

VIBRATORY CORE SAMPLING REPORT

Prepared for
Islander East Pipeline Company, LLC

Branford, Connecticut

Prepared by
TRC Environmental Corporation
Windsor, Connecticut

February 4, 2002

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1.0 INTRODUCTION

A vibratory coring and sampling program was conducted along the proposed Islander East pipeline route between the dates of November 6, 2001 and November 17, 2001. This report documents the methodologies and results of the sampling program with regard to the vibratory cores which were collected for sediment chemistry analysis. The sampling program was designed based on meetings between Islander East and the Connecticut Department of Environmental Protection (CTDEP), New York State Department of Environmental Conservation (NYSDEC), and U.S. Army Corps of Engineers (ACOE). Following the meetings, a sampling plan entitled *Marine Pipeline Survey Requirements – Islander East Pipeline Project* was developed to address the environmental, regulatory, and design tasks associated with the proposed pipeline project. The methodologies and results of the vibratory core sampling and analysis are presented in the following sections.

2.0 SAMPLING AND ANALYSIS METHODS

Vibratory coring was completed by Ocean Surveys, Inc. (OSI) of Old Saybrook, Connecticut between the dates of November 6, 2001 and November 17, 2001. A total of twenty three samples (VC10.a through VC10.w) were collected and analyzed for selected metals, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), pesticides, total organic carbon (TOC), specific gravity, percent moisture, and total solids. Samples taken within the boundaries of New York State were additionally analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) per the requirements of the NYSDEC *Sediment Sampling to Characterize Proposed Dredge Material* (Attachment VI). The locations of the vibratory core samples collected are shown in Attachment I. Samples VC10.a to VC10.j were collected in Connecticut waters while VC10.j to VC10.w were collected in New York Waters.

The vibratory cores were collected at approximate one-mile intervals along the proposed Islander East Pipeline centerline in Long Island Sound from the horizontal directional drill exit hole in Branford, CT (Station 41+37.48) to the New York State nearshore waters (Station 1158+70). Vibracores were collected off the R/V Parker using a reciprocating pneumatic vibracore device. Stations were located with a digital global positioning system (DGPS) and water depths were obtained with an Innerspace Model 448 digital depth sounder. Each sediment core was collected in a clean Lexan liner with a top valve and a stainless steel core catcher. The cores were advanced to depths of approximately ten feet below the seafloor or to refusal.

On board the sampling vessel, the cores were cut into approximate five foot lengths, sealed at each end with plastic caps, labeled with a unique sample identification number, and stored upright in a cooler with ice. The cores were then transported to TRC's Windsor, Connecticut office on a daily basis for logging and sediment collection. The cores were stored at TRC inside a refrigerator (40°F) until the core liners were cut open for actual sample collection. The sediment samples were generally obtained from the

core the next weekday after the vibratory coring. Prior to daily sample collection, an equipment blank was collected for each chemical analysis. This was conducted by pouring laboratory grade analyte-free deionized water through a clean Lexan liner provided by OSI, and into a clean stainless steel bowl with a stainless steel spoon. The water was then poured into the appropriate sample container.

Each Lexan core liner was opened using electric cutting shears. The top and bottom half of each sediment core was processed at the same time. After opening, the contents of cores were logged for lithology, grain size, and evidence of contamination (odor, staining, etc.) by a TRC field scientist. Photographs of representative cores were taken at that time, and are provided in Attachment V of this report. A composite sediment sample was then collected along the entire length of the core and homogenized in a clean stainless steel bowl. After homogenization, samples were placed into the appropriate sample containers for laboratory analysis. Samples collected for BTEX were not homogenized. These samples were collected and preserved in accordance with EPA Method 5035. The time from vibracoring to delivery to the laboratory did not exceed one week for any sample, and no method-specific holding times were exceeded.

In addition to the sediment samples collected, two matrix spike and matrix spike duplicate (MS/MSD) samples and two blind duplicate samples were collected for QA/QC purposes. A field blank was also collected for BTEX when sampling was conducted within New York waters. Following collection, the sediment and QA/QC samples were transported in a sample cooler with ice via chain-of-custody to Severn-Trent, Inc. of Shelton, Connecticut for laboratory analyses.

