*																				
VOAh*																				
VOAmeoh																				
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
____AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
125AGJmeoh																				
____CGJ																				
500CGJ																				
250CGJ			1																	
125CGJ	1	1																		
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
_____"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid **s** = sulfuric acid **na** = sodium hydroxide **n** = nitric acid **zn** = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

ORIGIN ID: AGCA (412) 963-7058
SAMPLE RECEIVING
TEST AMERICA LABORATORIES INC
301 ALPHA DR

PITTSBURGH, PA 152381330
UNITED STATES US

SHIP DATE: 15DEC11
ACTWGT: 11.0 LB
CAD: 741733/CAFE2509

BILL THIRD PARTY

TO SAMPLE RECIEVING
TEST AMERICA SACRAMENTO
880 RIVERSIDE PARKWAY

WEST SACRAMENTO CA 95605
(916) 373-6300 REF: SAMP-LES
DEPT: SAMPLE RECEIVING

FedEx Express

FRI - 16 DEC A1
PRIORITY OVERNIGHT

TRK# 0201 4342 6971 0409

XH BLUA

95605
CA-US SMF

Part # 156148-434 RIT2 10/11

Login Sample Receipt Checklist

Client: AB Consultants, Inc.

Job Number: 180-6792-1

Login Number: 6792
List Number: 1
Creator: Gamber, Tom

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: AB Consultants, Inc.

Job Number: 180-6792-1

Login Number: 6792
List Number: 1
Creator: May, Joel M

List Source: TestAmerica Buffalo
List Creation: 12/31/11 10:09 AM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AB Consultants, Inc.

Job Number: 180-6792-1

Login Number: 6792
List Number: 1
Creator: Maddux, Ann

List Source: TestAmerica North Canton
List Creation: 12/20/11 04:36 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: AB Consultants, Inc.

Job Number: 180-6792-1

Login Number: 6792
List Number: 2
Creator: Maddux, Ann

List Source: TestAmerica North Canton
List Creation: 12/21/11 04:54 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 3

TEST AMERICA, INC. – ANALYICAL REPORT 2

TAI JOB ID : 180-6792-1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 180-7603-1
Client Project/Site: Gunner Lake Sediments

For:
AB Consultants, Inc.
9450 Annapolis Road
Lanham, Maryland 20706

Attn: Graham T Hubbard

Authorized for release by:
1/25/2012 1:13:31 PM

Carrie Gamber
Project Manager II
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

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

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

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Case Narrative

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Job ID: 180-7603-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-7603-1

Comments
The samples were prepared for DTPA metals for the wetland and terrestrial conditions. The samples for the wetland conditions were not prepared under anerobic conditions. The sample volume was not received undisturbed.

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

Metals
Method(s) 3010A: Several samples were digested at a reduced volume due to the sample matrix.

Method(s) 6020: The serial dilution performed for the following sample(s) associated with batch 26648 was outside control limits: B-1 (0 to 4.5 FT) WETLAND (180-7603-4)

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Definitions/Glossary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes

Glossary

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

Certification Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	ACLASS	DoD ELAP		ADE-1422
TestAmerica Pittsburgh	Arkansas	State Program	6	88-0690
TestAmerica Pittsburgh	California	NELAC	9	4224CA
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAC	1	203011
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	New York	NELAC	2	11182
TestAmerica Pittsburgh	North Carolina	North Carolina DENR	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	USDA		P330-10-00139
TestAmerica Pittsburgh	USDA	USDA		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia	West Virginia DEP	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800

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

Sample Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-7603-1	B-1(0 to 4.5 FT)	Water	01/19/12 15:00	01/20/12 12:10
180-7603-2	B-2 (0 to 0.5 FT)	Water	01/19/12 15:00	01/20/12 12:10
180-7603-3	B-3 (0 to 4.5 FT)	Water	01/19/12 15:00	01/20/12 12:10
180-7603-4	B-1 (0 to 4.5 FT) WETLAND	Water	01/20/12 12:00	01/20/12 12:10
180-7603-5	B-2 (0 to 0.5 FT) WETLAND	Water	01/20/12 12:00	01/20/12 12:10
180-7603-6	B-3 (0 to 4.5 FT) WETLAND	Water	01/20/12 12:00	01/20/12 12:10
180-7603-7	B-1 (0 to 4.5 FT) TERRESTRIAL	Water	01/20/12 12:00	01/20/12 12:10
180-7603-8	B-2 (0 to 0.5 FT) TERRESTRIAL	Water	01/20/12 12:00	01/20/12 12:10
180-7603-9	B-3 (0 to 4.5 FT) TERRESTRIAL	Water	01/20/12 12:00	01/20/12 12:10
180-7603-10	DTPA BLANK	Water	01/20/12 12:00	01/20/12 12:10

Method Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
9040B	pH	SW846	TAL PIT

Protocol References:

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

Laboratory References:

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

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Client Sample ID: B-1(0 to 4.5 FT)

Lab Sample ID: 180-7603-1
Matrix: Water
Date Collected: 01/19/12 15:00
Date Received: 01/20/12 12:10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.39	HF	0.100	0.100	SU			01/20/12 11:03	1

Client Sample ID: B-2 (0 to 0.5 FT)

Lab Sample ID: 180-7603-2
Matrix: Water
Date Collected: 01/19/12 15:00
Date Received: 01/20/12 12:10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.44	HF	0.100	0.100	SU			01/20/12 11:06	1

Client Sample ID: B-3 (0 to 4.5 FT)

Lab Sample ID: 180-7603-3
Matrix: Water
Date Collected: 01/19/12 15:00
Date Received: 01/20/12 12:10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.66	HF	0.100	0.100	SU			01/20/12 11:09	1

Client Sample ID: B-1 (0 to 4.5 FT) WETLAND

Lab Sample ID: 180-7603-4
Matrix: Water
Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 14:23	1
Arsenic	6.7	B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 14:23	1
Cadmium	7.3		5.0	0.57	ug/L		01/23/12 16:51	01/24/12 14:23	1
Chromium	32	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 14:23	1
Copper	550	B	10	1.2	ug/L		01/23/12 16:51	01/24/12 14:23	1
Nickel	540		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 14:23	1
Lead	1000		5.0	0.096	ug/L		01/23/12 16:51	01/24/12 14:23	1
Zinc	2000		25	4.8	ug/L		01/23/12 16:51	01/24/12 14:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:30	1

Client Sample ID: B-2 (0 to 0.5 FT) WETLAND

Lab Sample ID: 180-7603-5
Matrix: Water
Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 14:46	1
Arsenic	30	B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 14:46	1
Cadmium	3.5	J	5.0	0.57	ug/L		01/23/12 16:51	01/24/12 14:46	1
Chromium	75	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 14:46	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Client Sample ID: B-2 (0 to 0.5 FT) WETLAND

Lab Sample ID: 180-7603-5
Matrix: Water

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	120	B	10	1.2	ug/L		01/23/12 16:51	01/24/12 14:46	1
Nickel	1400		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 14:46	1
Lead	58		5.0	0.096	ug/L		01/23/12 16:51	01/24/12 14:46	1
Zinc	1400		25	4.8	ug/L		01/23/12 16:51	01/24/12 14:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J	0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:32	1

Client Sample ID: B-3 (0 to 4.5 FT) WETLAND

Lab Sample ID: 180-7603-6
Matrix: Water

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 14:50	1
Arsenic	3.8	J B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 14:50	1
Cadmium	3.4	J	5.0	0.57	ug/L		01/23/12 16:51	01/24/12 14:50	1
Chromium	32	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 14:50	1
Copper	350	B	10	1.2	ug/L		01/23/12 16:51	01/24/12 14:50	1
Nickel	300		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 14:50	1
Lead	620		5.0	0.096	ug/L		01/23/12 16:51	01/24/12 14:50	1
Zinc	1200		25	4.8	ug/L		01/23/12 16:51	01/24/12 14:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:34	1

Client Sample ID: B-1 (0 to 4.5 FT) TERRESTRIAL

Lab Sample ID: 180-7603-7
Matrix: Water

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 14:55	1
Arsenic	2.6	J B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 14:55	1
Cadmium	8.4		5.0	0.57	ug/L		01/23/12 16:51	01/24/12 14:55	1
Chromium	39	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 14:55	1
Copper	780	B	10	1.2	ug/L		01/23/12 16:51	01/24/12 14:55	1
Nickel	630		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 14:55	1
Lead	960		5.0	0.096	ug/L		01/23/12 16:51	01/24/12 14:55	1
Zinc	2800		25	4.8	ug/L		01/23/12 16:51	01/24/12 14:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042	J	0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:36	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Client Sample ID: B-2 (0 to 0.5 FT) TERRESTRIAL

Lab Sample ID: 180-7603-8

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Matrix: Water

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 14:59	1
Arsenic	13	B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 14:59	1
Cadmium	24		5.0	0.57	ug/L		01/23/12 16:51	01/24/12 14:59	1
Chromium	34	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 14:59	1
Copper	1900	B	10	1.2	ug/L		01/23/12 16:51	01/24/12 14:59	1
Nickel	1600		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 14:59	1
Lead	230		5.0	0.096	ug/L		01/23/12 16:51	01/24/12 14:59	1
Zinc	7100		25	4.8	ug/L		01/23/12 16:51	01/24/12 14:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.070	J	0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:37	1

Client Sample ID: B-3 (0 to 4.5 FT) TERRESTRIAL

Lab Sample ID: 180-7603-9

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Matrix: Water

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 15:03	1
Arsenic	2.5	J B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 15:03	1
Cadmium	5.8		5.0	0.57	ug/L		01/23/12 16:51	01/24/12 15:03	1
Chromium	32	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 15:03	1
Copper	460	B	10	1.2	ug/L		01/23/12 16:51	01/24/12 15:03	1
Nickel	290		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 15:03	1
Lead	580		5.0	0.096	ug/L		01/23/12 16:51	01/24/12 15:03	1
Zinc	1300		25	4.8	ug/L		01/23/12 16:51	01/24/12 15:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:39	1

Client Sample ID: DTPA BLANK

Lab Sample ID: 180-7603-10

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Matrix: Water

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.18	ug/L		01/23/12 16:51	01/24/12 15:07	1
Arsenic	1.9	J B	5.0	1.5	ug/L		01/23/12 16:51	01/24/12 15:07	1
Cadmium	ND		5.0	0.57	ug/L		01/23/12 16:51	01/24/12 15:07	1
Chromium	20	B	10	2.7	ug/L		01/23/12 16:51	01/24/12 15:07	1
Copper	6.4	J B	10	1.2	ug/L		01/23/12 16:51	01/24/12 15:07	1
Nickel	ND		5.0	0.87	ug/L		01/23/12 16:51	01/24/12 15:07	1
Lead	1.5	J	5.0	0.096	ug/L		01/23/12 16:51	01/24/12 15:07	1
Zinc	28		25	4.8	ug/L		01/23/12 16:51	01/24/12 15:07	1

Client Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Client Sample ID: DTPA BLANK

Lab Sample ID: 180-7603-10

Date Collected: 01/20/12 12:00
Date Received: 01/20/12 12:10

Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:41	1

QC Sample Results

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-26648/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26791 — **Prep Batch: 26648**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.036	ug/L		01/23/12 16:51	01/24/12 14:10	1
Arsenic	0.621	J	1.0	0.29	ug/L		01/23/12 16:51	01/24/12 14:10	1
Cadmium	ND		1.0	0.11	ug/L		01/23/12 16:51	01/24/12 14:10	1
Chromium	1.86	J	2.0	0.54	ug/L		01/23/12 16:51	01/24/12 14:10	1
Copper	0.407	J	2.0	0.24	ug/L		01/23/12 16:51	01/24/12 14:10	1
Nickel	ND		1.0	0.17	ug/L		01/23/12 16:51	01/24/12 14:10	1
Lead	ND		1.0	0.019	ug/L		01/23/12 16:51	01/24/12 14:10	1
Zinc	ND		5.0	0.96	ug/L		01/23/12 16:51	01/24/12 14:10	1

Lab Sample ID: LCS 180-26648/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26791 — **Prep Batch: 26648**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	48.2		ug/L		96	80 - 120
Arsenic	40.0	38.6		ug/L		97	80 - 120
Cadmium	50.0	47.2		ug/L		94	80 - 120
Chromium	200	195		ug/L		97	80 - 120
Copper	250	242		ug/L		97	80 - 120
Nickel	500	478		ug/L		96	80 - 120
Lead	20.0	18.7		ug/L		94	80 - 120
Zinc	500	455		ug/L		91	80 - 120

Lab Sample ID: LCSD 180-26648/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26791 — **Prep Batch: 26648**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	50.0	46.9		ug/L		94	80 - 120	3	20
Arsenic	40.0	39.1		ug/L		98	80 - 120	1	20
Cadmium	50.0	45.8		ug/L		92	80 - 120	3	20
Chromium	200	191		ug/L		96	80 - 120	2	20
Copper	250	243		ug/L		97	80 - 120	0	20
Nickel	500	471		ug/L		94	80 - 120	1	20
Lead	20.0	18.1		ug/L		91	80 - 120	3	20
Zinc	500	461		ug/L		92	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-26565/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26599 — **Prep Batch: 26565**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		01/23/12 04:42	01/23/12 08:23	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 180-26565/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26599 — **Prep Batch: 26565**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			2.50	2.46		ug/L		98	80 - 120		

Lab Sample ID: 180-7594-G-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 26599 — **Prep Batch: 26565**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		1.00	0.993		ug/L		99	75 - 125		

Lab Sample ID: 180-7594-G-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 26599 — **Prep Batch: 26565**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	0.975		ug/L		98	75 - 125	2	20

Method: 9040B - pH

Lab Sample ID: LCS 180-26436/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26436

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.040		SU		101	99 - 101		

Lab Sample ID: 180-7606-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 26436

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.57	HF		6.580	HF	SU				0.2	2

QC Association Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

Metals

Prep Batch: 26565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-7594-G-3-B MS	Matrix Spike	Dissolved	Water	7470A	
180-7594-G-3-C MSD	Matrix Spike Duplicate	Dissolved	Water	7470A	
180-7603-4	B-1 (0 to 4.5 FT) WETLAND	Total/NA	Water	7470A	
180-7603-5	B-2 (0 to 0.5 FT) WETLAND	Total/NA	Water	7470A	
180-7603-6	B-3 (0 to 4.5 FT) WETLAND	Total/NA	Water	7470A	
180-7603-7	B-1 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	7470A	
180-7603-8	B-2 (0 to 0.5 FT) TERRESTRIAL	Total/NA	Water	7470A	
180-7603-9	B-3 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	7470A	
180-7603-10	DTPA BLANK	Total/NA	Water	7470A	
LCS 180-26565/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 180-26565/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 26599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-7594-G-3-B MS	Matrix Spike	Dissolved	Water	7470A	26565
180-7594-G-3-C MSD	Matrix Spike Duplicate	Dissolved	Water	7470A	26565
180-7603-4	B-1 (0 to 4.5 FT) WETLAND	Total/NA	Water	7470A	26565
180-7603-5	B-2 (0 to 0.5 FT) WETLAND	Total/NA	Water	7470A	26565
180-7603-6	B-3 (0 to 4.5 FT) WETLAND	Total/NA	Water	7470A	26565
180-7603-7	B-1 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	7470A	26565
180-7603-8	B-2 (0 to 0.5 FT) TERRESTRIAL	Total/NA	Water	7470A	26565
180-7603-9	B-3 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	7470A	26565
180-7603-10	DTPA BLANK	Total/NA	Water	7470A	26565
LCS 180-26565/2-A	Lab Control Sample	Total/NA	Water	7470A	26565
MB 180-26565/1-A	Method Blank	Total/NA	Water	7470A	26565

Prep Batch: 26648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-7603-4	B-1 (0 to 4.5 FT) WETLAND	Total/NA	Water	3010A	
180-7603-5	B-2 (0 to 0.5 FT) WETLAND	Total/NA	Water	3010A	
180-7603-6	B-3 (0 to 4.5 FT) WETLAND	Total/NA	Water	3010A	
180-7603-7	B-1 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	3010A	
180-7603-8	B-2 (0 to 0.5 FT) TERRESTRIAL	Total/NA	Water	3010A	
180-7603-9	B-3 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	3010A	
180-7603-10	DTPA BLANK	Total/NA	Water	3010A	
LCS 180-26648/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 180-26648/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
MB 180-26648/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 26791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-7603-4	B-1 (0 to 4.5 FT) WETLAND	Total/NA	Water	6020	26648
180-7603-5	B-2 (0 to 0.5 FT) WETLAND	Total/NA	Water	6020	26648
180-7603-6	B-3 (0 to 4.5 FT) WETLAND	Total/NA	Water	6020	26648
180-7603-7	B-1 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	6020	26648
180-7603-8	B-2 (0 to 0.5 FT) TERRESTRIAL	Total/NA	Water	6020	26648
180-7603-9	B-3 (0 to 4.5 FT) TERRESTRIAL	Total/NA	Water	6020	26648
180-7603-10	DTPA BLANK	Total/NA	Water	6020	26648
LCS 180-26648/2-A	Lab Control Sample	Total/NA	Water	6020	26648
LCSD 180-26648/3-A	Lab Control Sample Dup	Total/NA	Water	6020	26648
MB 180-26648/1-A	Method Blank	Total/NA	Water	6020	26648

QC Association Summary

Client: AB Consultants, Inc.
Project/Site: Gunner Lake Sediments

TestAmerica Job ID: 180-7603-1

General Chemistry

Analysis Batch: 26436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-7603-1	B-1(0 to 4.5 FT)	Total/NA	Water	9040B	
180-7603-2	B-2 (0 to 0.5 FT)	Total/NA	Water	9040B	
180-7603-3	B-3 (0 to 4.5 FT)	Total/NA	Water	9040B	
180-7606-B-1 DU	Duplicate	Total/NA	Water	9040B	
LCS 180-26436/1	Lab Control Sample	Total/NA	Water	9040B	

Baltimore/Washington Service Center
5710 Executive Drive Suite 106
Baltimore, MD 21228
Phone (410) 869-0085 Fax (410) 869-0086

1-1 #5

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1/25/2012

Client Information

Client Contact: Graham T Hubbard
Company: AB Consultants, Inc.
Address: 9450 Annapolis Road
City: Lanham
State, Zip: MD, 20706
Phone: 301-306-3091(Tel)
Email: Graham.Hubbard@abconsultantsinc.com
Project Name: Project X Sediemnts (Gunner lake Sediemnts)
Site: GERMANTOWN, MARYLAND

Sampler:
Phone:
Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 18008891
SSOW#:

Lab PM: Gamber, Carrie L
E-Mail: carrie.gamber@testamericainc.com
Carrier Tracking No(s):
COC No: 180-3046-908.1
Page: Page 1 of 1
Job #:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Lloyd_Kahn_Mod - Organic Carbon, Total (TOC)	6020, 7471A, 8081A_LL, 8270C_LL, 9045C	9056A -	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	N	N	X	
B-1 (0 to 4.5 Ft)	12/12/11	10:30 Am	G	Sediment			/	/	/	6	SILTY Sand with gravel w/organic Brown and gray
B-2 (0 to 0.5 Ft)	"	11:30 Pm	G	Sediment			/	/	/	6	Fine Sandy Silty with organic gray
B-3 (0 to 4.5 Ft)	"	12:30 Pm	G	Sediment			/	/	/	6	SILTY Sand with gravel w organic Brown

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown ☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
LUELSEGED, MENGISTU	13/12/11 @ 10:00 AM	AB CONSU	[signature]	12/13/11 1000	Test America
[signature]	12/13/11 1010		[signature]	12/14/11 1000	TAO.H

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

From: (410) 869-0085
Ken Ives
STL BALTIMORE
5710 Executive Drive
Suite 106
Baltimore, MD 21228

Origin ID: MTNA

FedEx Express

J112011080502 25

Ship Date: 13DEC11
ActWgt: 44.0 LB
CAD: 1030460/INET3210

Delivery Address Bar Code

SHIP TO: (412) 963-7058 BILL RECIPIENT

Sample Receiving
Test America Pittsburgh
301 ALPHA DR
RIDC PARK
PITTSBURGH, PA 15238

Ref # AB Consultants
Invoice #
PO #
Dept #

WED - 14 DEC A2
STANDARD OVERNIGHT

TRK# 7978 3560 9826
0201

ZP AGCA

15238
PA-US
PIT

50FG1/859F/F5F4

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: AB Consultants, Inc.