3.0 LABORATORY RESULTS

The sediment samples were collected and analyzed for the parameters listed in the following table:

Sediment Sample Analysis Summary

Parameter	EPA Method CLP/RCRA	Required Limits (mg/kg, ppm)	Number of Samples Collected	Total Number of Samples, Including QA/QC
Arsenic	Metals - EPA 6010B	0.5	23	32
Mercury	Metals - EPA 7471	0.02	23	32
Cadmium	Metals - EPA 6010B	0.1	23	32
Lead	Metals - EPA 6010B	1.0	23	32
Copper	Metals - EPA 6010B	1.0	23	32
Chromium	Metals - EPA 6010B	1.0	23	32
Nickel	Metals - EPA 6010B	1.0	23	32
Zinc	Metals - EPA 6010B	1.0	23	32
Pesticides	EPA 8081A	0.02	23	32
PCB Aroclors	EPA 8082	0.01	23	32
PAHs	EPA 8270C	0.02	23	32
BTEX	EPA 8021B	0.002	14	23
TOC	EPA 9060	0.1 ¹	23	23
% Water	ASTM D2216	1.0 ¹	23	23
Total Solids	Std. Mthds. 2540 B.		23	23
Specific Gravity	ASTM D854		23	23
Notes:				

¹ Units in %

QA/QC Required	Sample Collection	Total Collected
Duplicates	1 sample per week or 10% of all field samples, whichever is greater	A total of two duplicate samples were collected
Equipment (rinseate)	1 sample per day	A total of five equipment blanks were collected
Blank		
Field Blank	1 sample per day	A total of three field blanks were collected
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	1 sample per 20 sediment samples	A total of two MS/MSDs were collected.

3.1 Regulatory Criteria

The bucket dredging, plowing and jetting methods proposed for pipeline installation will result in transient effects from water dispersion of disturbed and re-suspended sediment that will vary depending upon the construction method used. The sediment entering the water column will be transported and redeposited adjacent to the work area in a manner depending upon such factors as grain size distribution and currents. Because the water column effects are brief and transient compared to the redeposition of sediments, results of the vibracore sample analyses were compared to the Effects Range-Low (ERL) and the Effects Range-Median (ERM) sediment screening guidelines developed for the National

Status and Trends (NS&T) Program. The NS&T Program was initiated in 1984 by the National Oceanic and Atmospheric Administration (NOAA) to determine the current status of, and to detect changes in, the environmental quality of the Nation's estuarine and coastal waters. These sediment quality guidelines were developed as an informal, interpretive tool to estimate the possible toxicological significance of chemical concentrations in sediments and their effect on ecological receptors.

The ERL and ERM values were developed by compiling the results of several studies into one large database. These studies were performed throughout North America, and involved the evaluation of biological effects associated with different contaminants at different concentrations. The guidelines were developed for as many chemicals as the data would defensibly support.

The data from each study was arranged in order of ascending concentrations. Study endpoints in which adverse effects were reported were identified. From the ascending data tables, the 10th percentile and the 50th percentile of the effects database were identified for each substance. The 10th percentile values were named the ERL, indicative of the concentrations below which adverse effects rarely occur. The 50th percentiles were named the ERM values, representative of concentrations above which effects frequently occur.

ERL and ERM values were calculated for 9 trace metals, 13 individual PAHs, 3 classes of PAHs, and 3 classes of chlorinated organic hydrocarbons. There were insufficient amounts of reliable data available to perform similar calculations for other substances. For trace metals, the percent of studies indicating adverse effects was less than 10% when concentrations were below the ERL values. For most organics, the incidence of effects was less than 25% when concentrations were below the ERLs.

The incidence of effects increased to 20% to 30% for most trace metals and 40% to 60% for most organics when concentrations exceeded the ERL values but were lower than the ERM values. When concentrations exceeded the ERM values, the incidence of adverse effects increased to 60% to 90% for most trace metals and 80% to 100% for most organics.

The ERL and ERM values can be used to compare analytical results of collected sediments as a tool in assessing impacts of projects resulting in sediment disturbance. Measured sediment contaminant concentrations can be used to determine appropriate construction methods, mitigation measures, or other requirements relative to issuance of permits. Analytical results below ERL values suggest levels of low contamination. Results between the ERL and ERM values may indicate levels of moderate contamination. Results above ERM values suggest a high level of contamination.

For constituents where ERL and ERM values were not available, the analytical results were compared to the applicable Apparent Effects Threshold (AET) level. The AET was developed by the Environmental Protection Agency (EPA), and is the contaminant concentration in sediment above which adverse effects are always expected for a

particular biological indicator (*The AET Approach*; Briefing Rpt. to the EPA SAB, Sept. 1988). This approach is based on empirical relationships between laboratory sediment bioassays, in situ biological effects observed in organisms associated with sediments, and chemical concentrations measured in sediments.

The samples collected in New York waters were additionally compared to the New York *Technical Guidance for Screening Contaminated Sediments*. This guidance document also uses the aforementioned ERL and ERM values to screen potentially contaminated sediments. Where no ERL and ERM values are not established, the document uses the New York Benthic Aquatic Life Acute Toxicity (BALAT) sediment criteria for salt water for screening purposes. Table 2 in Attachment III provides the applicable BALAT levels for screening purposes. These levels should only be used if the ERL and ERM values are not established.