Job Number: 180-7603-1

Login Number: 7603
List Number: 1
Creator: Gamber, Carrie L

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 4

ALS ENVIRONMENTAL LAB – BIO TEST REPORT

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

July 18, 2012

Mr. Carlos Parra
AB Consultants, Inc.
9450 Annapolis Road
Lanham, MD 20706

Certificate of Analysis

Project Name:	**2012-GUNNERS**	Workorder:	**9949774**
Purchase Order:		Workorder ID:	**Gunner's Lake, Germanstown MD**

Dear Mr. Parra,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, February 01, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

CC: Mr. Robert Boyd

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9949774 Gunner's Lake, Germanstown MD Discard Date: 08/01/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9949774001	B-1	Solid	1/31/12 15:30	2/1/12 10:10	Customer
9949774002	B-2	Solid	1/31/12 15:53	2/1/12 10:10	Customer
9949774003	B-3	Solid	1/31/12 16:15	2/1/12 10:10	Customer

Workorder Comments:

This workorder was modified to correct a calculation error involving the fecal coliform RDL values. AGM 07/18/12

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as “analyze immediately” require analysis within 15 minutes of collection. Any “analyze immediately” parameters not listed under the header “Field Parameters” are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9949774 Gunner's Lake, Germanstown MD

Lab ID: **9949774001** Date Collected: 1/31/2012 15:30 Matrix: Solid

Sample ID: **B-1** Date Received: 2/1/2012 10:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	46.9		%	0.1	SM20-2540 G			2/2/12 11:50	KAK	A
Total Solids	53.1		%	0.1	SM20-2540 G			2/2/12 11:50	KAK	A
MICROBIOLOGY										
Fecal Coliforms	ND	1,2	col/gm Dry Wt	18.8	SM20-9222 D			2/1/12 14:53	LLJ	A

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9949774 Gunner's Lake, Germanstown MD

Lab ID: **9949774002** Date Collected: 1/31/2012 15:53 Matrix: Solid

Sample ID: **B-2** Date Received: 2/1/2012 10:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	71.3		%	0.1	SM20-2540 G			2/2/12 11:50	KAK	A
Total Solids	28.7		%	0.1	SM20-2540 G			2/2/12 11:50	KAK	A
MICROBIOLOGY										
Fecal Coliforms	ND	2,3	col/gm Dry Wt	34.9	SM20-9222 D			2/1/12 14:55	LLJ	A

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9949774 Gunner's Lake, Germanstown MD

Lab ID: **9949774003** Date Collected: 1/31/2012 16:15 Matrix: Solid

Sample ID: **B-3** Date Received: 2/1/2012 10:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	22.2		%	0.1	SM20-2540 G			2/2/12 11:50	KAK	A
Total Solids	77.8		%	0.1	SM20-2540 G			2/2/12 11:50	KAK	A
MICROBIOLOGY										
Fecal Coliforms	ND	2,4	col/gm Dry Wt	12.9	SM20-9222 D			2/1/12 14:57	LLJ	A

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9949774 Gunner's Lake, Germanstown MD

PARAMETER QUALIFIERS\FLAGS

[1] This sample was analyzed approximately 23 hours & 25 minutes after sampling.

[2] EPA 503 regulations do not specify a holding time for fecal coliform on a sludge sample.

[3] This sample was analyzed approximately 23 hours after sampling.

[4] This sample was analyzed approximately 22 hours & 45 minutes after sampling.

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER (INSTRUCTIONS ON THE BACK)

Page ___ of ___
Courier:
Tracking #: 8H 8240 3032

9949774

Co. Name: AB CONSULTANTS, INC
Contact (Report to): CARLOS PARRA Phone: 301-306-3091
Address: 9450 ANNAPOLIS Rd LANHAM, MD 20706

Bill to (if different than Report to): AB CONSULTANTS, INC 9450 ANNAPOLIS RD LANHAM, MD 20706 PO#:
Project Name/#: GUNNERS LAKE, Germantown, MD ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [ ] -Y Carlos.parra@abconsultantsinc.com
Fax? [ ] -Y No.:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Total Coliform	Fecal Coliform
1	B-1	Samples shall Be Run for fecal Coliform By 9221 E	1/31/12	3:30pm	G	SL	1	1
2	B-2		1/31/12	3:53pm	G	SL	1	1
3	B-3		1/31/12	4:15pm	G	SL	1	1
4								
5								
6								
7								
8								

***Container Type: PL PL
***Container Size: 125mL 125mL
***Preservative: Na2S2O3 Na2S2O3

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

(completed by Sample Receiver)
Performed by: [illegible]
Cooler Temp: 2°
Therm. ID: TH21
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	N	N	N	Y	

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y	N	N	N

SAMPLED BY (Please Print): LAUREL SEELED MENDISTU
LOGGED BY (signature): K. Shaw DATE 2/1/12 TIME 1345
REVIEWED BY (signature): Summer Lutter DATE 2/2/12 TIME 1112

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1			2 [illegible]	2/1/12	1010
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
EDDs Required? [ ] If yes, format type:
DOD Criteria Required?
SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [✓] NJ [ ] NY [ ] PA [ ] Other
ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY Rev 6/2011

ATTACHMENTS 5A, 5B & 5C

SUMMARY OF INORGANIC METALS

AND

SEMIVOLATILE COMPOUNDS

SUMMARY of INGORANIC METALS
Gunners Lake
3-Feb-12

Attachment 5-A

Chemical Constituent	**Units**				**MDE Soil Standards**			
		B-1	B-2	B-3	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil -to-Groundwater	Anticipated Typical Concentrations
Lab Sample ID		180-2792-1	180-2792-2	180-2792-3				
		Sediment	Sediment	Sediment				
		(0 to 4.5 FT)	(0 to 0.5 FT)	(0 to 4.5 FT)				
Inorganic Metals								
Aluminum	mg/kg	8000	21000	5100	7800	100000		19000
Antimony	mg/kg	0.21	1.1	0.044	3.1	41	13	
Arsenic	mg/kg	1.7	4.3	3.2	0.43	1.9	0.026	4.9
Beryllium	mg/kg	0.53	1.1	0.39	16	200	1200	
Cadmium	mg/kg	0.27	0.5	0.13	3.9	51	27	
Chromium	mg/kg	27	57	15	23	310	42	30
Colbalt	mg/kg	11	20	11				
Copper	mg/kg	23	66	17	310	4100	11000	
Iron	mg/kg	18000	38000	26000	5500	72000		26000
Lead	mg/kg	16	34	13	400	1000		
Managanese	mg/kg	210	770	200	160	2000	950	1400
Nickel	mg/kg	29	54	15	160	2000		
Selenium	mg/kg	0.43	1.1	0.21	39	510	19	
Potassium	mg/kg	740	1800	360				
Silver	mg/kg	0.03	0.092	0.01	39	510	31	
Thallium	mg/kg	0.087	0.24	0.034	0.55	7.2	3.6	
Tin	mg/kg	0.96	2.8	1.2	4700	61000		
Zinc	mg/kg	100	210	120	2300	3100	14000	
Sodium	mg/kg	87	240	36				
Indicates Generic MDE Clean-up Standards								
Exceeds MDE Residential Clean-up Standards								

SUMMARY of METALS- WATER SAMPLES
Gunners Lake
3-Feb-12
Attachment 5-B

Chemical Constituent	**Units**								**MDE Soil Standards**		
		B-1	B-1	B-2	B-2	B-3	B-3	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil -to-Groundwater	Anticipated Typical Concentrations
Lab Sample ID											
		Water	Terrestrial	Water	Terrestrial	Water	Terrestrial				
		(0 to 4.5)	(0 to 4.5 FT)	(0 to 4.5)	(0 to 0.5)	(0 to 4.5)	(0 to 4.5)				
Inorganic Metals											
Aluminum	mg/kg							7800	100000		19000
Antimony	mg/kg							3.1	41	13	
Arsenic	mg/kg	0.0067	0.67	0.03	0.013	0.0038	0.0025	0.43	1.9	0.026	4.9
Beryllium	mg/kg							16	200	1200	
Cadmium	mg/kg	0.0073	0.0084	0.0035	0.024	0.0034	0.0058	3.9	51	27	
Chromium	mg/kg	0.032	0.039	0.075	0.034	0.32	0.032	23	310	42	30
Colbalt	mg/kg										
Copper	mg/kg	0.550	0.780	0.12	1.9	0.35	0.46	310	4100	11000	
Iron	mg/kg							5500	72000		26000
Lead	mg/kg	1	0.96	0.058	0.23	0.62	0.58	400	1000		
Managanese	mg/kg							160	2000	950	1400
Nickel	mg/kg	0.54	0.63	1.4	1600	0.30	0.29	160	2000		
Selenium	mg/kg							39	510	19	
Potassium	mg/kg	740									
Silver	mg/kg	ND	ND	ND	ND	ND	ND	39	510	31	
Thallium	mg/kg							0.55	7.2	3.6	
Tin	mg/kg							4700	61000		
Zinc	mg/kg	2	2.8	1.4	7.1	1.2	1.3	2300	3100	14000	
Sodium	mg/kg										
Mercury	mg/kg	ND	0.00004								
Indicates Generic MDE Clean-up Standards											
Exceeds MDE Residential Clean-up Standards											

SUMMARY of SEMIVOLATILE COMPOUNDS (SVOC's)
3-Feb-12

Attachment 5-C

Chemical Constituent	**Units**				**USEPA Soil Screening**		**MDE Soil Standards**		
		B-1	B-2	B-3	Residential Soil	Industrial Soil	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil -to-Groundwater
Lab Sample ID		180-2792-1	180-2792-2	180-2792-3					
		Sediment	Sediment	Sediment					
		(0 to 4.5 FT)	(0 to 0.5 FT)	(0 to 4.5 FT)					
Semivolatile Organic Compounds									
(SVOCs)									
Acenaphtylene*	mg/kg	0.011	ND	ND			470	6100	100
Acenaphthene*	mg/kg	0.11	ND	ND			470	6100	100
Anthracene*	mg/kg	4.6	0.097	0.041			2300	31000	470
Benzo [a] anthracene*	mg/kg	1.7	0.97	0.28	0.15	2.1	0.22	3.90	0.48
Benzo[a]pyrene*	mg/kg	1.8	1.6	0.36	0.015	0.21	0.022	0.39	0.12
Benzo[b]fluoranthene*	mg/kg	2.1	2.3	0.38	0.15	2.1	0.22	3.90	1.5
Benzo[k]fluoranthene*	mg/kg	0.75	1	0.2			2.2	39	15
Benzo[g,h,i]perylene*	mg/kg	1.1	1.5	0.28			230	3100	680
Bis(2-ethylhexyl) phthalate	mg/kg	0.49	3.2	0.82			46	200	2900
Butyl benzyl phthalate	mg/kg	0.19	1	0.53			46	200	2900
Chrysene*	mg/kg	2	1.8	0.4			22	390	48
Dibenz(a,h)anthracene*	mg/kg	0.21	0.27	0.052	0.015	0.21	0.022	0.39	0.46
Diethyl phthalate	mg/kg	0.025	ND	ND			6300	82000	450
Fluoranthene*	mg/kg	4.2	ND	0.75			310	4100	6300
Fluorene*	mg/kg	0.2	ND	0.018			310	4100	140
Indeno[1,2,3-cd]pyrene*	mg/kg	0.99	1.3	0.23	0.15	0.21	0.2	3.90	4.2
2- Methylnaphthalene*	mg/kg	0.0046	0.23	0.041			31	410	4.4
Naphthalene*	mg/kg	0.025	0.19	0.035			160	2000	0.15
Phenanthrene*	mg/kg	2.7	0.72	0.3			2300	31000	470
Pyrene*	mg/kg	3.7	2.1	0.6			230	3100	680
Sum PAH's*	mg/kg	26.2	14.07	3.96					
Indicates Generic MDE Clean-up Standards									
Exceeds MDE Residential Clean-up Standards and USPA Residental Soil Screening Levels									
PAH Compounds									

ATTACHMENTS 6A & 6B

SUMMARY OF BACTERIOLOGICAL, DIOXINS, PCB CONGENERS AND ORGANOCHLORIDE PESTICIDES

SUMMARY OF BACTERIOLOGICAL, DIOXINS and PCB CONGENERS
Gunners Lake
3-Feb-12
Attachment 6-A

Chemical Constituent	**Units**				MDE Soil Standards		
		B-1	B-2	B-3	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil- to Groundwater
Lab Sample ID		180-2792-1	180-2792-2	180-2792-3			
		Sediment	Sediment	Sediment			
		(0 to 4.5 FT)	(0 to 0.5 FT)	(0 to 4.5 FT)			
Bacteriological		B-1	B-2	B-3			
Fecal Coliform	MPN/gm	ND	ND	ND			
Dioxins		B-1	B-2	B-3			
2,3,7,8- TCDD	pg/g	0.25	0.44	ND			
Total - TCDD	pg/g	1.2	3.6	ND			
Total HpCDD	pg/g	92	350	8.3			
OCDD	pg/g	2100	8000	210			
Total TCDF	pg/g	1.4	5.7	0.085			
Total PeCDF	pg/g	1.8	6.3	0.27			
Total HxCDF	pg/g	5.6	15	0.89			
Total HpCDF	pg/g	11	37	0.88			
OCDF	pg/g	14	46	0.74			
PCB Congeners							
PCB 8	mg/kg	0.00017	0.0022	0.00016			
PCB 18	mg/kg	0.00024	0.00071	ND			
PCB 28	mg/kg	0.00028	0.00044	ND			
PCB 87	mg/kg	0.00016	ND	ND			
PCB 101	mg/kg	ND	0.00049	ND			
PCB 118	mg/kg	ND	ND	ND			
PCB 138	mg/kg	ND	0.0017	ND			
PCB 153	mg/kg	ND	0.0019	ND			
PCB Total	mg/kg	0.00085	0.00744	0.00016	0.32	1.4	0.41

SUMMARY OF ORGANIC PESTICIDES
Gunners Lake
3-Feb-12

Attachment 6-B

Chemical Constituent	**Units**				MDE Soil Standards		
		B-1	B-2	B-3	Residential Clean-up Standard	Non-Residential Clean-up Standard	Soil -to-Groundwater
Lab Sample ID		180-2792-1	180-2792-2	180-2792-3			
		Sediment	Sediment	Sediment			
		(0 to 4.5 FT)	(0 to 0.5 FT)	(0 to 4.5 FT)			
Organochloride Pesticides		B-1	B-2	B-3			
4,4'-DDD	mg/kg	ND	ND	ND	2.7	12	11
4,4'-DDE	mg/kg	ND	ND	ND	1.9	8.4	35
4,4'-DDT	mg/kg	ND	ND	ND	1.9	8.4	1.2
beta-BHC	mg/kg	ND	ND	ND			
Chlordane (technical)	mg/kg	ND	ND	ND	1.8	8.2	0.92
beta-BHC	mg/kg	ND	ND	ND			
Dieldrin	mg/kg	ND	ND	ND	0.04	0.18	0.0022
Endosulfan sulfate	mg/kg	ND	ND	ND	47	610	20
Endrin	mg/kg	ND	ND	ND	2.3	31	5.4
gamma-BHC (Lindane)	mg/kg	ND	0.0026	ND			
Heptachlor epoxide	mg/kg	ND	ND	ND	0.7	0.31	0.025
Methoxychlor	mg/kg	ND	ND	ND	39	510	310
Toxaphene	mg/kg	ND	ND	ND	0.58	2.6	0.63

ATTACHMENT 7

SITE PHOTOGRAPHS

View Gunners Lake looking from north to south

View of eastern side of lake near SB-1

View of pedestrian trail and railing

View of silt in northern end of lake

View Gunners Lake looking from east looking west

View of eastern side of lake near SB-1

View of silt in northern end of lake

View of debris and vegetation in lake

View Gunners Lake from west looking east

View of western side of lake south of SB-3

View of vegetation along lake edge

View of silt area in lake

View Gunners Lake looking from center looking west

View of vegetation along the north side of the lake

View of silt in near SB-3

View of shallow water depth

View Gunners Lake looking from center looking west

View of vegetation along the north side of the lake

View of silt in near SB-3

View of shallow water depth

View Gunners Lake from west looking north

View of western side of lake south of SB-2

View of vegetation along lake edge

View of silt area in lake

View Gunners Lake from north looking south

View of clear view looking south

View of vegetation along lake edge

View of silt in foreground

View Gunners Lake from west looking east

View of clear view looking north

View of vegetation along lake edge

View of island in lake

View SB-1 being prepared

Silt has filled in lake

View of vegetation along lake edge

Boring being prepared with hand auger

View of PVC pipe being installed for SB-1

Silt has filled in lake

View of vegetation along lake edge

Boring area being prepared for hand auger

ATTACHMENT 8

REGIONAL SCREENING LEVEL (RSL)

RESIDENT SOIL TABLE NOVEMBER 2011

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
1.8E-02	C	5.1E-06	C	1.5E-01	I					1	0.1		1.4E+09		ALAR	1596-84-5	3.6E+01	1.1E+02	6.5E+05	2.7E+01	1.2E+04	4.2E+04		9.2E+03
8.7E-03	I			4.0E-03	I					1	0.1		1.4E+09		Acephate	30560-19-1	7.4E+01	2.3E+02		5.6E+01	3.1E+02	1.1E+03		2.4E+02
		2.2E-06	I			9.0E-03	I	V		1		1.1E+05	1.4E+09	9.4E+03	Acetaldehyde	75-07-0			1.0E+01	1.0E+01			8.8E+01	8.8E+01
				2.0E-02	I					1	0.1		1.4E+09		Acetochlor	34256-82-1					1.6E+03	5.6E+03		1.2E+03
				9.0E-01	I	3.1E+01	A	V		1		1.1E+05	1.4E+09	1.5E+04	Acetone	67-64-1					7.0E+04		4.7E+05	6.1E+04
				3.0E-03	P	6.0E-02	P	V		1		1.1E+05	1.4E+09	2.6E+04	Acetone Cyanohydrin	75-86-5					2.3E+02		1.6E+03	2.0E+02
						6.0E-02	I	V		1		1.3E+05	1.4E+09	1.4E+04	Acetonitrile	75-05-8							8.7E+02	8.7E+02
				1.0E-01	I			V		1		2.5E+03	1.4E+09	6.4E+04	Acetophenone	98-86-2					7.8E+03			7.8E+03
3.8E+00	C	1.3E-03	C							1	0.1		1.4E+09		Acetylaminofluorene, 2-	53-96-3	1.7E-01	5.3E-01	2.5E+03	1.3E-01				
				5.0E-04	I	2.0E-05	I	V		1		2.3E+04	1.4E+09	7.4E+03	Acrolein	107-02-8					3.9E+01		1.6E-01	1.5E-01
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	1	0.1		1.4E+09		Acrylamide	79-06-1	3.0E-01	1.0E+00	1.3E+04	2.3E-01	1.6E+02	5.6E+02	8.5E+06	1.2E+02
				5.0E-01	I	1.0E-03	I			1	0.1		1.4E+09		Acrylic Acid	79-10-7					3.9E+04	1.4E+05	1.4E+06	3.0E+04
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1		1.1E+04	1.4E+09	8.3E+03	Acrylonitrile	107-13-1	1.2E+00		3.0E-01	2.4E-01	3.1E+03		1.7E+01	1.7E+01
						6.0E-03	P			1	0.1		1.4E+09		Adiponitrile	111-69-3							8.5E+06	8.5E+06
5.6E-02	C			1.0E-02	I					1	0.1		1.4E+09		Alachlor	15972-60-8	1.1E+01	3.6E+01		8.7E+00	7.8E+02	2.8E+03		6.1E+02
				1.0E-03	I					1	0.1		1.4E+09		Aldicarb	116-06-3					7.8E+01	2.8E+02		6.1E+01
				1.0E-03	I					1	0.1		1.4E+09		Aldicarb Sulfone	1646-88-4					7.8E+01	2.8E+02		6.1E+01
1.7E+01	I	4.9E-03	I	3.0E-05	I					1	0.1		1.4E+09		Aldrin	309-00-2	3.8E-02	1.2E-01	6.8E+02	2.9E-02	2.3E+00	8.4E+00		1.8E+00
				2.5E-01	I					1	0.1		1.4E+09		Ally	74223-64-6					2.0E+04	7.0E+04		1.5E+04
				5.0E-03	I	1.0E-04	X			1	0.1		1.4E+09		Allyl Alcohol	107-18-6					3.9E+02	1.4E+03	1.4E+05	3.0E+02
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1		1.4E+03	1.4E+09	1.7E+03	Allyl Chloride	107-05-1	3.0E+01		6.9E-01	6.8E-01			1.8E+00	1.8E+00
				1.0E+00	P	5.0E-03	P			1			1.4E+09		Aluminum	7429-90-5					7.8E+04		7.1E+06	7.7E+04
				4.0E-04	I					1			1.4E+09		Aluminum Phosphide	20859-73-8					3.1E+01			3.1E+01
				3.0E-04	I					1	0.1		1.4E+09		Amdro	67485-29-4					2.3E+01	8.4E+01		1.8E+01
				9.0E-03	I					1	0.1		1.4E+09		Ametryn	834-12-8					7.0E+02	2.5E+03		5.5E+02
2.1E+01	C	6.0E-03	C							1	0.1		1.4E+09		Aminobiphenyl, 4-	92-67-1	3.0E-02	9.6E-02	5.5E+02	2.3E-02				
				8.0E-02	P					1	0.1		1.4E+09		Aminophenol, m-	591-27-5					6.3E+03	2.2E+04		4.9E+03
				2.0E-02	P					1	0.1		1.4E+09		Aminophenol, p-	123-30-8					1.6E+03	5.6E+03		1.2E+03
				2.5E-03	I					1	0.1		1.4E+09		Amitraz	33089-61-1					2.0E+02	7.0E+02		1.5E+02
						1.0E-01	I			1					Ammonia	7664-41-7								
				2.0E-01	I					1			1.4E+09		Ammonium Sulfamate	7773-06-0					1.6E+04			1.6E+04
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			1	0.1		1.4E+09		Aniline	62-53-3	1.1E+02	3.5E+02	2.1E+06	8.5E+01	5.5E+02	2.0E+03	1.4E+06	4.3E+02
4.0E-02	P			2.0E-03	X					1	0.1		1.4E+09		Anthraquinone, 9,10-	84-65-1	1.6E+01	5.1E+01		1.2E+01	1.6E+02	5.6E+02		1.2E+02
				4.0E-04	I					0.15			1.4E+09		Antimony (metallic)	7440-36-0					3.1E+01			3.1E+01
				5.0E-04	H					0.15			1.4E+09		Antimony Pentoxide	1314-60-9					3.9E+01			3.9E+01
				9.0E-04	H					0.15			1.4E+09		Antimony Potassium Tartrate	11071-15-1					7.0E+01			7.0E+01
				4.0E-04	H					0.15			1.4E+09		Antimony Tetroxide	1332-81-6					3.1E+01			3.1E+01
						2.0E-04	I			0.15			1.4E+09		Antimony Trioxide	1309-64-4							2.8E+05	2.8E+05
				1.3E-02	I					1	0.1		1.4E+09		Apollo	74115-24-5					1.0E+03	3.6E+03		7.9E+02
2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1		1.4E+09		Aramite	140-57-8	2.6E+01	8.1E+01	4.7E+05	1.9E+01	3.9E+03	1.4E+04		3.1E+03
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C			1	0.03		1.4E+09		Arsenic, Inorganic	7440-38-2	4.3E-01	4.5E+00	7.7E+02	3.9E-01	2.3E+01	2.8E+02	2.1E+04	2.2E+01
				3.5E-06	C	5.0E-05	I			1			1.4E+09		Arsine	7784-42-1					2.7E-01		7.1E+04	2.7E-01
				9.0E-03	I					1	0.1		1.4E+09		Assure	76578-14-8					7.0E+02	2.5E+03		5.5E+02
				5.0E-02	I					1	0.1		1.4E+09		Asulam	3337-71-1					3.9E+03	1.4E+04		3.1E+03
2.3E-01	C			3.5E-02	I					1	0.1		1.4E+09		Atrazine	1912-24-9	2.8E+00	8.8E+00		2.1E+00	2.7E+03	9.8E+03		2.1E+03
8.8E-01	C	2.5E-04	C							1	0.1		1.4E+09		Auramine	492-80-8	7.3E-01	2.3E+00	1.3E+04	5.5E-01				
				4.0E-04	I					1	0.1		1.4E+09		Avermectin B1	65195-55-3					3.1E+01	1.1E+02		2.4E+01
1.1E-01	I	3.1E-05	I					V		1			1.4E+09	5.6E+05	Azobenzene	103-33-3	5.8E+00		4.4E+01	5.1E+00				
				2.0E-01	I	5.0E-04	H			0.07			1.4E+09		Barium	7440-39-3					1.6E+04		7.1E+05	1.5E+04
				4.0E-03	I					1	0.1		1.4E+09		Baygon	114-26-1					3.1E+02	1.1E+03		2.4E+02
				3.0E-02	I					1	0.1		1.4E+09		Bayleton	43121-43-3					2.3E+03	8.4E+03		1.8E+03
				2.5E-02	I					1	0.1		1.4E+09		Baythroid	68359-37-5					2.0E+03	7.0E+03		1.5E+03
				3.0E-01	I					1	0.1		1.4E+09		Benefin	1861-40-1					2.3E+04	8.4E+04		1.8E+04
				5.0E-02	I					1	0.1		1.4E+09		Benomyl	17804-35-2					3.9E+03	1.4E+04		3.1E+03
				3.0E-02	I					1	0.1		1.4E+09		Bentazon	25057-89-0					2.3E+03	8.4E+03		1.8E+03
				1.0E-01	I			V		1		1.2E+03	1.4E+09	2.4E+04	Benzaldehyde	100-52-7					7.8E+03			7.8E+03
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1		1.8E+03	1.4E+09	3.8E+03	Benzene	71-43-2	1.2E+01		1.2E+00	1.1E+00	3.1E+02		1.2E+02	8.6E+01
				2.0E-04	X					1	0.1		1.4E+09		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1					1.6E+01	5.6E+01		1.2E+01
				1.0E-03	P			V		1		1.3E+03	1.4E+09	2.1E+04	Benzenethiol	108-98-5					7.8E+01			7.8E+01
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1	0.1		1.4E+09		Benzidine	92-87-5	6.5E-04	2.2E-03	1.9E+01	5.0E-04	2.3E+02	8.4E+02		1.8E+02
				4.0E+00	I					1	0.1		1.4E+09		Benzoic Acid	65-85-0					3.1E+05	1.1E+06		2.4E+05
1.3E+01	I							V		1		3.2E+02	1.4E+09	7.3E+04	Benzotrichloride	98-07-7	4.9E-02			4.9E-02				
				1.0E-01	P					1	0.1		1.4E+09		Benzyl Alcohol	100-51-6					7.8E+03	2.8E+04		6.1E+03
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1		1.5E+03	1.4E+09	2.7E+04	Benzyl Chloride	100-44-7	3.8E+00		1.4E+00	1.0E+00	1.6E+02		2.9E+01	2.4E+01
		2.4E-03	I	2.0E-03	I	2.0E-05	I			0.007			1.4E+09		Beryllium and compounds	7440-41-7			1.4E+03	1.4E+03	1.6E+02		2.8E+04	1.6E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				1.0E-04	I					1	0.1		1.4E+09		Bidrin	141-66-2					7.8E+00	2.8E+01		6.1E+00
				9.0E-03	P					1	0.1		1.4E+09		Bifenox	42576-02-3					7.0E+02	2.5E+03		5.5E+02
				1.5E-02	I					1	0.1		1.4E+09		Biphenthrin	82657-04-3					1.2E+03	4.2E+03		9.2E+02
8.0E-03	X			5.0E-02	I	4.0E-04	X	V		1		2.1E+02	1.4E+09	1.2E+05	Biphenyl, 1,1'-	92-52-4	8.0E+01			8.0E+01	3.9E+03		5.1E+01	5.1E+01
7.0E-02	H	1.0E-05	H	4.0E-02	I			V		1		1.0E+03	1.4E+09	3.8E+04	Bis(2-chloro-1-methylethyl) ether	108-60-1	9.1E+00		9.2E+00	4.6E+00	3.1E+03			3.1E+03
				3.0E-03	P					1	0.1		1.4E+09		Bis(2-chloroethoxy)methane	111-91-1					2.3E+02	8.4E+02		1.8E+02
1.1E+00	I	3.3E-04	I					V		1		5.1E+03	1.4E+09	4.6E+04	Bis(2-chloroethyl)ether	111-44-4	5.8E-01		3.4E-01	2.1E-01				
1.4E-02	I	2.4E-06	C	2.0E-02	I					1	0.1		1.4E+09		Bis(2-ethylhexyl)phthalate	117-81-7	4.6E+01	1.4E+02	1.4E+06	3.5E+01	1.6E+03	5.6E+03		1.2E+03
2.2E+02	I	6.2E-02	I					V		1		4.2E+03	1.4E+09	2.0E+03	Bis(chloromethyl)ether	542-88-1	2.9E-03		7.9E-05	7.7E-05				
				5.0E-02	I					1	0.1		1.4E+09		Bisphenol A	80-05-7					3.9E+03	1.4E+04		3.1E+03
				2.0E-01	I	2.0E-02	H			1			1.4E+09		Boron And Borates Only	7440-42-8					1.6E+04		2.8E+07	1.6E+04
				4.0E-02	C	1.3E-02	C			1			1.4E+09		Boron Trifluoride	7637-07-2					3.1E+03		1.8E+07	3.1E+03
7.0E-01	I			4.0E-03	I					1			1.4E+09		Bromate	15541-45-4	9.1E-01			9.1E-01	3.1E+02			3.1E+02
2.0E+00	X	6.0E-04	X					V		1		2.4E+03	1.4E+09	6.4E+03	Bromo-2-chloroethane, 1-	107-04-0	3.2E-01		2.6E-02	2.4E-02				
				8.0E-03	I	6.0E-02	I	V		1		6.8E+02	1.4E+09	9.0E+03	Bromobenzene	108-86-1					6.3E+02		5.6E+02	3.0E+02
						4.0E-02	X	V		1		4.0E+03	1.4E+09	3.9E+03	Bromochloromethane	74-97-5							1.6E+02	1.6E+02
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	1.4E+09	4.3E+03	Bromodichloromethane	75-27-4	1.0E+01		2.8E-01	2.7E-01	1.6E+03			1.6E+03
7.9E-03	I	1.1E-06	I	2.0E-02	I					1	0.1		1.4E+09		Bromoform	75-25-2	8.1E+01	2.6E+02	3.0E+06	6.2E+01	1.6E+03	5.6E+03		1.2E+03
				1.4E-03	I	5.0E-03	I	V		1		3.6E+03	1.4E+09	1.5E+03	Bromomethane	74-83-9					1.1E+02		7.8E+00	7.3E+00
				5.0E-03	H					1	0.1		1.4E+09		Bromophos	2104-96-3					3.9E+02	1.4E+03		3.1E+02
				2.0E-02	I					1	0.1		1.4E+09		Bromoxynil	1689-84-5					1.6E+03	5.6E+03		1.2E+03
				2.0E-02	I					1	0.1		1.4E+09		Bromoxynil Octanoate	1689-99-2					1.6E+03	5.6E+03		1.2E+03
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1		6.7E+02	1.4E+09	9.3E+02	Butadiene, 1,3-	106-99-0	1.9E-01		7.6E-02	5.4E-02			1.9E+00	1.9E+00
				1.0E-01	I					1	0.1		1.4E+09		Butanol, N-	71-36-3					7.8E+03	2.8E+04		6.1E+03
1.9E-03	P			2.0E-01	I					1	0.1		1.4E+09		Butyl Benzyl Phthlate	85-68-7	3.4E+02	1.1E+03		2.6E+02	1.6E+04	5.6E+04		1.2E+04
				2.0E+00	P	3.0E+01	P			1	0.1		1.4E+09		Butyl alcohol, sec-	78-92-2					1.6E+05	5.6E+05	4.3E+10	1.2E+05
				5.0E-02	I					1	0.1		1.4E+09		Butylate	2008-41-5					3.9E+03	1.4E+04		3.1E+03
2.0E-04	C	5.7E-08	C							1	0.1		1.4E+09		Butylated hydroxyanisole	25013-16-5	3.2E+03	1.0E+04	5.8E+07	2.4E+03				
				5.0E-02	P			V		1		1.1E+02	1.4E+09	8.8E+03	Butylbenzene, n-	104-51-8					3.9E+03			3.9E+03
				1.0E+00	I					1	0.1		1.4E+09		Butylphthalyl Butylglycolate	85-70-1					7.8E+04	2.8E+05		6.1E+04
				2.0E-02	A					1	0.1		1.4E+09		Cacodylic Acid	75-60-5					1.6E+03	5.6E+03		1.2E+03
		1.8E-03	I	1.0E-03	I	2.0E-05	C			0.025	0.001		1.4E+09		Cadmium (Diet)	7440-43-9			1.8E+03	1.8E+03	7.8E+01	7.0E+02	2.8E+04	7.0E+01
		1.8E-03	I	5.0E-04	I	2.0E-05	C			0.05	0.001				Cadmium (Water)	7440-43-9								
				5.0E-01	I					1	0.1		1.4E+09		Caprolactam	105-60-2					3.9E+04	1.4E+05		3.1E+04
1.5E-01	C	4.3E-05	C	2.0E-03	I					1	0.1		1.4E+09		Captafol	2425-06-1	4.3E+00	1.3E+01	7.7E+04	3.2E+00	1.6E+02	5.6E+02		1.2E+02
2.3E-03	C	6.6E-07	C	1.3E-01	I					1	0.1		1.4E+09		Captan	133-06-2	2.8E+02	8.8E+02	5.0E+06	2.1E+02	1.0E+04	3.6E+04		7.9E+03
				1.0E-01	I					1	0.1		1.4E+09		Carbaryl	63-25-2					7.8E+03	2.8E+04		6.1E+03
				5.0E-03	I					1	0.1		1.4E+09		Carbofuran	1563-66-2					3.9E+02	1.4E+03		3.1E+02
				1.0E-01	I	7.0E-01	I	V		1		7.4E+02	1.4E+09	1.3E+03	Carbon Disulfide	75-15-0					7.8E+03		9.2E+02	8.2E+02
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		1		4.6E+02	1.4E+09	1.6E+03	Carbon Tetrachloride	56-23-5	9.1E+00		6.5E-01	6.1E-01	3.1E+02		1.7E+02	1.1E+02
				1.0E-02	I					1	0.1		1.4E+09		Carbosulfan	55285-14-8					7.8E+02	2.8E+03		6.1E+02
				1.0E-01	I					1	0.1		1.4E+09		Carboxin	5234-68-4					7.8E+03	2.8E+04		6.1E+03
						9.0E-04	I			1			1.4E+09		Ceric oxide	1306-38-3							1.3E+06	1.3E+06
				1.0E-01	I					1	0.1		1.4E+09		Chloral Hydrate	302-17-0					7.8E+03	2.8E+04		6.1E+03
				1.5E-02	I					1	0.1		1.4E+09		Chloramben	133-90-4					1.2E+03	4.2E+03		9.2E+02
4.0E-01	H									1	0.1		1.4E+09		Chloranil	118-75-2	1.6E+00	5.0E+00		1.2E+00				
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I			1	0.04		1.4E+09		Chlordane	12789-03-6	1.8E+00	1.4E+01	3.3E+04	1.6E+00	3.9E+01	3.5E+02	9.9E+05	3.5E+01
1.0E+01	I	4.6E-03	C	3.0E-04	I					1	0.1		1.4E+09		Chlordecone (Kepone)	143-50-0	6.4E-02	2.0E-01	7.2E+02	4.9E-02	2.3E+01	8.4E+01		1.8E+01
				7.0E-04	A					1	0.1		1.4E+09		Chlorfenvinphos	470-90-6					5.5E+01	2.0E+02		4.3E+01
				2.0E-02	I					1	0.1		1.4E+09		Chlorimuron, Ethyl-	90982-32-4					1.6E+03	5.6E+03		1.2E+03
				1.0E-01	I	1.5E-04	A			1			1.4E+09		Chlorine	7782-50-5					7.8E+03		2.1E+05	7.5E+03
				3.0E-02	I	2.0E-04	I			1			1.4E+09		Chlorine Dioxide	10049-04-4					2.3E+03		2.8E+05	2.3E+03
				3.0E-02	I					1			1.4E+09		Chlorite (Sodium Salt)	7758-19-2					2.3E+03			2.3E+03
						5.0E+01	I	V		1		1.2E+03	1.4E+09	1.1E+03	Chloro-1,1-difluoroethane, 1-	75-68-3							5.8E+04	5.8E+04
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		1		7.5E+02	1.4E+09	1.2E+03	Chloro-1,3-butadiene, 2-	126-99-8			9.4E-03	9.4E-03	1.6E+03		2.4E+01	2.4E+01
4.6E-01	H									1	0.1		1.4E+09		Chloro-2-methylaniline HCl, 4-	3165-93-3	1.4E+00	4.4E+00		1.1E+00				
1.0E-01	P	7.7E-05	C	3.0E-03	X					1	0.1		1.4E+09		Chloro-2-methylaniline, 4-	95-69-2	6.4E+00	2.0E+01	4.3E+04	4.9E+00	2.3E+02	8.4E+02		1.8E+02
2.7E-01	X									1	0.1		1.4E+09		Chloroacetaldehyde, 2-	107-20-0	2.4E+00	7.5E+00		1.8E+00				
				2.0E-03	H					1	0.1		1.4E+09		Chloroacetic Acid	79-11-8					1.6E+02	5.6E+02		1.2E+02
						3.0E-05	I			1	0.1		1.4E+09		Chloroacetophenone, 2-	532-27-4							4.3E+04	4.3E+04
2.0E-01	P			4.0E-03	I					1	0.1		1.4E+09		Chloroaniline, p-	106-47-8	3.2E+00	1.0E+01		2.4E+00	3.1E+02	1.1E+03		2.4E+02
				2.0E-02	I	5.0E-02	P	V		1		7.6E+02	1.4E+09	6.9E+03	Chlorobenzene	108-90-7					1.6E+03		3.6E+02	2.9E+02
1.1E-01	C	3.1E-05	C	2.0E-02	I					1	0.1		1.4E+09		Chlorobenzilate	510-15-6	5.8E+00	1.8E+01	1.1E+05	4.4E+00	1.6E+03	5.6E+03		1.2E+03
				3.0E-02	X					1	0.1		1.4E+09		Chlorobenzoic Acid, p-	74-11-3					2.3E+03	8.4E+03		1.8E+03
				3.0E-03	P	3.0E-01	P	V		1		1.2E+02	1.4E+09	7.3E+03	Chlorobenzotrifluoride, 4-	98-56-6					2.3E+02		2.3E+03	2.1E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				4.0E-02	P			V		1		7.3E+02	1.4E+09	1.9E+03	Chlorobutane, 1-	109-69-3					3.1E+03			3.1E+03
						5.0E+01	I	V		1		1.7E+03	1.4E+09	1.0E+03	Chlorodifluoromethane	75-45-6							5.3E+04	5.3E+04
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1		2.5E+03	1.4E+09	2.8E+03	Chloroform	67-66-3	2.1E+01		3.0E-01	2.9E-01	7.8E+02		2.9E+02	2.1E+02
						9.0E-02	I	V		1		1.3E+03	1.4E+09	1.3E+03	Chloromethane	74-87-3							1.2E+02	1.2E+02
2.4E+00	C	6.9E-04	C					V		1		2.6E+04	1.4E+09	5.7E+03	Chloromethyl Methyl Ether	107-30-2	2.7E-01		2.0E-02	1.9E-02				
				8.0E-02	I			V		1		1.8E+02	1.4E+09	8.6E+04	Chloronaphthalene, Beta-	91-58-7					6.3E+03			6.3E+03
3.0E-01	P			3.0E-03	P	1.0E-05	X			1	0.1		1.4E+09		Chloronitrobenzene, o-	88-73-3	2.1E+00	6.7E+00		1.6E+00	2.3E+02	8.4E+02	1.4E+04	1.8E+02
6.3E-03	P			1.0E-03	P	6.0E-04	P			1	0.1		1.4E+09		Chloronitrobenzene, p-	100-00-5	1.0E+02	3.2E+02		7.7E+01	7.8E+01	2.8E+02	8.5E+05	6.1E+01
				5.0E-03	I			V		1		2.2E+04	1.4E+09	1.3E+05	Chlorophenol, 2-	95-57-8					3.9E+02			3.9E+02
						4.0E-04	C	V		1		6.2E+02	1.4E+09	5.0E+03	Chloropicrin	76-06-2							2.1E+00	2.1E+00
3.1E-03	C	8.9E-07	C	1.5E-02	I					1	0.1		1.4E+09		Chlorothalonil	1897-45-6	2.1E+02	6.5E+02	3.7E+06	1.6E+02	1.2E+03	4.2E+03		9.2E+02
				2.0E-02	I			V		1		9.1E+02	1.4E+09	8.7E+03	Chlorotoluene, o-	95-49-8					1.6E+03			1.6E+03
				2.0E-02	X			V		1		2.5E+02	1.4E+09	7.9E+03	Chlorotoluene, p-	106-43-4					1.6E+03			1.6E+03
2.4E+02	C	6.9E-02	C							1	0.1		1.4E+09		Chlorozotocin	54749-90-5	2.7E-03	8.4E-03	4.8E+01	2.0E-03				
				2.0E-01	I					1	0.1		1.4E+09		Chlorpropham	101-21-3					1.6E+04	5.6E+04		1.2E+04
				1.0E-03	A					1	0.1		1.4E+09		Chlorpyrifos	2921-88-2					7.8E+01	2.8E+02		6.1E+01
				1.0E-02	H					1	0.1		1.4E+09		Chlorpyrifos Methyl	5598-13-0					7.8E+02	2.8E+03		6.1E+02
				5.0E-02	I					1	0.1		1.4E+09		Chlorsulfuron	64902-72-3					3.9E+03	1.4E+04		3.1E+03
				8.0E-04	H					1	0.1		1.4E+09		Chlorthiophos	60238-56-4					6.3E+01	2.2E+02		4.9E+01
				1.5E+00	I					0.013			1.4E+09		Chromium(III), Insoluble Salts	16065-83-1					1.2E+05			1.2E+05
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M	0.025			1.4E+09		Chromium(VI)	18540-29-9	3.0E-01		1.6E+01	2.9E-01	2.3E+02		1.4E+05	2.3E+02
										0.013			1.4E+09		Chromium, Total	7440-47-3								
		9.0E-03	P	3.0E-04	P	6.0E-06	P			1			1.4E+09		Cobalt	7440-48-4			3.7E+02	3.7E+02	2.3E+01		8.5E+03	2.3E+01
		6.2E-04	I						M	1	0.1				Coke Oven Emissions	8007-45-2								
				4.0E-02	H					1			1.4E+09		Copper	7440-50-8					3.1E+03			3.1E+03
				5.0E-02	I	6.0E-01	C			1	0.1		1.4E+09		Cresol, m-	108-39-4					3.9E+03	1.4E+04	8.5E+08	3.1E+03
				5.0E-02	I	6.0E-01	C			1	0.1		1.4E+09		Cresol, o-	95-48-7					3.9E+03	1.4E+04	8.5E+08	3.1E+03
				5.0E-03	H	6.0E-01	C			1	0.1		1.4E+09		Cresol, p-	106-44-5					3.9E+02	1.4E+03	8.5E+08	3.1E+02
				1.0E-01	X					1	0.1		1.4E+09		Cresol, p-chloro-m-	59-50-7					7.8E+03	2.8E+04		6.1E+03
				1.0E-01	A	6.0E-01	C	V		1		5.0E+04	1.4E+09	3.3E+05	Cresols	1319-77-3					7.8E+03		2.0E+05	7.5E+03
1.9E+00	H			1.0E-03	P			V		1		1.7E+04	1.4E+09	2.0E+04	Crotonaldehyde, trans-	123-73-9	3.4E-01			3.4E-01	7.8E+01			7.8E+01