3.2 Analytical Results

3.2.1 Connecticut Samples

The results of the vibracore samples collected within the jurisdiction of Connecticut are summarized in Table 1 in Attachment II. Copies of the laboratory reports are presented in Attachment III. The applicable ERL and ERM or AET values are also included in the table for screening purposes. Three metals (arsenic, copper, and nickel) were detected at concentrations that exceeded the sediment screening guidelines. The arsenic concentration in samples VC10.c (8.3 mg/Kg) and VC10.d (8.5 mg/Kg) barely exceeded the ERL screening level (8.2 mg/Kg) and were well below the ERM screening level of 70 mg/Kg. The copper concentration in sample VC10.d (48.2 mg/Kg) just exceeds the ERL screening level (34 mg/Kg) and is well below the ERM screening level of 270 mg/Kg. The nickel concentration in samples VC10.c (22.7 mg/Kg), VC10.d (22.6 mg/Kg), VC10.e (21.3 mg/Kg), VC10.f (22.2 mg/Kg) and VC10.g (22.1 mg/Kg) all barely exceed the ERL screening level (20.9 mg/Kg) and are well below the ERM screening level of 51.6 mg/Kg. Samples VC10.c, VC10.d, VC10.e, VC10.f and VC10.g were collected at Mileposts 13, 14, 15, 16 and 17, respectively.

No other constituents, including PAHs, PCBs or pesticides, detected in any of the Connecticut vibracore samples exceeded any of the applicable screening levels or laboratory quantitation limits. It should be noted, however, that the reported quantitation limits for Aroclor 1221 and heptachlor exceeded the applicable screening values.

3.2.2 New York Samples

The results of the vibracore samples collected within the jurisdiction of New York are summarized in Table 2 in Attachment II. Copies of the laboratory reports are presented in Attachment III. The applicable ERL, ERM and New York guidance values are also included in the table for screening purposes. Similar to the results of the samples collected within Connecticut, two metals (arsenic and nickel) were detected at concentrations that exceeded the sediment screening guidelines. Arsenic concentrations

in select samples [VC10.o (8.6 mg/Kg), VC10.p (8.4 mg/Kg), VC10.q (9.3 mg/Kg), VC10.s (11.1 mg/Kg), and VC10.t (15.7 mg/Kg)] barely exceeded the ERL screening level (8.2 mg/Kg) and were well below the ERM screening level of 70 mg/Kg. The nickel concentration in samples VC10.n (21.8 mg/Kg), VC10.o (21.6 mg/Kg), VC10.p (23 mg/Kg), VC10.q (24.5 mg/Kg), VC10.s (27.2 mg/Kg), and VC10.t (37.9 mg/Kg) all barely exceed the ERL screening level (20.9 mg/Kg) and are well below the ERM screening level of 51.6 mg/Kg. Samples VC10.n, VC10.o, VC10.p, VC10.q, VC10.s, and VC10.t were collected at Mileposts 24, 25, 26, 27, 29 and 30, respectively.

No other constituents, including PAHs, PCBs, pesticides, or BTEX detected in any of the New York vibracore samples exceeded any of the applicable screening levels or laboratory quantitation limits. It should be noted, however, that the reported quantitation limits for Aroclor 1221, heptachlor, 4,4'DDT, alpha-chlordane and gamma-chlordane exceeded the applicable screening values.

3.2.3 Data Comparison

The results for metals and select PAHs were also reviewed to determine whether any general trends regarding contaminant levels are present along the proposed route through Connecticut and New York waters. Metals and select PAHs were chosen for comparison due to their high frequency of detection. The results of this screening are displayed in the graphs in Attachment IV.

As a result of the comparison screening, it appears that the concentrations of metals along the proposed route in Connecticut are fairly consistent, with a slight peak at VC10.d (Milepost 14). PAH levels, however, appear to increase with distance from shore, with the highest levels detected at VC10.j, near the New York State border. Again, no PAHs were detected at levels exceeding the applicable screening levels.

The metals results for the samples collected in New York are similarly fairly consistent, with slight peaks at VC10.n and VC10.t. The PAH levels along the route in New York begin at comparatively high concentrations at the Connecticut border, and steadily decrease towards the New York shoreline.

The nearshore water is the zone where benthic communities would be most affected by sediment constituents. Since the nearshore sediments have concentrations below all screening criteria, the impacts from the pipeline installation methods will have minimal impact due to sediment quality. The effect on offshore benthic communities will be low since the detected exceedances of the screening levels were small and the distribution of sediment constituents does not indicate any unusually poor sediment quality area that will impact an area with much lower levels of constituents.