				1.0E-01	I	4.0E-01	I	V		1		2.7E+02	1.4E+09	6.7E+03	Cumene	98-82-8					7.8E+03		2.8E+03	2.1E+03
2.2E-01	C	6.3E-05	C							1	0.1		1.4E+09		Cupferron	135-20-6	2.9E+00	9.2E+00	5.3E+04	2.2E+00				
8.4E-01	H			2.0E-03	H					1	0.1		1.4E+09		Cyanazine	21725-46-2	7.6E-01	2.4E+00		5.8E-01	1.6E+02	5.6E+02		1.2E+02
															Cyanides									
				4.0E-02	I					1			1.4E+09		~Calcium Cyanide	592-01-8					3.1E+03			3.1E+03
				5.0E-03	I					1			1.4E+09		~Copper Cyanide	544-92-3					3.9E+02			3.9E+02
				2.0E-02	I			V		1		1.0E+07	1.4E+09	5.0E+04	~Cyanide (CN-)	57-12-5					1.6E+03			1.6E+03
				4.0E-02	I			V		1			1.4E+09		~Cyanogen	460-19-5					3.1E+03			3.1E+03
				9.0E-02	I			V		1			1.4E+09		~Cyanogen Bromide	506-68-3					7.0E+03			7.0E+03
				5.0E-02	I			V		1			1.4E+09		~Cyanogen Chloride	506-77-4					3.9E+03			3.9E+03
				6.0E-04	I	8.0E-04	I	V		1			1.4E+09		~Hydrogen Cyanide	74-90-8					4.7E+01		1.1E+06	4.7E+01
				5.0E-02	I					1			1.4E+09		~Potassium Cyanide	151-50-8					3.9E+03			3.9E+03
				2.0E-01	I					0.04			1.4E+09		~Potassium Silver Cyanide	506-61-6					1.6E+04			1.6E+04
				1.0E-01	I					0.04			1.4E+09		~Silver Cyanide	506-64-9					7.8E+03			7.8E+03
				4.0E-02	I					1			1.4E+09		~Sodium Cyanide	143-33-9					3.1E+03			3.1E+03
				2.0E-04	P			V		1		4.6E+03	1.4E+09	7.1E+03	~Thiocyanate	463-56-9					1.6E+01			1.6E+01
				5.0E-02	I					1			1.4E+09		~Zinc Cyanide	557-21-1					3.9E+03			3.9E+03
						6.0E+00	I	V		1		1.2E+02	1.4E+09	1.1E+03	Cyclohexane	110-82-7							7.0E+03	7.0E+03
2.3E-02	H									1	0.1		1.4E+09		Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	2.8E+01	8.8E+01		2.1E+01				
				5.0E+00	I	7.0E-01	P			1	0.1		1.4E+09		Cyclohexanone	108-94-1					3.9E+05	1.4E+06	9.9E+08	3.1E+05
				2.0E-01	I					1	0.1		1.4E+09		Cyclohexylamine	108-91-8					1.6E+04	5.6E+04		1.2E+04
				5.0E-03	I					1	0.1		1.4E+09		Cyhalothrin/karate	68085-85-8					3.9E+02	1.4E+03		3.1E+02
				1.0E-02	I					1	0.1		1.4E+09		Cypermethrin	52315-07-8					7.8E+02	2.8E+03		6.1E+02
				7.5E-03	I					1	0.1		1.4E+09		Cyromazine	66215-27-8					5.9E+02	2.1E+03		4.6E+02
2.4E-01	I	6.9E-05	C							1	0.1		1.4E+09		DDD	72-54-8	2.7E+00	8.4E+00	4.8E+04	2.0E+00				
3.4E-01	I	9.7E-05	C							1	0.1		1.4E+09		DDE, p,p'-	72-55-9	1.9E+00	5.9E+00	3.4E+04	1.4E+00				
3.4E-01	I	9.7E-05	I	5.0E-04	I					1	0.03		1.4E+09		DDT	50-29-3	1.9E+00	2.0E+01	3.4E+04	1.7E+00	3.9E+01	4.7E+02		3.6E+01
				1.0E-02	I					1	0.1		1.4E+09		Dacthal	1861-32-1					7.8E+02	2.8E+03		6.1E+02
				3.0E-02	I					1	0.1		1.4E+09		Dalapon	75-99-0					2.3E+03	8.4E+03		1.8E+03
7.0E-04	I			7.0E-03	I					1	0.1		1.4E+09		Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.1E+02	2.9E+03		6.9E+02	5.5E+02	2.0E+03		4.3E+02
				4.0E-05	I					1	0.1		1.4E+09		Demeton	8065-48-3					3.1E+00	1.1E+01		2.4E+00
1.2E-03	I			6.0E-01	I					1	0.1		1.4E+09		Di(2-ethylhexyl)adipate	103-23-1	5.3E+02	1.7E+03		4.1E+02	4.7E+04	1.7E+05		3.7E+04
6.1E-02	H									1	0.1		1.4E+09		Diallate	2303-16-4	1.0E+01	3.3E+01		8.0E+00				
				7.0E-04	A					1	0.1		1.4E+09		Diazinon	333-41-5					5.5E+01	2.0E+02		4.3E+01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	1.4E+09	3.4E+04	Dibromo-3-chloropropane, 1,2-	96-12-8	1.9E-01		5.5E-03	5.4E-03	1.6E+01		7.2E+00	4.9E+00
				1.0E-02	I					1	0.1		1.4E+09		Dibromobenzene, 1,4-	106-37-6					7.8E+02	2.8E+03		6.1E+02
8.4E-02	I	2.7E-05	C	2.0E-02	I			V		1	0.1	8.0E+02	1.4E+09	8.6E+03	Dibromochloromethane	124-48-1	7.6E+00	2.4E+01	7.7E-01	6.8E-01	1.6E+03	5.6E+03		1.2E+03
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1		1.3E+03	1.4E+09	9.3E+03	Dibromoethane, 1,2-	106-93-4	3.2E-01		3.8E-02	3.4E-02	7.0E+02		8.7E+01	7.8E+01
				1.0E-02	H	4.0E-03	X	V		1		2.8E+03	1.4E+09	6.1E+03	Dibromomethane (Methylene Bromide)	74-95-3					7.8E+02		2.5E+01	2.5E+01
				1.0E-01	I					1	0.1		1.4E+09		Dibutyl Phthalate	84-74-2					7.8E+03	2.8E+04		6.1E+03
				3.0E-04	P					1	0.1		1.4E+09		Dibutyltin Compounds	NA					2.3E+01	8.4E+01		1.8E+01
				3.0E-02	I					1	0.1		1.4E+09		Dicamba	1918-00-9					2.3E+03	8.4E+03		1.8E+03
		4.2E-03	P					V		1		5.2E+02	1.4E+09	1.2E+04	Dichloro-2-butene, 1,4-	764-41-0			6.9E-03	6.9E-03				
		4.2E-03	P					V		1	0.1	5.2E+02	1.4E+09	1.2E+04	Dichloro-2-butene, cis-1,4-	1476-11-5			6.9E-03	6.9E-03				
		4.2E-03	P					V		1	0.1	7.6E+02	1.4E+09	1.2E+04	Dichloro-2-butene, trans-1,4-	110-57-6			6.9E-03	6.9E-03				
5.0E-02	I			4.0E-03	I					1	0.1		1.4E+09		Dichloroacetic Acid	79-43-6	1.3E+01	4.0E+01		9.7E+00	3.1E+02	1.1E+03		2.4E+02
				9.0E-02	I	2.0E-01	H	V		1		3.8E+02	1.4E+09	1.3E+04	Dichlorobenzene, 1,2-	95-50-1					7.0E+03		2.6E+03	1.9E+03
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		1			1.4E+09	1.1E+04	Dichlorobenzene, 1,4-	106-46-7	1.2E+02		2.5E+00	2.4E+00	5.5E+03		9.4E+03	3.5E+03
4.5E-01	I	3.4E-04	C							1	0.1		1.4E+09		Dichlorobenzidine, 3,3'-	91-94-1	1.4E+00	4.5E+00	9.7E+03	1.1E+00				
				9.0E-03	X					1	0.1		1.4E+09		Dichlorobenzophenone, 4,4'-	90-98-2					7.0E+02	2.5E+03		5.5E+02
				2.0E-01	I	1.0E-01	X	V		1		8.5E+02	1.4E+09	9.1E+02	Dichlorodifluoromethane	75-71-8					1.6E+04		9.4E+01	9.4E+01
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1		1.7E+03	1.4E+09	2.2E+03	Dichloroethane, 1,1-	75-34-3	1.1E+02		3.4E+00	3.3E+00	1.6E+04			1.6E+04
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1		3.0E+03	1.4E+09	4.9E+03	Dichloroethane, 1,2-	107-06-2	7.0E+00		4.6E-01	4.3E-01	4.7E+02		3.6E+01	3.3E+01
				5.0E-02	I	2.0E-01	I	V		1		1.2E+03	1.4E+09	1.2E+03	Dichloroethylene, 1,1-	75-35-4					3.9E+03		2.6E+02	2.4E+02
				9.0E-03	H			V		1		1.3E+03	1.4E+09	2.7E+03	Dichloroethylene, 1,2- (Mixed Isomers)	540-59-0					7.0E+02			7.0E+02
				2.0E-03	I			V		1		2.4E+03	1.4E+09	2.7E+03	Dichloroethylene, 1,2-cis-	156-59-2					1.6E+02			1.6E+02
				2.0E-02	I	6.0E-02	P	V		1		1.7E+03	1.4E+09	2.7E+03	Dichloroethylene, 1,2-trans-	156-60-5					1.6E+03		1.7E+02	1.5E+02
				3.0E-03	I					1	0.1		1.4E+09		Dichlorophenol, 2,4-	120-83-2					2.3E+02	8.4E+02		1.8E+02
				1.0E-02	I					1	0.05		1.4E+09		Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					7.8E+02	5.6E+03		6.9E+02
				8.0E-03	I					1	0.1		1.4E+09		Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					6.3E+02	2.2E+03		4.9E+02
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1		1.4E+03	1.4E+09	4.1E+03	Dichloropropane, 1,2-	78-87-5	1.8E+01		9.9E-01	9.4E-01	7.0E+03		1.7E+01	1.7E+01
				2.0E-02	P			V		1		1.5E+03	1.4E+09	7.3E+03	Dichloropropane, 1,3-	142-28-9					1.6E+03			1.6E+03
				3.0E-03	I					1	0.1		1.4E+09		Dichloropropanol, 2,3-	616-23-9					2.3E+02	8.4E+02		1.8E+02
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1		1.6E+03	1.4E+09	3.8E+03	Dichloropropene, 1,3-	542-75-6	6.4E+00		2.3E+00	1.7E+00	2.3E+03		8.0E+01	7.7E+01
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1	0.1		1.4E+09		Dichlorvos	62-73-7	2.2E+00	7.0E+00	4.0E+04	1.7E+00	3.9E+01	1.4E+02	7.1E+05	3.1E+01
				8.0E-03	P	7.0E-03	P	V		1		1.3E+02	1.4E+09	4.4E+03	Dicyclopentadiene	77-73-6					6.3E+02		3.2E+01	3.1E+01
1.6E+01	I	4.6E-03	I	5.0E-05	I					1	0.1		1.4E+09		Dieldrin	60-57-1	4.0E-02	1.3E-01	7.2E+02	3.0E-02	3.9E+00	1.4E+01		3.1E+00
		3.0E-04	C			5.0E-03	I			1	0.1				Diesel Engine Exhaust	NA								
						3.0E-03	C			1	0.1		1.4E+09		Diethanolamine	111-42-2							4.3E+06	4.3E+06
				8.0E-01	I					1	0.1		1.4E+09		Diethyl Phthalate	84-66-2					6.3E+04	2.2E+05		4.9E+04
				3.0E-02	P	1.0E-04	P			1	0.1		1.4E+09		Diethylene Glycol Monobutyl Ether	112-34-5					2.3E+03	8.4E+03	1.4E+05	1.8E+03
				6.0E-02	P	3.0E-04	P			1	0.1		1.4E+09		Diethylene Glycol Monoethyl Ether	111-90-0					4.7E+03	1.7E+04	4.3E+05	3.6E+03
				1.0E-03	P					1	0.1		1.4E+09		Diethylformamide	617-84-5					7.8E+01	2.8E+02		6.1E+01
3.5E+02	C	1.0E-01	C							1	0.1		1.4E+09		Diethylstilbestrol	56-53-1	1.8E-03	5.8E-03	3.3E+01	1.4E-03				
				8.0E-02	I					1	0.1		1.4E+09		Difenzoquat	43222-48-6					6.3E+03	2.2E+04		4.9E+03
				2.0E-02	I					1	0.1		1.4E+09		Diflubenzuron	35367-38-5					1.6E+03	5.6E+03		1.2E+03
						4.0E+01	I	V		1		1.4E+03	1.4E+09	1.2E+03	Difluoroethane, 1,1-	75-37-6							5.2E+04	5.2E+04
4.4E-02	C	1.3E-05	C							1	0.1		1.4E+09		Dihydrosafrole	94-58-6	1.5E+01	4.6E+01	2.5E+05	1.1E+01				
						7.0E-01	P	V		1		2.3E+03	1.4E+09	3.3E+03	Diisopropyl Ether	108-20-3							2.4E+03	2.4E+03
				8.0E-02	I			V		1		5.3E+02	1.4E+09	3.1E+04	Diisopropyl Methylphosphonate	1445-75-6					6.3E+03			6.3E+03
				2.0E-02	I					1	0.1		1.4E+09		Dimethipin	55290-64-7					1.6E+03	5.6E+03		1.2E+03
				2.0E-04	I					1	0.1		1.4E+09		Dimethoate	60-51-5					1.6E+01	5.6E+01		1.2E+01
1.4E-02	H									1	0.1		1.4E+09		Dimethoxybenzidine, 3,3'-	119-90-4	4.6E+01	1.4E+02		3.5E+01				
1.7E-03	P			6.0E-02	P					1	0.1		1.4E+09		Dimethyl methylphosphonate	756-79-6	3.8E+02	1.2E+03		2.9E+02	4.7E+03	1.7E+04		3.7E+03
4.6E+00	C	1.3E-03	C							1	0.1		1.4E+09		Dimethylamino azobenzene [p-]	60-11-7	1.4E-01	4.4E-01	2.5E+03	1.1E-01				
5.8E-01	H									1	0.1		1.4E+09		Dimethylaniline HCl, 2,4-	21436-96-4	1.1E+00	3.5E+00		8.4E-01				
2.0E-01	P			2.0E-03	X					1	0.1		1.4E+09		Dimethylaniline, 2,4-	95-68-1	3.2E+00	1.0E+01		2.4E+00	1.6E+02	5.6E+02		1.2E+02
				2.0E-03	I			V		1		8.3E+02	1.4E+09	3.4E+04	Dimethylaniline, N,N-	121-69-7					1.6E+02			1.6E+02
1.1E+01	P									1	0.1		1.4E+09		Dimethylbenzidine, 3,3'-	119-93-7	5.8E-02	1.8E-01		4.4E-02				
				1.0E-01	P	3.0E-02	I			1	0.1		1.4E+09		Dimethylformamide	68-12-2					7.8E+03	2.8E+04	4.3E+07	6.1E+03
				1.0E-04	X	2.0E-06	X			1	0.1		1.4E+09		Dimethylhydrazine, 1,1-	57-14-7					7.8E+00	2.8E+01	2.8E+03	6.1E+00
5.5E+02	C	1.6E-01	C							1	0.1		1.4E+09		Dimethylhydrazine, 1,2-	540-73-8	1.2E-03	3.7E-03	2.1E+01	8.8E-04				
				2.0E-02	I					1	0.1		1.4E+09		Dimethylphenol, 2,4-	105-67-9					1.6E+03	5.6E+03		1.2E+03
				6.0E-04	I					1	0.1		1.4E+09		Dimethylphenol, 2,6-	576-26-1					4.7E+01	1.7E+02		3.7E+01
				1.0E-03	I					1	0.1		1.4E+09		Dimethylphenol, 3,4-	95-65-8					7.8E+01	2.8E+02		6.1E+01
				1.0E-01	I			V		1		5.5E+00	1.4E+09	2.3E+04	Dimethylterephthalate	120-61-6					7.8E+03			7.8E+03
4.5E-02	C	1.3E-05	C							1	0.1		1.4E+09		Dimethylvinylchloride	513-37-1	1.4E+01	4.5E+01	2.5E+05	1.1E+01				
				8.0E-05	X					1	0.1		1.4E+09		Dinitro-o-cresol, 4,6-	534-52-1					6.3E+00	2.2E+01		4.9E+00
				2.0E-03	I					1	0.1		1.4E+09		Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					1.6E+02	5.6E+02		1.2E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				1.0E-04	P					1	0.1		1.4E+09		Dinitrobenzene, 1,2-	528-29-0					7.8E+00	2.8E+01		6.1E+00
				1.0E-04	I					1	0.1		1.4E+09		Dinitrobenzene, 1,3-	99-65-0					7.8E+00	2.8E+01		6.1E+00
				1.0E-04	P					1	0.1		1.4E+09		Dinitrobenzene, 1,4-	100-25-4					7.8E+00	2.8E+01		6.1E+00
				2.0E-03	I					1	0.1		1.4E+09		Dinitrophenol, 2,4-	51-28-5					1.6E+02	5.6E+02		1.2E+02
6.8E-01	I									1	0.1		1.4E+09		Dinitrotoluene Mixture, 2,4/2,6-	25321-14-6	9.4E-01	3.0E+00		7.2E-01				
3.1E-01	C	8.9E-05	C	2.0E-03	I					1	0.102		1.4E+09		Dinitrotoluene, 2,4-	121-14-2	2.1E+00	6.4E+00	3.7E+04	1.6E+00	1.6E+02	5.5E+02		1.2E+02
				1.0E-03	P					1	0.099		1.4E+09		Dinitrotoluene, 2,6-	606-20-2					7.8E+01	2.8E+02		6.1E+01
				2.0E-03	S					1	0.006		1.4E+09		Dinitrotoluene, 2-Amino-4,6-	35572-78-2					1.6E+02	9.3E+03		1.5E+02
				2.0E-03	S					1	0.009		1.4E+09		Dinitrotoluene, 4-Amino-2,6-	19406-51-0					1.6E+02	6.2E+03		1.5E+02
				1.0E-03	I					1	0.1		1.4E+09		Dinoseb	88-85-7					7.8E+01	2.8E+02		6.1E+01
1.0E-01	I	7.7E-06	C	3.0E-02	I	3.0E+00	C			1	0.1		1.4E+09		Dioxane, 1,4-	123-91-1	6.4E+00	2.0E+01	4.3E+05	4.9E+00	2.3E+03	8.4E+03	4.3E+09	1.8E+03
															Dioxins									
6.2E+03	I	1.3E+00	I							1	0.03		1.4E+09		~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.0E-04	1.1E-03	2.5E+00	9.4E-05				
1.3E+05	C	3.8E+01	C	1.0E-09	A	4.0E-08	C			1	0.03		1.4E+09		~TCDD, 2,3,7,8-	1746-01-6	4.9E-06	5.2E-05	8.7E-02	4.5E-06	7.8E-05	9.3E-04	5.7E+01	7.2E-05
				3.0E-02	I					1	0.1		1.4E+09		Diphenamid	957-51-7					2.3E+03	8.4E+03		1.8E+03
				8.0E-04	X					1	0.1		1.4E+09		Diphenyl Sulfone	127-63-9					6.3E+01	2.2E+02		4.9E+01
				2.5E-02	I					1	0.1		1.4E+09		Diphenylamine	122-39-4					2.0E+03	7.0E+03		1.5E+03
8.0E-01	I	2.2E-04	I							1	0.1		1.4E+09		Diphenylhydrazine, 1,2-	122-66-7	8.0E-01	2.5E+00	1.5E+04	6.1E-01				
				2.2E-03	I					1	0.1		1.4E+09		Diquat	85-00-7					1.7E+02	6.1E+02		1.3E+02
7.4E+00	C	2.1E-03	C							1	0.1		1.4E+09		Direct Black 38	1937-37-7	8.7E-02	2.7E-01	1.6E+03	6.6E-02				
7.4E+00	C	2.1E-03	C							1	0.1		1.4E+09		Direct Blue 6	2602-46-2	8.7E-02	2.7E-01	1.6E+03	6.6E-02				
6.7E+00	C	1.9E-03	C							1	0.1		1.4E+09		Direct Brown 95	16071-86-6	9.6E-02	3.0E-01	1.7E+03	7.3E-02				
				4.0E-05	I					1	0.1		1.4E+09		Disulfoton	298-04-4					3.1E+00	1.1E+01		2.4E+00
				1.0E-02	I					1	0.1		1.4E+09		Dithiane, 1,4-	505-29-3					7.8E+02	2.8E+03		6.1E+02
				2.0E-03	I					1	0.1		1.4E+09		Diuron	330-54-1					1.6E+02	5.6E+02		1.2E+02
				4.0E-03	I					1	0.1		1.4E+09		Dodine	2439-10-3					3.1E+02	1.1E+03		2.4E+02
				2.5E-02	I			V		1		4.1E+02	1.4E+09	1.3E+05	EPTC	759-94-4					2.0E+03			2.0E+03
				6.0E-03	I					1	0.1		1.4E+09		Endosulfan	115-29-7					4.7E+02	1.7E+03		3.7E+02
				2.0E-02	I					1	0.1		1.4E+09		Endothall	145-73-3					1.6E+03	5.6E+03		1.2E+03
				3.0E-04	I					1	0.1		1.4E+09		Endrin	72-20-8					2.3E+01	8.4E+01		1.8E+01
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	1.4E+09	2.0E+04	Epichlorohydrin	106-89-8	6.5E+01		4.1E+01	2.5E+01	4.7E+02		2.1E+01	2.0E+01
						2.0E-02	I	V		1		1.5E+04	1.4E+09	8.2E+03	Epoxybutane, 1,2-	106-88-7							1.7E+02	1.7E+02
				5.0E-03	I					1	0.1		1.4E+09		Ethephon	16672-87-0					3.9E+02	1.4E+03		3.1E+02
				5.0E-04	I					1	0.1		1.4E+09		Ethion	563-12-2					3.9E+01	1.4E+02		3.1E+01
				1.0E-01	P	6.0E-02	P			1	0.1		1.4E+09		Ethoxyethanol Acetate, 2-	111-15-9					7.8E+03	2.8E+04	8.5E+07	6.1E+03
				4.0E-01	H	2.0E-01	I			1	0.1		1.4E+09		Ethoxyethanol, 2-	110-80-5					3.1E+04	1.1E+05	2.8E+08	2.4E+04
				9.0E-01	I			V		1		1.1E+04	1.4E+09	9.3E+03	Ethyl Acetate	141-78-6					7.0E+04			7.0E+04
4.8E-02	H							V		1		2.5E+03	1.4E+09	6.8E+03	Ethyl Acrylate	140-88-5	1.3E+01			1.3E+01				
						1.0E+01	I	V		1		2.1E+03	1.4E+09	1.4E+03	Ethyl Chloride	75-00-3							1.5E+04	1.5E+04
				2.0E-01	I			V		1		1.0E+04	1.4E+09	3.4E+03	Ethyl Ether	60-29-7					1.6E+04			1.6E+04
				9.0E-02	H	3.0E-01	P	V		1		1.1E+03	1.4E+09	6.2E+03	Ethyl Methacrylate	97-63-2					7.0E+03		1.9E+03	1.5E+03
				1.0E-05	I					1	0.1		1.4E+09		Ethyl-p-nitrophenyl Phosphonate	2104-64-5					7.8E-01	2.8E+00		6.1E-01
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		1		4.8E+02	1.4E+09	6.1E+03	Ethylbenzene	100-41-4	5.8E+01		5.9E+00	5.4E+00	7.8E+03		6.4E+03	3.5E+03
				3.0E-02	P					1	0.1		1.4E+09		Ethylene Cyanohydrin	109-78-4					2.3E+03	8.4E+03		1.8E+03
				9.0E-02	P					1	0.1		1.4E+09		Ethylene Diamine	107-15-3					7.0E+03	2.5E+04		5.5E+03
				2.0E+00	I	4.0E-01	C			1	0.1		1.4E+09		Ethylene Glycol	107-21-1					1.6E+05	5.6E+05	5.7E+08	1.2E+05
				1.0E-01	I	1.6E+00	I			1	0.1		1.4E+09		Ethylene Glycol Monobutyl Ether	111-76-2					7.8E+03	2.8E+04	2.3E+09	6.1E+03
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1		1.2E+05	1.4E+09	6.6E+03	Ethylene Oxide	75-21-8	2.1E+00		1.8E-01	1.7E-01			2.0E+02	2.0E+02
4.5E-02	C	1.3E-05	C	8.0E-05	I					1	0.1		1.4E+09		Ethylene Thiourea	96-45-7	1.4E+01	4.5E+01	2.5E+05	1.1E+01	6.3E+00	2.2E+01		4.9E+00
6.5E+01	C	1.9E-02	C							1	0.1		1.4E+09		Ethyleneimine	151-56-4	9.9E-03	3.1E-02	1.7E+02	7.5E-03				
				3.0E+00	I					1	0.1		1.4E+09		Ethylphthalyl Ethyl Glycolate	84-72-0					2.3E+05	8.4E+05		1.8E+05
				8.0E-03	I					1	0.1		1.4E+09		Express	101200-48-0					6.3E+02	2.2E+03		4.9E+02
				2.5E-04	I					1	0.1		1.4E+09		Fenamiphos	22224-92-6					2.0E+01	7.0E+01		1.5E+01
				2.5E-02	I					1	0.1		1.4E+09		Fenpropathrin	39515-41-8					2.0E+03	7.0E+03		1.5E+03
				1.3E-02	I					1	0.1		1.4E+09		Fluometuron	2164-17-2					1.0E+03	3.6E+03		7.9E+02
				4.0E-02	C	1.3E-02	C			1			1.4E+09		Fluoride	16984-48-8					3.1E+03		1.8E+07	3.1E+03
				6.0E-02	I	1.3E-02	C			1			1.4E+09		Fluorine (Soluble Fluoride)	7782-41-4					4.7E+03		1.8E+07	4.7E+03
				8.0E-02	I					1	0.1		1.4E+09		Fluridone	59756-60-4					6.3E+03	2.2E+04		4.9E+03
				2.0E-02	I					1	0.1		1.4E+09		Flurprimidol	56425-91-3					1.6E+03	5.6E+03		1.2E+03
				6.0E-02	I					1	0.1		1.4E+09		Flutolanil	66332-96-5					4.7E+03	1.7E+04		3.7E+03
				1.0E-02	I					1	0.1		1.4E+09		Fluvalinate	69409-94-5					7.8E+02	2.8E+03		6.1E+02
3.5E-03	I			1.0E-01	I					1	0.1		1.4E+09		Folpet	133-07-3	1.8E+02	5.8E+02		1.4E+02	7.8E+03	2.8E+04		6.1E+03
1.9E-01	I									1	0.1		1.4E+09		Fomesafen	72178-02-0	3.4E+00	1.1E+01		2.6E+00				
				2.0E-03	I					1	0.1		1.4E+09		Fonofos	944-22-9					1.6E+02	5.6E+02		1.2E+02
		1.3E-05	I	2.0E-01	I	9.8E-03	A			1	0.1		1.4E+09		Formaldehyde	50-00-0			2.5E+05	2.5E+05	1.6E+04	5.6E+04	1.4E+07	1.2E+04

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															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				9.0E-01	P	3.0E-04	X			1	0.1		1.4E+09		Formic Acid	64-18-6					7.0E+04	2.5E+05	4.3E+05	4.9E+04
				3.0E+00	I					1	0.1		1.4E+09		Fosetyl-AL	39148-24-8					2.3E+05	8.4E+05		1.8E+05
															Furans									
				1.0E-03	X			V		1		1.7E+02	1.4E+09	2.1E+05	~Dibenzofuran	132-64-9					7.8E+01			7.8E+01
				1.0E-03	I			V		1		6.2E+03	1.4E+09	2.8E+03	~Furan	110-00-9					7.8E+01			7.8E+01
3.8E+00	H									1	0.1		1.4E+09		Furazolidone	67-45-8	1.7E-01	5.3E-01		1.3E-01				
				3.0E-03	I	5.0E-02	H			1	0.1		1.4E+09		Furfural	98-01-1					2.3E+02	8.4E+02	7.1E+07	1.8E+02
1.5E+00	C	4.3E-04	C							1	0.1		1.4E+09		Furium	531-82-8	4.3E-01	1.3E+00	7.7E+03	3.2E-01				
3.0E-02	I	8.6E-06	C							1	0.1		1.4E+09		Furmecyclox	60568-05-0	2.1E+01	6.7E+01	3.8E+05	1.6E+01				
				4.0E-04	I					1	0.1		1.4E+09		Glufosinate, Ammonium	77182-82-2					3.1E+01	1.1E+02		2.4E+01
						8.0E-05	C			1	0.1		1.4E+09		Glutaraldehyde	111-30-8							1.1E+05	1.1E+05
				4.0E-04	I	1.0E-03	H			1	0.1		1.4E+09		Glycidyl	765-34-4					3.1E+01	1.1E+02	1.4E+06	2.4E+01
				1.0E-01	I					1	0.1		1.4E+09		Glyphosate	1071-83-6					7.8E+03	2.8E+04		6.1E+03
				3.0E-03	I					1	0.1		1.4E+09		Goal	42874-03-3					2.3E+02	8.4E+02		1.8E+02
				3.0E-03	A	1.0E-02	A			1	0.1		1.4E+09		Guthion	86-50-0					2.3E+02	8.4E+02	1.4E+07	1.8E+02
				5.0E-05	I					1	0.1		1.4E+09		Haloxyfop, Methyl	69806-40-2					3.9E+00	1.4E+01		3.1E+00
				1.3E-02	I					1	0.1		1.4E+09		Harmony	79277-27-3					1.0E+03	3.6E+03		7.9E+02
4.5E+00	I	1.3E-03	I	5.0E-04	I					1	0.1		1.4E+09		Heptachlor	76-44-8	1.4E-01	4.5E-01	2.5E+03	1.1E-01	3.9E+01	1.4E+02		3.1E+01
9.1E+00	I	2.6E-03	I	1.3E-05	I					1	0.1		1.4E+09		Heptachlor Epoxide	1024-57-3	7.0E-02	2.2E-01	1.3E+03	5.3E-02	1.0E+00	3.6E+00		7.9E-01
				2.0E-03	I					1	0.1		1.4E+09		Hexabromobenzene	87-82-1					1.6E+02	5.6E+02		1.2E+02
				2.0E-04	I					1	0.1		1.4E+09		Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					1.6E+01	5.6E+01		1.2E+01
1.6E+00	I	4.6E-04	I	8.0E-04	I					1	0.1		1.4E+09		Hexachlorobenzene	118-74-1	4.0E-01	1.3E+00	7.2E+03	3.0E-01	6.3E+01	2.2E+02		4.9E+01
7.8E-02	I	2.2E-05	I	1.0E-03	P					1	0.1		1.4E+09		Hexachlorobutadiene	87-68-3	8.2E+00	2.6E+01	1.5E+05	6.2E+00	7.8E+01	2.8E+02		6.1E+01
6.3E+00	I	1.8E-03	I	8.0E-03	A					1	0.1		1.4E+09		Hexachlorocyclohexane, Alpha-	319-84-6	1.0E-01	3.2E-01	1.8E+03	7.7E-02	6.3E+02	2.2E+03		4.9E+02
1.8E+00	I	5.3E-04	I							1	0.1		1.4E+09		Hexachlorocyclohexane, Beta-	319-85-7	3.6E-01	1.1E+00	6.2E+03	2.7E-01				
1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.04		1.4E+09		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	5.8E-01	4.6E+00	1.1E+04	5.2E-01	2.3E+01	2.1E+02		2.1E+01
1.8E+00	I	5.1E-04	I							1	0.1		1.4E+09		Hexachlorocyclohexane, Technical	608-73-1	3.6E-01	1.1E+00	6.5E+03	2.7E-01				
				6.0E-03	I	2.0E-04	I			1	0.1		1.4E+09		Hexachlorocyclopentadiene	77-47-4					4.7E+02	1.7E+03	2.8E+05	3.7E+02
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I			1	0.1		1.4E+09		Hexachloroethane	67-72-1	1.6E+01	5.1E+01	3.0E+05	1.2E+01	5.5E+01	2.0E+02	4.3E+07	4.3E+01
				3.0E-04	I					1	0.1		1.4E+09		Hexachlorophene	70-30-4					2.3E+01	8.4E+01		1.8E+01
1.1E-01	I			3.0E-03	I					1	0.015		1.4E+09		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	5.8E+00	1.2E+02		5.6E+00	2.3E+02	5.6E+03		2.3E+02
						1.0E-05	I	V		1		5.2E+03	1.4E+09	3.2E+05	Hexamethylene Diisocyanate, 1,6-	822-06-0							3.4E+00	3.4E+00
				6.0E-02	H	7.0E-01	I	V		1		1.4E+02	1.4E+09	8.9E+02	Hexane, N-	110-54-3					4.7E+03		6.5E+02	5.7E+02
				2.0E+00	P					1	0.1		1.4E+09		Hexanedioic Acid	124-04-9					1.6E+05	5.6E+05		1.2E+05
				5.0E-03	I	3.0E-02	I	V		1		3.3E+03	1.4E+09	1.4E+04	Hexanone, 2-	591-78-6					3.9E+02		4.5E+02	2.1E+02
				3.3E-02	I					1	0.1		1.4E+09		Hexazinone	51235-04-2					2.6E+03	9.2E+03		2.0E+03
3.0E+00	I	4.9E-03	I			3.0E-05	P			1			1.4E+09		Hydrazine	302-01-2	2.1E-01		6.8E+02	2.1E-01			4.3E+04	4.3E+04
3.0E+00	I	4.9E-03	I							1			1.4E+09		Hydrazine Sulfate	10034-93-2	2.1E-01		6.8E+02	2.1E-01				
						2.0E-02	I			1			1.4E+09		Hydrogen Chloride	7647-01-0							2.8E+07	2.8E+07
				4.0E-02	C	1.4E-02	C			1			1.4E+09		Hydrogen Fluoride	7664-39-3					3.1E+03		2.0E+07	3.1E+03
						2.0E-03	I			1			1.4E+09		Hydrogen Sulfide	7783-06-4							2.8E+06	2.8E+06
6.0E-02	P			4.0E-02	P					1	0.1		1.4E+09		Hydroquinone	123-31-9	1.1E+01	3.4E+01		8.1E+00	3.1E+03	1.1E+04		2.4E+03
				1.3E-02	I					1	0.1		1.4E+09		Imazalil	35554-44-0					1.0E+03	3.6E+03		7.9E+02
				2.5E-01	I					1	0.1		1.4E+09		Imazaquin	81335-37-7					2.0E+04	7.0E+04		1.5E+04
				1.0E-02	A					1			1.4E+09		Iodine	7553-56-2					7.8E+02			7.8E+02
				4.0E-02	I					1	0.1		1.4E+09		Iprodione	36734-19-7					3.1E+03	1.1E+04		2.4E+03
				7.0E-01	P					1			1.4E+09		Iron	7439-89-6					5.5E+04			5.5E+04
				3.0E-01	I			V		1		1.0E+04	1.4E+09	3.0E+04	Isobutyl Alcohol	78-83-1					2.3E+04			2.3E+04
9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		1.4E+09		Isophorone	78-59-1	6.7E+02	2.1E+03		5.1E+02	1.6E+04	5.6E+04	2.8E+09	1.2E+04
				1.5E-02	I					1	0.1		1.4E+09		Isopropalin	33820-53-0					1.2E+03	4.2E+03		9.2E+02
						7.0E+00	C			1	0.1		1.4E+09		Isopropanol	67-63-0							9.9E+09	9.9E+09
				1.0E-01	I					1	0.1		1.4E+09		Isopropyl Methyl Phosphonic Acid	1832-54-8					7.8E+03	2.8E+04		6.1E+03
				5.0E-02	I					1	0.1		1.4E+09		Isoxaben	82558-50-7					3.9E+03	1.4E+04		3.1E+03
						3.0E-01	A	V		1			1.4E+09		JP-7	NA							4.3E+08	4.3E+08
				7.5E-02	I					1	0.1		1.4E+09		Kerb	23950-58-5					5.9E+03	2.1E+04		4.6E+03
				2.0E-03	I					1	0.1		1.4E+09		Lactofen	77501-63-4					1.6E+02	5.6E+02		1.2E+02
															Lead Compounds									
2.8E-01	C	8.0E-05	C							1	0.1		1.4E+09		~Lead acetate	301-04-2	2.3E+00	7.2E+00	4.1E+04	1.7E+00				
										1			1.4E+09		~Lead and Compounds	7439-92-1								4.0E+02
3.8E-02	C	1.1E-05	C							1	0.1		1.4E+09		~Lead subacetate	1335-32-6	1.7E+01	5.3E+01	3.0E+05	1.3E+01				
				1.0E-07	I					1	0.1		1.4E+09		~Tetraethyl Lead	78-00-2					7.8E-03	2.8E-02		6.1E-03
				2.0E-03	I					1	0.1		1.4E+09		Linuron	330-55-2					1.6E+02	5.6E+02		1.2E+02
				2.0E-03	P					1			1.4E+09		Lithium	7439-93-2					1.6E+02			1.6E+02
				2.0E-01	I					1	0.1		1.4E+09		Londax	83055-99-6					1.6E+04	5.6E+04		1.2E+04
				5.0E-04	I					1	0.1		1.4E+09		MCPA	94-74-6					3.9E+01	1.4E+02		3.1E+01

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															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				1.0E-02	I					1	0.1		1.4E+09		MCPB	94-81-5					7.8E+02	2.8E+03		6.1E+02
				1.0E-03	I					1	0.1		1.4E+09		MCPP	93-65-2					7.8E+01	2.8E+02		6.1E+01
				2.0E-02	I					1	0.1		1.4E+09		Malathion	121-75-5					1.6E+03	5.6E+03		1.2E+03
				1.0E-01	I	7.0E-04	C			1	0.1		1.4E+09		Maleic Anhydride	108-31-6					7.8E+03	2.8E+04	9.9E+05	6.1E+03
				5.0E-01	I					1	0.1		1.4E+09		Maleic Hydrazide	123-33-1					3.9E+04	1.4E+05		3.1E+04
				1.0E-04	P					1	0.1		1.4E+09		Malononitrile	109-77-3					7.8E+00	2.8E+01		6.1E+00
				3.0E-02	H					1	0.1		1.4E+09		Mancozeb	8018-01-7					2.3E+03	8.4E+03		1.8E+03
				5.0E-03	I					1	0.1		1.4E+09		Maneb	12427-38-2					3.9E+02	1.4E+03		3.1E+02
				1.4E-01	I	5.0E-05	I			1					Manganese (Diet)	7439-96-5								
				2.4E-02	S	5.0E-05	I			0.04			1.4E+09		Manganese (Non-diet)	7439-96-5					1.9E+03		7.1E+04	1.8E+03
				9.0E-05	H					1	0.1		1.4E+09		Mephosfolan	950-10-7					7.0E+00	2.5E+01		5.5E+00
				3.0E-02	I					1	0.1		1.4E+09		Mepiquat Chloride	24307-26-4					2.3E+03	8.4E+03		1.8E+03
															Mercury Compounds									
				3.0E-04	I	3.0E-05	C			0.07			1.4E+09		~Mercuric Chloride (and other Mercury salts)	7487-94-7					2.3E+01		4.3E+04	2.3E+01
						3.0E-04	I	V		1		3.1E+00	1.4E+09	3.2E+04	~Mercury (elemental)	7439-97-6							1.0E+01	1.0E+01
				1.0E-04	I					1			1.4E+09		~Methyl Mercury	22967-92-6					7.8E+00			7.8E+00
				8.0E-05	I					1	0.1		1.4E+09		~Phenylmercuric Acetate	62-38-4					6.3E+00	2.2E+01		4.9E+00
				3.0E-05	I					1	0.1		1.4E+09		Merphos	150-50-5					2.3E+00	8.4E+00		1.8E+00
				3.0E-05	I					1	0.1		1.4E+09		Merphos Oxide	78-48-8					2.3E+00	8.4E+00		1.8E+00
				6.0E-02	I					1	0.1		1.4E+09		Metalaxyl	57837-19-1					4.7E+03	1.7E+04		3.7E+03
				1.0E-04	I	7.0E-04	H	V		1		4.6E+03	1.4E+09	7.3E+03	Methacrylonitrile	126-98-7					7.8E+00		5.3E+00	3.2E+00
				5.0E-05	I					1	0.1		1.4E+09		Methamidophos	10265-92-6					3.9E+00	1.4E+01		3.1E+00
				5.0E-01	I	4.0E+00	C			1	0.1		1.4E+09		Methanol	67-56-1					3.9E+04	1.4E+05	5.7E+09	3.1E+04
				1.0E-03	I					1	0.1		1.4E+09		Methidathion	950-37-8					7.8E+01	2.8E+02		6.1E+01
				2.5E-02	I					1	0.1		1.4E+09		Methomyl	16752-77-5					2.0E+03	7.0E+03		1.5E+03
4.9E-02	C	1.4E-05	C							1	0.1		1.4E+09		Methoxy-5-nitroaniline, 2-	99-59-2	1.3E+01	4.1E+01	2.4E+05	9.9E+00				
				5.0E-03	I					1	0.1		1.4E+09		Methoxychlor	72-43-5					3.9E+02	1.4E+03		3.1E+02
				8.0E-03	P	1.0E-03	P			1	0.1		1.4E+09		Methoxyethanol Acetate, 2-	110-49-6					6.3E+02	2.2E+03	1.4E+06	4.9E+02
				5.0E-03	P	2.0E-02	I			1	0.1		1.4E+09		Methoxyethanol, 2-	109-86-4					3.9E+02	1.4E+03	2.8E+07	3.1E+02
				1.0E+00	X			V		1		2.9E+04	1.4E+09	8.7E+03	Methyl Acetate	79-20-9					7.8E+04			7.8E+04
				3.0E-02	H			V		1		6.8E+03	1.4E+09	7.5E+03	Methyl Acrylate	96-33-3					2.3E+03			2.3E+03
				6.0E-01	I	5.0E+00	I	V		1		2.8E+04	1.4E+09	1.3E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3					4.7E+04		6.8E+04	2.8E+04
		1.0E-03	X	1.0E-03	P	2.0E-05	X			1	0.1		1.4E+09		Methyl Hydrazine	60-34-4			3.3E+03	3.3E+03	7.8E+01	2.8E+02	2.8E+04	6.1E+01
				8.0E-02	H	3.0E+00	I	V		1		3.4E+03	1.4E+09	1.1E+04	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1					6.3E+03		3.6E+04	5.3E+03
						1.0E-03	C			1	0.1		1.4E+09		Methyl Isocyanate	624-83-9							1.4E+06	1.4E+06
				1.4E+00	I	7.0E-01	I	V		1		2.4E+03	1.4E+09	6.8E+03	Methyl Methacrylate	80-62-6					1.1E+05		5.0E+03	4.8E+03
				2.5E-04	I					1	0.1		1.4E+09		Methyl Parathion	298-00-0					2.0E+01	7.0E+01		1.5E+01
				6.0E-02	X					1	0.1		1.4E+09		Methyl Phosphonic Acid	993-13-5					4.7E+03	1.7E+04		3.7E+03
				6.0E-03	H	4.0E-02	H	V		1		3.8E+02	1.4E+09	1.2E+04	Methyl Styrene (Mixed Isomers)	25013-15-4					4.7E+02		5.1E+02	2.5E+02
9.9E-02	C	2.8E-05	C							1	0.1		1.4E+09		Methyl methanesulfonate	66-27-3	6.5E+00	2.0E+01	1.2E+05	4.9E+00				
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	1.4E+09	5.3E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	3.6E+02		4.9E+01	4.3E+01			1.7E+04	1.7E+04
				2.0E-04	X					1	0.1		1.4E+09		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					1.6E+01	5.6E+01		1.2E+01
9.0E-03	P			2.0E-02	X					1	0.1		1.4E+09		Methyl-5-Nitroaniline, 2-	99-55-8	7.1E+01	2.2E+02		5.4E+01	1.6E+03	5.6E+03		1.2E+03
8.3E+00	C	2.4E-03	C							1	0.1		1.4E+09		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	7.7E-02	2.4E-01	1.4E+03	5.9E-02				
1.3E-01	C	3.7E-05	C							1	0.1		1.4E+09		Methylaniline Hydrochloride, 2-	636-21-5	4.9E+00	1.6E+01	8.9E+04	3.7E+00				
				1.0E-02	A					1	0.1		1.4E+09		Methylarsonic acid	124-58-3					7.8E+02	2.8E+03		6.1E+02
				2.0E-04	X					1	0.1		1.4E+09		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					1.6E+01	5.6E+01		1.2E+01
				2.0E-04	X					1	0.1		1.4E+09		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9					1.6E+01	5.6E+01		1.2E+01
2.2E+01	C	6.3E-03	C						M	1	0.1		1.4E+09		Methylcholanthrene, 3-	56-49-5	6.8E-03	2.3E-02	2.1E+02	5.2E-03				
7.5E-03	I	4.7E-07	I	6.0E-02	I	1.0E+00	A	V		1		3.3E+03	1.4E+09	2.4E+03	Methylene Chloride	75-09-2	8.5E+01		1.2E+01	1.1E+01	4.7E+03		2.6E+03	1.7E+03
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		1.4E+09		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	5.1E+00	3.0E+03	1.2E+00	1.6E+02	5.6E+02		1.2E+02
4.6E-02	I	1.3E-05	C							1	0.1		1.4E+09		Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.4E+01	4.4E+01	2.5E+05	1.1E+01				
1.6E+00	C	4.6E-04	C			2.0E-02	C			1	0.1		1.4E+09		Methylenebisbenzenamine, 4,4'-	101-77-9	4.0E-01	1.3E+00	7.2E+03	3.0E-01			2.8E+07	2.8E+07
						6.0E-04	I			1	0.1		1.4E+09		Methylenediphenyl Diisocyanate	101-68-8							8.5E+05	8.5E+05
				7.0E-02	H			V		1		5.0E+02	1.4E+09	1.4E+04	Methylstyrene, Alpha-	98-83-9					5.5E+03			5.5E+03
				1.5E-01	I					1	0.1		1.4E+09		Metolachlor	51218-45-2					1.2E+04	4.2E+04		9.2E+03
				2.5E-02	I					1	0.1		1.4E+09		Metribuzin	21087-64-9					2.0E+03	7.0E+03		1.5E+03
				3.0E+00	P					1	0.1		1.4E+09		Mineral oils	8012-95-1					2.3E+05	8.4E+05		1.8E+05
1.8E+01	C	5.1E-03	C	2.0E-04	I					1	0.1		1.4E+09		Mirex	2385-85-5	3.6E-02	1.1E-01	6.5E+02	2.7E-02	1.6E+01	5.6E+01		1.2E+01
				2.0E-03	I					1	0.1		1.4E+09		Molinate	2212-67-1					1.6E+02	5.6E+02		1.2E+02
				5.0E-03	I					1			1.4E+09		Molybdenum	7439-98-7					3.9E+02			3.9E+02
				1.0E-01	I					1			1.4E+09		Monochloramine	10599-90-3					7.8E+03			7.8E+03
				2.0E-03	P					1	0.1		1.4E+09		Monomethylaniline	100-61-8					1.6E+02	5.6E+02		1.2E+02
				3.0E-04	X					1	0.1		1.4E+09		N,N'-Diphenyl-1,4-benzenediamine	74-31-7					2.3E+01	8.4E+01		1.8E+01
				2.0E-03	I					1	0.1		1.4E+09		Naled	300-76-5					1.6E+02	5.6E+02		1.2E+02

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															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				3.0E-02	X	1.0E-01	P	V		1			1.4E+09		Naphtha, High Flash Aromatic (HFAN)	64724-95-6					2.3E+03		1.4E+08	2.3E+03
1.8E+00	C	0.0E+00	C							1	0.1		1.4E+09		Naphthylamine, 2-	91-59-8	3.6E-01	1.1E+00		2.7E-01				
				1.0E-01	I					1	0.1		1.4E+09		Napropamide	15299-99-7					7.8E+03	2.8E+04		6.1E+03
				5.0E-02	C	5.0E-05	C			0.04			1.4E+09		Nickel Carbonyl	13463-39-3					3.9E+03		7.1E+04	3.7E+03
				5.0E-02	C	1.0E-04	C			1			1.4E+09		Nickel Oxide	1313-99-1					3.9E+03		1.4E+05	3.8E+03
		2.4E-04	I	5.0E-02	C	5.0E-05	C			0.04			1.4E+09		Nickel Refinery Dust	NA			1.4E+04	1.4E+04	3.9E+03		7.1E+04	3.7E+03
		2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			1.4E+09		Nickel Soluble Salts	7440-02-0			1.3E+04	1.3E+04	1.6E+03		1.3E+05	1.5E+03
1.7E+00	C	4.8E-04	I	5.0E-02	C	5.0E-05	C			0.04			1.4E+09		Nickel Subsulfide	12035-72-2	3.8E-01		6.9E+03	3.8E-01	3.9E+03		7.1E+04	3.7E+03
				1.6E+00	I					1			1.4E+09		Nitrate	14797-55-8					1.3E+05			1.3E+05
				1.0E-01	I					1			1.4E+09		Nitrite	14797-65-0					7.8E+03			7.8E+03
				1.0E-02	X	5.0E-05	X			1	0.1		1.4E+09		Nitroaniline, 2-	88-74-4					7.8E+02	2.8E+03	7.1E+04	6.1E+02
2.0E-02	P			4.0E-03	P	6.0E-03	P			1	0.1		1.4E+09		Nitroaniline, 4-	100-01-6	3.2E+01	1.0E+02		2.4E+01	3.1E+02	1.1E+03	8.5E+06	2.4E+02
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	1.4E+09	7.9E+04	Nitrobenzene	98-95-3			4.8E+00	4.8E+00	1.6E+02		7.4E+02	1.3E+02
				3.0E+03	P					1	0.1		1.4E+09		Nitrocellulose	9004-70-0					2.3E+08	8.4E+08		1.8E+08
				7.0E-02	H					1	0.1		1.4E+09		Nitrofurantoin	67-20-9					5.5E+03	2.0E+04		4.3E+03
1.3E+00	C	3.7E-04	C							1	0.1		1.4E+09		Nitrofurazone	59-87-0	4.9E-01	1.6E+00	8.9E+03	3.7E-01				
1.7E-02	P			1.0E-04	P					1	0.1		1.4E+09		Nitroglycerin	55-63-0	3.8E+01	1.2E+02		2.9E+01	7.8E+00	2.8E+01		6.1E+00
				1.0E-01	I					1	0.1		1.4E+09		Nitroguanidine	556-88-7					7.8E+03	2.8E+04		6.1E+03
		9.0E-06	P			2.0E-02	P	V		1		1.8E+04	1.4E+09	1.8E+04	Nitromethane	75-52-5			4.9E+00	4.9E+00			3.8E+02	3.8E+02
		2.7E-03	H			2.0E-02	I	V		1		4.9E+03	1.4E+09	1.4E+04	Nitropropane, 2-	79-46-9			1.3E-02	1.3E-02			2.9E+02	2.9E+02
2.7E+01	C	7.7E-03	C						M	1	0.1		1.4E+09		Nitroso-N-ethylurea, N-	759-73-9	5.5E-03	1.9E-02	1.7E+02	4.3E-03				
1.2E+02	C	3.4E-02	C						M	1	0.1		1.4E+09		Nitroso-N-methylurea, N-	684-93-5	1.2E-03	4.2E-03	3.8E+01	9.6E-04				
5.4E+00	I	1.6E-03	I					V		1		7.1E+03	1.4E+09	2.1E+05	Nitroso-di-N-butylamine, N-	924-16-3	1.2E-01		3.2E-01	8.7E-02				
7.0E+00	I	2.0E-03	C							1	0.1		1.4E+09		Nitroso-di-N-propylamine, N-	621-64-7	9.1E-02	2.9E-01	1.7E+03	6.9E-02				
2.8E+00	I	8.0E-04	C							1	0.1		1.4E+09		Nitrosodiethanolamine, N-	1116-54-7	2.3E-01	7.2E-01	4.1E+03	1.7E-01				
1.5E+02	I	4.3E-02	I						M	1	0.1		1.4E+09		Nitrosodiethylamine, N-	55-18-5	9.9E-04	3.4E-03	3.0E+01	7.7E-04				
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X		M	1	0.1		1.4E+09		Nitrosodimethylamine, N-	62-75-9	2.9E-03	9.9E-03	9.3E+01	2.3E-03	6.3E-01	2.2E+00	5.7E+04	4.9E-01
4.9E-03	I	2.6E-06	C							1	0.1		1.4E+09		Nitrosodiphenylamine, N-	86-30-6	1.3E+02	4.1E+02	1.3E+06	9.9E+01				
2.2E+01	I	6.3E-03	C							1	0.1		1.4E+09		Nitrosomethylethylamine, N-	10595-95-6	2.9E-02	9.2E-02	5.3E+02	2.2E-02				
6.7E+00	C	1.9E-03	C							1	0.1		1.4E+09		Nitrosomorpholine [N-]	59-89-2	9.6E-02	3.0E-01	1.7E+03	7.3E-02				
9.4E+00	C	2.7E-03	C							1	0.1		1.4E+09		Nitrosopiperidine [N-]	100-75-4	6.8E-02	2.2E-01	1.2E+03	5.2E-02				
2.1E+00	I	6.1E-04	I							1	0.1		1.4E+09		Nitrosopyrrolidine, N-	930-55-2	3.0E-01	9.6E-01	5.4E+03	2.3E-01				
				1.0E-04	X					1	0.1		1.4E+09		Nitrotoluene, m-	99-08-1					7.8E+00	2.8E+01		6.1E+00
2.2E-01	P			9.0E-04	P			V		1		1.5E+03	1.4E+09	1.5E+05	Nitrotoluene, o-	88-72-2	2.9E+00			2.9E+00	7.0E+01			7.0E+01
1.6E-02	P			4.0E-03	P					1	0.1		1.4E+09		Nitrotoluene, p-	99-99-0	4.0E+01	1.3E+02		3.0E+01	3.1E+02	1.1E+03		2.4E+02
				3.0E-04	X	2.0E-01	P	V		1		6.9E+00	1.4E+09	1.1E+03	Nonane, n-	111-84-2					2.3E+01		2.3E+02	2.1E+01
				4.0E-02	I					1	0.1		1.4E+09		Norflurazon	27314-13-2					3.1E+03	1.1E+04		2.4E+03
				7.0E-04	I					1	0.1		1.4E+09		Nustar	85509-19-9					5.5E+01	2.0E+02		4.3E+01
				3.0E-03	I					1	0.1		1.4E+09		Octabromodiphenyl Ether	32536-52-0					2.3E+02	8.4E+02		1.8E+02
				5.0E-02	I					1	0.006		1.4E+09		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetra (HMX)	2691-41-0					3.9E+03	2.3E+05		3.8E+03
				2.0E-03	H					1	0.1		1.4E+09		Octamethylpyrophosphoramide	152-16-9					1.6E+02	5.6E+02		1.2E+02
				5.0E-02	I					1	0.1		1.4E+09		Oryzalin	19044-88-3					3.9E+03	1.4E+04		3.1E+03
				5.0E-03	I					1	0.1		1.4E+09		Oxadiazon	19666-30-9					3.9E+02	1.4E+03		3.1E+02
				2.5E-02	I					1	0.1		1.4E+09		Oxamyl	23135-22-0					2.0E+03	7.0E+03		1.5E+03
				1.3E-02	I					1	0.1		1.4E+09		Paclobutrazol	76738-62-0					1.0E+03	3.6E+03		7.9E+02
				4.5E-03	I					1	0.1		1.4E+09		Paraquat Dichloride	1910-42-5					3.5E+02	1.3E+03		2.7E+02
				6.0E-03	H					1	0.1		1.4E+09		Parathion	56-38-2					4.7E+02	1.7E+03		3.7E+02
				5.0E-02	H					1	0.1		1.4E+09		Pebulate	1114-71-2					3.9E+03	1.4E+04		3.1E+03
				4.0E-02	I					1	0.1		1.4E+09		Pendimethalin	40487-42-1					3.1E+03	1.1E+04		2.4E+03
				2.0E-03	I					1	0.1		1.4E+09		Pentabromodiphenyl Ether	32534-81-9					1.6E+02	5.6E+02		1.2E+02
				1.0E-04	I					1	0.1		1.4E+09		Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					7.8E+00	2.8E+01		6.1E+00
				8.0E-04	I					1	0.1		1.4E+09		Pentachlorobenzene	608-93-5					6.3E+01	2.2E+02		4.9E+01
9.0E-02	P									1	0.1		1.4E+09		Pentachloroethane	76-01-7	7.1E+00	2.2E+01		5.4E+00				
2.6E-01	H			3.0E-03	I					1	0.1		1.4E+09		Pentachloronitrobenzene	82-68-8	2.5E+00	7.8E+00		1.9E+00	2.3E+02	8.4E+02		1.8E+02
4.0E-01	I	5.1E-06	C	5.0E-03	I					1	0.25		1.4E+09		Pentachlorophenol	87-86-5	1.6E+00	2.0E+00	6.5E+05	8.9E-01	3.9E+02	5.6E+02		2.3E+02
4.0E-03	X			2.0E-03	P					1	0.1		1.4E+09		Pentaerythritol tetranitrate (PETN)	78-11-5	1.6E+02	5.1E+02		1.2E+02	1.6E+02	5.6E+02		1.2E+02
						1.0E+00	P	V		1		3.9E+02	1.4E+09	8.4E+02	Pentane, n-	109-66-0							8.7E+02	8.7E+02
															Perchlorates									
				7.0E-04	I					1			1.4E+09		~Ammonium Perchlorate	7790-98-9					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Lithium Perchlorate	7791-03-9					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Perchlorate and Perchlorate Salts	14797-73-0					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Potassium Perchlorate	7778-74-7					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Sodium Perchlorate	7601-89-0					5.5E+01			5.5E+01
				5.0E-02	I					1	0.1		1.4E+09		Permethrin	52645-53-1					3.9E+03	1.4E+04		3.1E+03
2.2E-03	C	6.3E-07	C							1	0.1		1.4E+09		Phenacetin	62-44-2	2.9E+02	9.2E+02	5.3E+06	2.2E+02				

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				2.5E-01	I					1	0.1		1.4E+09		Phenmedipham	13684-63-4					2.0E+04	7.0E+04		1.5E+04
				3.0E-01	I	2.0E-01	C			1	0.1		1.4E+09		Phenol	108-95-2					2.3E+04	8.4E+04	2.8E+08	1.8E+04
				5.0E-04	X					1	0.1		1.4E+09		Phenothiazine	92-84-2					3.9E+01	1.4E+02		3.1E+01
				6.0E-03	I					1	0.1		1.4E+09		Phenylenediamine, m-	108-45-2					4.7E+02	1.7E+03		3.7E+02
4.7E-02	H									1	0.1		1.4E+09		Phenylenediamine, o-	95-54-5	1.4E+01	4.3E+01		1.0E+01				
				1.9E-01	H					1	0.1		1.4E+09		Phenylenediamine, p-	106-50-3					1.5E+04	5.3E+04		1.2E+04
1.9E-03	H									1	0.1		1.4E+09		Phenylphenol, 2-	90-43-7	3.3E+02	1.0E+03		2.5E+02				
				2.0E-04	H					1	0.1		1.4E+09		Phorate	298-02-2					1.6E+01	5.6E+01		1.2E+01
						3.0E-04	I	V		1		1.6E+03	1.4E+09	1.1E+03	Phosgene	75-44-5							3.3E-01	3.3E-01
				2.0E-02	I					1	0.1		1.4E+09		Phosmet	732-11-6					1.6E+03	5.6E+03		1.2E+03
															Phosphates, Inorganic									
				4.9E+01	P					1			1.4E+09		~Aluminum metaphosphate	13776-88-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Ammonium polyphosphate	68333-79-9					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Calcium pyrophosphate	7790-76-3					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Diammonium phosphate	7783-28-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Dicalcium phosphate	7757-93-9					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Dimagnesium phosphate	7782-75-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Dipotassium phosphate	7758-11-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Disodium phosphate	7558-79-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monoaluminum phosphate	13530-50-2					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monoammonium phosphate	7722-76-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monocalcium phosphate	7758-23-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monomagnesium phosphate	7757-86-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monopotassium phosphate	7778-77-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monosodium phosphate	7558-80-7					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Polyphosphoric acid	8017-16-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Potassium tripolyphosphate	13845-36-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium acid pyrophosphate	7758-16-9					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (acidic)	7785-88-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (anhydrous)	10279-59-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium hexametaphosphate	10124-56-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium polyphosphate	68915-31-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium trimetaphosphate	7785-84-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium tripolyphosphate	7758-29-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tetrapotassium phosphate	7320-34-5					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tetrasodium pyrophosphate	7722-88-5					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tricalcium phosphate	7758-87-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Trimagnesium phosphate	7757-87-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tripotassium phosphate	7778-53-2					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Trisodium phosphate	7601-54-9					3.8E+06			3.8E+06
				3.0E-04	I	3.0E-04	I			1			1.4E+09		Phosphine	7803-51-2					2.3E+01		4.3E+05	2.3E+01
				4.9E+01	P	1.0E-02	I			1			1.4E+09		Phosphoric Acid	7664-38-2					3.8E+06		1.4E+07	3.0E+06
				2.0E-05	I					1			1.4E+09		Phosphorus, White	7723-14-0					1.6E+00			1.6E+00
				1.0E+00	H					1	0.1		1.4E+09		Phthalic Acid, P-	100-21-0					7.8E+04	2.8E+05		6.1E+04
				2.0E+00	I	2.0E-02	C			1	0.1		1.4E+09		Phthalic Anhydride	85-44-9					1.6E+05	5.6E+05	2.8E+07	1.2E+05
				7.0E-02	I					1	0.1		1.4E+09		Picloram	1918-02-1					5.5E+03	2.0E+04		4.3E+03
				1.0E-04	X					1	0.1		1.4E+09		Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					7.8E+00	2.8E+01		6.1E+00
				1.0E-02	I					1	0.1		1.4E+09		Pirimiphos, Methyl	29232-93-7					7.8E+02	2.8E+03		6.1E+02
3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		1.4E+09		Polybrominated Biphenyls	59536-65-1	2.1E-02	6.7E-02	3.8E+02	1.6E-02	5.5E-01	2.0E+00		4.3E-01
															Polychlorinated Biphenyls (PCBs)									
7.0E-02	S	2.0E-05	S	7.0E-05	I					1	0.14		1.4E+09		~Aroclor 1016	12674-11-2	9.1E+00	2.1E+01	1.7E+05	6.3E+00	5.5E+00	1.4E+01		3.9E+00
2.0E+00	S	5.7E-04	S					V		1	0.14	7.6E+02	1.4E+09	9.2E+04	~Aroclor 1221	11104-28-2	3.2E-01	7.2E-01	3.9E-01	1.4E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14	7.3E+01	1.4E+09	9.2E+04	~Aroclor 1232	11141-16-5	3.2E-01	7.2E-01	3.9E-01	1.4E-01				
2.0E+00	S	5.7E-04	S							1	0.14		1.4E+09		~Aroclor 1242	53469-21-9	3.2E-01	7.2E-01	5.8E+03	2.2E-01				
2.0E+00	S	5.7E-04	S							1	0.14		1.4E+09		~Aroclor 1248	12672-29-6	3.2E-01	7.2E-01	5.8E+03	2.2E-01				
2.0E+00	S	5.7E-04	S	2.0E-05	I					1	0.14		1.4E+09		~Aroclor 1254	11097-69-1	3.2E-01	7.2E-01	5.8E+03	2.2E-01	1.6E+00	4.0E+00		1.1E+00
2.0E+00	S	5.7E-04	S							1	0.14		1.4E+09		~Aroclor 1260	11096-82-5	3.2E-01	7.2E-01	5.8E+03	2.2E-01				
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
3.9E+03	E	1.1E+00	E	3.3E-08	E	1.3E-06	E			1	0.14		1.4E+09		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.6E-04	3.7E-04	2.9E+00	1.1E-04	2.6E-03	6.7E-03	1.9E+03	1.9E-03
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00

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															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
3.9E+00	E	1.1E-03	E	3.3E-05	E	1.3E-03	E			1	0.14		1.4E+09		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.6E-01	3.7E-01	2.9E+03	1.1E-01	2.6E+00	6.7E+00	1.9E+06	1.9E+00
1.3E+04	E	3.8E+00	E	1.0E-08	E	4.0E-07	E			1	0.14		1.4E+09		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	4.9E-05	1.1E-04	8.7E-01	3.4E-05	7.8E-04	2.0E-03	5.7E+02	5.6E-04
2.0E+00	I	5.7E-04	I							1	0.14		1.4E+09		~Polychlorinated Biphenyls (high risk)	1336-36-3	3.2E-01	7.2E-01	5.8E+03	2.2E-01				
4.0E-01	I	1.0E-04	I							1	0.14				~Polychlorinated Biphenyls (low risk)	1336-36-3								
7.0E-02	I	2.0E-05	I							1	0.14				~Polychlorinated Biphenyls (lowest risk)	1336-36-3								
1.3E+01	E	3.8E-03	E	1.0E-05	E	4.0E-04	E			1	0.14		1.4E+09		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	4.9E-02	1.1E-01	8.7E+02	3.4E-02	7.8E-01	2.0E+00	5.7E+05	5.6E-01
3.9E+01	E	1.1E-02	E	3.3E-06	E	1.3E-04	E			1	0.14		1.4E+09		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.6E-02	3.7E-02	2.9E+02	1.1E-02	2.6E-01	6.7E-01	1.9E+05	1.9E-01
						6.0E-04	I			1	0.1		1.4E+09		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9							8.5E+05	8.5E+05
															Polynuclear Aromatic Hydrocarbons (PAHs)									
				6.0E-02	I			V		1	0.13		1.4E+09	1.5E+05	~Acenaphthene	83-32-9					4.7E+03	1.3E+04		3.4E+03
				3.0E-01	I			V		1	0.13		1.4E+09	5.6E+05	~Anthracene	120-12-7					2.3E+04	6.4E+04		1.7E+04
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benz[a]anthracene	56-55-3	2.0E-01	5.3E-01	1.2E+04	1.5E-01				
1.2E+00	C	1.1E-04	C							1	0.13		1.4E+09		~Benzo(j)fluoranthene	205-82-3	5.3E-01	1.3E+00	3.0E+04	3.8E-01				
7.3E+00	I	1.1E-03	C						M	1	0.13		1.4E+09		~Benzo[a]pyrene	50-32-8	2.0E-02	5.3E-02	1.2E+03	1.5E-02				
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benzo[b]fluoranthene	205-99-2	2.0E-01	5.3E-01	1.2E+04	1.5E-01				
7.3E-02	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benzo[k]fluoranthene	207-08-9	2.0E+00	5.3E+00	1.2E+04	1.5E+00				
7.3E-03	E	1.1E-05	C						M	1	0.13		1.4E+09		~Chrysene	218-01-9	2.0E+01	5.3E+01	1.2E+05	1.5E+01				
7.3E+00	E	1.2E-03	C						M	1	0.13		1.4E+09		~Dibenz[a,h]anthracene	53-70-3	2.0E-02	5.3E-02	1.1E+03	1.5E-02				
1.2E+01	C	1.1E-03	C							1	0.13		1.4E+09		~Dibenzo(a,e)pyrene	192-65-4	5.3E-02	1.3E-01	3.0E+03	3.8E-02				
2.5E+02	C	7.1E-02	C						M	1	0.13		1.4E+09		~Dimethylbenz(a)anthracene, 7,12-	57-97-6	6.0E-04	1.6E-03	1.8E+01	4.3E-04				
				4.0E-02	I					1	0.13		1.4E+09		~Fluoranthene	206-44-0					3.1E+03	8.6E+03		2.3E+03
				4.0E-02	I			V		1	0.13		1.4E+09	3.0E+05	~Fluorene	86-73-7					3.1E+03	8.6E+03		2.3E+03
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Indeno[1,2,3-cd]pyrene	193-39-5	2.0E-01	5.3E-01	1.2E+04	1.5E-01				
2.9E-02	P			7.0E-02	A			V		1		3.9E+02	1.4E+09	6.3E+04	~Methylnaphthalene, 1-	90-12-0	2.2E+01			2.2E+01	5.5E+03			5.5E+03
				4.0E-03	I			V		1		3.7E+02	1.4E+09	6.2E+04	~Methylnaphthalene, 2-	91-57-6					3.1E+02			3.1E+02
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		1	0.13		1.4E+09	5.0E+04	~Naphthalene	91-20-3			3.6E+00	3.6E+00	1.6E+03	4.3E+03	1.6E+02	1.4E+02
1.2E+00	C	1.1E-04	C							1	0.13		1.4E+09		~Nitropyrene, 4-	57835-92-4	5.3E-01	1.3E+00	3.0E+04	3.8E-01				
				3.0E-02	I			V		1	0.13		1.4E+09	2.6E+06	~Pyrene	129-00-0					2.3E+03	6.4E+03		1.7E+03
1.5E-01	I			9.0E-03	I					1	0.1		1.4E+09		Prochloraz	67747-09-5	4.3E+00	1.3E+01		3.2E+00	7.0E+02	2.5E+03		5.5E+02
				6.0E-03	H					1	0.1		1.4E+09		Profluralin	26399-36-0					4.7E+02	1.7E+03		3.7E+02
				1.5E-02	I					1	0.1		1.4E+09		Prometon	1610-18-0					1.2E+03	4.2E+03		9.2E+02
				4.0E-03	I					1	0.1		1.4E+09		Prometryn	7287-19-6					3.1E+02	1.1E+03		2.4E+02
				1.3E-02	I					1	0.1		1.4E+09		Propachlor	1918-16-7					1.0E+03	3.6E+03		7.9E+02
				5.0E-03	I					1	0.1		1.4E+09		Propanil	709-98-8					3.9E+02	1.4E+03		3.1E+02
				2.0E-02	I					1	0.1		1.4E+09		Propargite	2312-35-8					1.6E+03	5.6E+03		1.2E+03
				2.0E-03	I					1	0.1		1.4E+09		Propargyl Alcohol	107-19-7					1.6E+02	5.6E+02		1.2E+02
				2.0E-02	I					1	0.1		1.4E+09		Propazine	139-40-2					1.6E+03	5.6E+03		1.2E+03
				2.0E-02	I					1	0.1		1.4E+09		Propham	122-42-9					1.6E+03	5.6E+03		1.2E+03
				1.3E-02	I					1	0.1		1.4E+09		Propiconazole	60207-90-1					1.0E+03	3.6E+03		7.9E+02
						8.0E-03	I	V		1		3.3E+04	1.4E+09	9.6E+03	Propionaldehyde	123-38-6							8.0E+01	8.0E+01
				1.0E-01	X	1.0E+00	X	V		1	0.1	2.6E+02	1.4E+09	7.5E+03	Propyl benzene	103-65-1					7.8E+03	2.8E+04	7.9E+03	3.4E+03
						3.0E+00	C			1	0.1		1.4E+09		Propylene	115-07-1							4.3E+09	4.3E+09
				2.0E+01	P					1	0.1		1.4E+09		Propylene Glycol	57-55-6					1.6E+06	5.6E+06		1.2E+06
						2.7E-04	A	V		1		1.5E+03	1.4E+09	2.0E+05	Propylene Glycol Dinitrate	6423-43-4							5.7E+01	5.7E+01
				7.0E-01	H					1	0.1		1.4E+09		Propylene Glycol Monoethyl Ether	1569-02-4					5.5E+04	2.0E+05		4.3E+04
				7.0E-01	H	2.0E+00	I			1	0.1		1.4E+09		Propylene Glycol Monomethyl Ether	107-98-2					5.5E+04	2.0E+05	2.8E+09	4.3E+04
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04	1.4E+09	1.1E+04	Propylene Oxide	75-56-9	2.7E+00		7.3E+00	2.0E+00			3.5E+02	3.5E+02
				2.5E-01	I					1	0.1		1.4E+09		Pursuit	81335-77-5					2.0E+04	7.0E+04		1.5E+04
				2.5E-02	I					1	0.1		1.4E+09		Pydrin	51630-58-1					2.0E+03	7.0E+03		1.5E+03
				1.0E-03	I			V		1		5.3E+05	1.4E+09	6.0E+04	Pyridine	110-86-1					7.8E+01			7.8E+01
				5.0E-04	I					1	0.1		1.4E+09		Quinalphos	13593-03-8					3.9E+01	1.4E+02		3.1E+01
3.0E+00	I									1	0.1		1.4E+09		Quinoline	91-22-5	2.1E-01	6.7E-01		1.6E-01				
						3.0E-02	A			1			1.4E+09		Refractory Ceramic Fibers	NA							4.3E+07	4.3E+07
				3.0E-02	I					1	0.1		1.4E+09		Resmethrin	10453-86-8					2.3E+03	8.4E+03		1.8E+03
				5.0E-02	H					1	0.1		1.4E+09		Ronnel	299-84-3					3.9E+03	1.4E+04		3.1E+03
				4.0E-03	I					1	0.1		1.4E+09		Rotenone	83-79-4					3.1E+02	1.1E+03		2.4E+02
2.2E-01	C	6.3E-05	C						M	1	0.1		1.4E+09		Safrole	94-59-7	6.8E-01	2.3E+00	2.1E+04	5.2E-01				
				2.5E-02	I					1	0.1		1.4E+09		Savey	78587-05-0					2.0E+03	7.0E+03		1.5E+03
				5.0E-03	I					1			1.4E+09		Selenious Acid	7783-00-8					3.9E+02			3.9E+02
				5.0E-03	I	2.0E-02	C			1			1.4E+09		Selenium	7782-49-2					3.9E+02		2.8E+07	3.9E+02
				5.0E-03	C	2.0E-02	C			1			1.4E+09		Selenium Sulfide	7446-34-6					3.9E+02		2.8E+07	3.9E+02
				9.0E-02	I					1	0.1		1.4E+09		Sethoxydim	74051-80-2					7.0E+03	2.5E+04		5.5E+03
						3.0E-03	C			1			1.4E+09		Silica (crystalline, respirable)	7631-86-9							4.3E+06	4.3E+06

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															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vo c	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				5.0E-03	I					0.04			1.4E+09		Silver	7440-22-4					3.9E+02			3.9E+02
1.2E-01	H			5.0E-03	I					1	0.1		1.4E+09		Simazine	122-34-9	5.3E+00	1.7E+01		4.1E+00	3.9E+02	1.4E+03		3.1E+02
				1.3E-02	I					1	0.1		1.4E+09		Sodium Acifluorfen	62476-59-9					1.0E+03	3.6E+03		7.9E+02
				4.0E-03	I					1			1.4E+09		Sodium Azide	26628-22-8					3.1E+02			3.1E+02
2.7E-01	H			3.0E-02	I					1	0.1		1.4E+09		Sodium Diethyldithiocarbamate	148-18-5	2.4E+00	7.5E+00		1.8E+00	2.3E+03	8.4E+03		1.8E+03
				5.0E-02	A	1.3E-02	C			1			1.4E+09		Sodium Fluoride	7681-49-4					3.9E+03		1.8E+07	3.9E+03
				2.0E-05	I					1	0.1		1.4E+09		Sodium Fluoroacetate	62-74-8					1.6E+00	5.6E+00		1.2E+00
				1.0E-03	H					1			1.4E+09		Sodium Metavanadate	13718-26-8					7.8E+01			7.8E+01
2.4E-02	H			3.0E-02	I					1	0.1		1.4E+09		Stirofos (Tetrachlorovinphos)	961-11-5	2.7E+01	8.4E+01		2.0E+01	2.3E+03	8.4E+03		1.8E+03
				6.0E-01	I					1			1.4E+09		Strontium, Stable	7440-24-6					4.7E+04			4.7E+04
				3.0E-04	I					1	0.1		1.4E+09		Strychnine	57-24-9					2.3E+01	8.4E+01		1.8E+01
				2.0E-01	I	1.0E+00	I	V		1		8.7E+02	1.4E+09	1.0E+04	Styrene	100-42-5					1.6E+04		1.0E+04	6.3E+03
				8.0E-04	P					1	0.1		1.4E+09		Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					6.3E+01	2.2E+02		4.9E+01
						1.0E-03	C			1			1.4E+09		Sulfuric Acid	7664-93-9							1.4E+06	1.4E+06
				2.5E-02	I					1	0.1		1.4E+09		Systhane	88671-89-0					2.0E+03	7.0E+03		1.5E+03
				3.0E-02	H					1	0.1		1.4E+09		TCMTB	21564-17-0					2.3E+03	8.4E+03		1.8E+03
				7.0E-02	I					1	0.1		1.4E+09		Tebuthiuron	34014-18-1					5.5E+03	2.0E+04		4.3E+03
				2.0E-02	H					1	0.1		1.4E+09		Temephos	3383-96-8					1.6E+03	5.6E+03		1.2E+03
				1.3E-02	I					1	0.1		1.4E+09		Terbacil	5902-51-2					1.0E+03	3.6E+03		7.9E+02
				2.5E-05	H					1	0.1		1.4E+09		Terbufos	13071-79-9					2.0E+00	7.0E+00		1.5E+00
				1.0E-03	I					1	0.1		1.4E+09		Terbutryn	886-50-0					7.8E+01	2.8E+02		6.1E+01
				1.0E-04	I					1	0.1		1.4E+09		Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					7.8E+00	2.8E+01		6.1E+00
				3.0E-04	I					1	0.1		1.4E+09		Tetrachlorobenzene, 1,2,4,5-	95-94-3					2.3E+01	8.4E+01		1.8E+01
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02	1.4E+09	6.1E+03	Tetrachloroethane, 1,1,1,2-	630-20-6	2.5E+01		2.0E+00	1.9E+00	2.3E+03			2.3E+03
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03	1.4E+09	1.6E+04	Tetrachloroethane, 1,1,2,2-	79-34-5	3.2E+00		6.8E-01	5.6E-01	1.6E+03			1.6E+03
5.4E-01	C	5.9E-06	C	1.0E-02	I	2.7E-01	A	V		1		1.7E+02	1.4E+09	2.5E+03	Tetrachloroethylene	127-18-4	1.2E+00		1.0E+00	5.5E-01	7.8E+02		7.2E+02	3.7E+02
				3.0E-02	I					1	0.1		1.4E+09		Tetrachlorophenol, 2,3,4,6-	58-90-2					2.3E+03	8.4E+03		1.8E+03
2.0E+01	H									1	0.1		1.4E+09		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.2E-02	1.0E-01		2.4E-02				
				5.0E-04	I					1	0.1		1.4E+09		Tetraethyl Dithiopyrophosphate	3689-24-5					3.9E+01	1.4E+02		3.1E+01
						8.0E+01	I	V		1		1.1E+03	1.4E+09	1.3E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2							1.1E+05	1.1E+05
				4.0E-03	P					1	0.1		1.4E+09		Tetryl (Trinitrophenylmethylnitramine)	479-45-8					3.1E+02	1.1E+03		2.4E+02
				1.0E-05	X					1			1.4E+09		Thallium (Soluble Salts)	7440-28-0					7.8E-01			7.8E-01
				1.0E-02	I					1	0.1		1.4E+09		Thiobencarb	28249-77-6					7.8E+02	2.8E+03		6.1E+02
				7.0E-02	X					1	0.008		1.4E+09		Thiodiglycol	111-48-8					5.5E+03	2.6E+05		5.4E+03
				3.0E-04	H					1	0.1		1.4E+09		Thiofanox	39196-18-4					2.3E+01	8.4E+01		1.8E+01
				8.0E-02	I					1	0.1		1.4E+09		Thiophanate, Methyl	23564-05-8					6.3E+03	2.2E+04		4.9E+03
				5.0E-03	I					1	0.1		1.4E+09		Thiram	137-26-8					3.9E+02	1.4E+03		3.1E+02
				6.0E-01	H					1			1.4E+09		Tin	7440-31-5					4.7E+04			4.7E+04
						1.0E-04	A			1			1.4E+09		Titanium Tetrachloride	7550-45-0							1.4E+05	1.4E+05
				8.0E-02	I	5.0E+00	I	V		1		8.2E+02	1.4E+09	4.6E+03	Toluene	108-88-3					6.3E+03		2.4E+04	5.0E+03
1.8E-01	X			1.0E-04	X					1	0.1		1.4E+09		Toluene-2,5-diamine	95-70-5	3.6E+00	1.1E+01		2.7E+00	7.8E+00	2.8E+01		6.1E+00
1.9E-01	H									1	0.1		1.4E+09		Toluidine, p-	106-49-0	3.4E+00	1.1E+01		2.6E+00				
1.1E+00	I	3.2E-04	I							1	0.1		1.4E+09		Toxaphene	8001-35-2	5.8E-01	1.8E+00	1.0E+04	4.4E-01				
				7.5E-03	I					1	0.1		1.4E+09		Tralomethrin	66841-25-6					5.9E+02	2.1E+03		4.6E+02
				3.0E-04	A					1	0.1		1.4E+09		Tri-n-butyltin	688-73-3					2.3E+01	8.4E+01		1.8E+01
				1.3E-02	I					1	0.1		1.4E+09		Triallate	2303-17-5					1.0E+03	3.6E+03		7.9E+02
				1.0E-02	I					1	0.1		1.4E+09		Triasulfuron	82097-50-5					7.8E+02	2.8E+03		6.1E+02
				5.0E-03	I					1	0.1		1.4E+09		Tribromobenzene, 1,2,4-	615-54-3					3.9E+02	1.4E+03		3.1E+02
9.0E-03	P			1.0E-02	P					1	0.1		1.4E+09		Tributyl Phosphate	126-73-8	7.1E+01	2.2E+02		5.4E+01	7.8E+02	2.8E+03		6.1E+02
				3.0E-04	P					1	0.1		1.4E+09		Tributyltin Compounds	NA					2.3E+01	8.4E+01		1.8E+01
				3.0E-04	I					1	0.1		1.4E+09		Tributyltin Oxide	56-35-9					2.3E+01	8.4E+01		1.8E+01
				3.0E+01	I	3.0E+01	H	V		1		9.1E+02	1.4E+09	1.4E+03	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					2.3E+06		4.3E+04	4.3E+04
7.0E-02	I			2.0E-02	I					1	0.1		1.4E+09		Trichloroacetic Acid	76-03-9	9.1E+00	2.9E+01		6.9E+00	1.6E+03	5.6E+03		1.2E+03
2.9E-02	H									1	0.1		1.4E+09		Trichloroaniline HCl, 2,4,6-	33663-50-2	2.2E+01	7.0E+01		1.7E+01				
7.0E-03	X			3.0E-05	X					1	0.1		1.4E+09		Trichloroaniline, 2,4,6-	634-93-5	9.1E+01	2.9E+02		6.9E+01	2.3E+00	8.4E+00		1.8E+00
				8.0E-04	X			V		1	0.1	1.5E+02	1.4E+09	3.5E+04	Trichlorobenzene, 1,2,3-	87-61-6					6.3E+01	2.2E+02		4.9E+01
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		1		4.0E+02	1.4E+09	3.2E+04	Trichlorobenzene, 1,2,4-	120-82-1	2.2E+01			2.2E+01	7.8E+02		6.7E+01	6.2E+01
				2.0E+00	I	5.0E+00	I	V		1		6.4E+02	1.4E+09	1.8E+03	Trichloroethane, 1,1,1-	71-55-6					1.6E+05		9.3E+03	8.7E+03
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1		2.2E+03	1.4E+09	7.8E+03	Trichloroethane, 1,1,2-	79-00-5	1.1E+01		1.2E+00	1.1E+00	3.1E+02		1.6E+00	1.6E+00
See FAQ	I	See FAQ	I	5.0E-04	I	2.0E-03	I	V	M	1		6.9E+02	1.4E+09	2.4E+03	Trichloroethylene	79-01-6	8.3E+00		1.0E+00	9.1E-01	3.9E+01		5.0E+00	4.4E+00
				3.0E-01	I	7.0E-01	H	V		1		1.2E+03	1.4E+09	1.1E+03	Trichlorofluoromethane	75-69-4					2.3E+04		8.1E+02	7.9E+02
				1.0E-01	I					1	0.1		1.4E+09		Trichlorophenol, 2,4,5-	95-95-4					7.8E+03	2.8E+04		6.1E+03
1.1E-02	I	3.1E-06	I	1.0E-03	P					1	0.1		1.4E+09		Trichlorophenol, 2,4,6-	88-06-2	5.8E+01	1.8E+02	1.1E+06	4.4E+01	7.8E+01	2.8E+02		6.1E+01
				1.0E-02	I					1	0.1		1.4E+09		Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					7.8E+02	2.8E+03		6.1E+02
				8.0E-03	I					1	0.1		1.4E+09		Trichlorophenoxypropionic acid, -2,4,5	93-72-1					6.3E+02	2.2E+03		4.9E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = PPRTV Appendix; H = HEAST; J = New Jersey; O = EPA Office of Water; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; F = See FAQ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)
				5.0E-03	I			V		1		1.3E+03	1.4E+09	1.6E+04	Trichloropropane, 1,1,2-	598-77-6					3.9E+02			3.9E+02
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1		1.4E+03	1.4E+09	1.7E+04	Trichloropropane, 1,2,3-	96-18-4	5.0E-03			5.0E-03	3.1E+02		5.3E+00	5.2E+00
				3.0E-03	X	3.0E-04	P	V		1		4.5E+02	1.4E+09	2.5E+03	Trichloropropene, 1,2,3-	96-19-5					2.3E+02		7.9E-01	7.8E-01
				3.0E-03	I					1	0.1		1.4E+09		Tridiphane	58138-08-2					2.3E+02	8.4E+02		1.8E+02
						7.0E-03	I	V		1		2.8E+04	1.4E+09	1.7E+04	Triethylamine	121-44-8							1.2E+02	1.2E+02
7.7E-03	I			7.5E-03	I					1	0.1		1.4E+09		Trifluralin	1582-09-8	8.3E+01	2.6E+02		6.3E+01	5.9E+02	2.1E+03		4.6E+02
2.0E-02	P			1.0E-02	P					1	0.1		1.4E+09		Trimethyl Phosphate	512-56-1	3.2E+01	1.0E+02		2.4E+01	7.8E+02	2.8E+03		6.1E+02
						5.0E-03	P	V		1		2.9E+02	1.4E+09	1.0E+04	Trimethylbenzene, 1,2,3-	526-73-8							5.3E+01	5.3E+01
						7.0E-03	P	V		1		2.2E+02	1.4E+09	8.5E+03	Trimethylbenzene, 1,2,4-	95-63-6							6.2E+01	6.2E+01
				1.0E-02	X			V		1		1.8E+02	1.4E+09	7.1E+03	Trimethylbenzene, 1,3,5-	108-67-8					7.8E+02			7.8E+02
				3.0E-02	I					1	0.019		1.4E+09		Trinitrobenzene, 1,3,5-	99-35-4					2.3E+03	4.4E+04		2.2E+03
3.0E-02	I			5.0E-04	I					1	0.032		1.4E+09		Trinitrotoluene, 2,4,6-	118-96-7	2.1E+01	2.1E+02		1.9E+01	3.9E+01	4.4E+02		3.6E+01
				2.0E-02	P					1	0.1		1.4E+09		Triphenylphosphine Oxide	791-28-6					1.6E+03	5.6E+03		1.2E+03
2.0E-02	P			7.0E-03	P					1	0.1		1.4E+09		Tris(2-chloroethyl)phosphate	115-96-8	3.2E+01	1.0E+02		2.4E+01	5.5E+02	2.0E+03		4.3E+02
3.2E-03	P			1.0E-01	P					1	0.1		1.4E+09		Tris(2-ethylhexyl)phosphate	78-42-2	2.0E+02	6.3E+02		1.5E+02	7.8E+03	2.8E+04		6.1E+03
				3.0E-03	I	3.0E-04	A			1			1.4E+09		Uranium (Soluble Salts)	NA					2.3E+02		4.3E+05	2.3E+02
1.0E+00	C	2.9E-04	C						M	1	0.1		1.4E+09		Urethane	51-79-6	1.5E-01	5.1E-01	4.5E+03	1.2E-01				
		8.3E-03	P	9.0E-03	I	7.0E-06	P			0.026			1.4E+09		Vanadium Pentoxide	1314-62-1			4.0E+02	4.0E+02	7.0E+02		9.9E+03	6.6E+02
				5.0E-03	S					1			1.4E+09		Vanadium and Compounds	NA					3.9E+02			3.9E+02
				1.0E-03	I					1	0.1		1.4E+09		Vernolate	1929-77-7					7.8E+01	2.8E+02		6.1E+01
				2.5E-02	I					1	0.1		1.4E+09		Vinclozolin	50471-44-8					2.0E+03	7.0E+03		1.5E+03
				1.0E+00	H	2.0E-01	I	V		1		2.8E+03	1.4E+09	4.7E+03	Vinyl Acetate	108-05-4					7.8E+04		9.9E+02	9.7E+02
		3.2E-05	H			3.0E-03	I	V		1		0.0E+00	1.4E+09	1.5E+03	Vinyl Bromide	593-60-2			1.1E-01	1.1E-01			4.6E+00	4.6E+00
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1		3.9E+03	1.4E+09	1.0E+03	Vinyl Chloride	75-01-4	9.3E-02		1.7E-01	6.0E-02	2.3E+02		1.1E+02	7.4E+01
				3.0E-04	I					1	0.1		1.4E+09		Warfarin	81-81-2					2.3E+01	8.4E+01		1.8E+01
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	1.4E+09	6.0E+03	Xylene, P-	106-42-3					1.6E+04		6.3E+02	6.0E+02
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	1.4E+09	5.9E+03	Xylene, m-	108-38-3					1.6E+04		6.1E+02	5.9E+02
				2.0E-01	S	1.0E-01	S	V		1		4.3E+02	1.4E+09	7.0E+03	Xylene, o-	95-47-6					1.6E+04		7.2E+02	6.9E+02
				2.0E-01	I	1.0E-01	I	V		1		2.6E+02	1.4E+09	6.3E+03	Xylenes	1330-20-7					1.6E+04		6.5E+02	6.3E+02
				3.0E-04	I					1			1.4E+09		Zinc Phosphide	1314-84-7					2.3E+01			2.3E+01
				3.0E-01	I					1			1.4E+09		Zinc and Compounds	7440-66-6					2.3E+04			2.3E+04
				5.0E-02	I					1	0.1		1.4E+09		Zineb	12122-67-7					3.9E+03	1.4E+04		3.1E+03