3.3 Data Validation

Data validation was performed to determine if the requirements and specifications of the work plan and the specified analytical methods were met. Field and laboratory records were used to determine if the specified QA/QC samples were collected and analyzed and the effect on data quality when the required limits were not achieved.

Tables 4 through 10 in Attachment II present the criteria evaluated for each of the analytical methods performed. The criteria are split into two categories, field and laboratory QA/QC requirements. Field QA/QC requirements were specified in the work plan as the type of samples to be collected and the frequency at which they were to be performed. Laboratory QA/QC requirements are specified in SW-846.

Data validation found that field QA/QC requirements as listed in the work plan were met and no deficiencies were noted. It was also found that the proper laboratory QA/QC samples were performed at the correct frequency. No major problems were found with the performance of the methods and none of the data was rejected. However, some of the data was flagged as estimated (J or UJ) because of problems with surrogate recoveries or other QA/QC samples. Reanalysis of samples that did not achieve all QA/QC requirements as stated in method specifications indicated that matrix effects were the cause of the problem and that there was not a problem with the performance of the method. These deficiencies and the flags added to the data are presented in Tables 4 through 10 in Attachment II.

ATTACHMENT I

VIBRACORE SAMPLE LOCATIONS

figure 2A

figure
2B

ATTACHMENT II

TABLES

TABLE 1
VIBRACORE SAMPLE ANALYTICAL RESULTS
ISLANDER EAST
LONG ISLAND SOUND - CONNECTICUT

SAMPLE ID	VC10.aB	VC10.b	VC10.c	VC10.d	VC10.e	VC10.f	VC10.g	VC10.h	VC10.i	VC10.j	Effects Range Low	Effects Range Med.	Required Quantitation Limit	
METALS [mg/kg]														
Arsenic	6.9	8.2	< 0.18*	< 0.18*	< 0.23*	6.7	6.3	7.3	5.2	< 0.14*	6.2	7.5	8.2	70
Cadmium	< 0.19*	< 0.33*	< 0.18*	< 0.23*	< 0.26*	< 0.26*	35.6	37.9	27.1	< 0.17*	29.5	29.1	1.2	9.6
Chromium	27.2	34.7	34.7	43.6	36.9	35.6	23.2	23.6	17.7	10.8	17.9	10.6	34	0.1
Copper	10.9B	18.9B	14.9	18.3	16.1	16.1	17.5	11.4	7.6	11.5	7.7	11.5	270	1
Lead	7.4	11.6	10.5	25.3	10.5	10.5	17.5	11.4	7.6	11.5	7.7	11.5	218	1
Mercury	0.0051B	0.030	0.015	0.026	0.018	0.028	0.028	0.016	0.044	0.027	0.032	0.044	0.15	0.02
Nickel	17.5	20.3	22.3	22.4	21.3	21.3	22.3	22.3	18.1	18.9	19.3	20.9	51.8	1
Zinc	51.1B	66.1B	67.0	114.0	78.4	81.5	72.2	53.0	63.4	55.8	150	150	410	1
PAHs [ug/kg]														
Naphthalene	< 5.87	< 6.73	< 6.07	< 6.10	< 6.43	< 6.43	3.8B	< 5.97	3.0B	2.3J	5.0	160	2100	20
2-Methylnaphthalene	< 5.87	< 6.73	< 6.07	< 6.10	< 6.43	< 6.43	2.3B	1.7B	2.0B	< 5.28	3.3	70	670	20
Acenaphthylene	< 5.87	4.8J	< 6.07	2.5	2.4	2.4	9.9	9.9	8.0	9.6	15.0	44	640	20
Acenaphthene	< 5.87	< 6.73	< 6.07	< 6.10	< 6.43	< 6.43	1.3J	< 5.97	1.0	< 5.28	2.4	16	500	20
Fluorene	< 5.87	< 6.73	< 6.07	< 6.10	< 6.43	< 6.43	2.1J	< 5.97	< 5.77	< 5.28	2.9	19	540	20
Phenanthrene	< 5.87	11.0	3.9J	5.0J	4.2J	25J	11.0	17J	11.0	33J	11.0	33J	240	20
Anthracene	< 5.87	4.3J	< 6.07	< 6.23	< 6.43J	< 6.43J	8.6J	4.7	7J	5.4	13J	85.3	1100	20
Fluoranthene	3.1J	21.0	6.1	9J	6.5J	48J	25.0	31J	19.0	56J	600	600	5100	20
Pyrene	5.0J	45J	18J	24J	17J	100J	40.0	79J	54J	130J	665	665	2600	20
Benzo(a)anthracene	< 5.87	13.0	6.9	6.4J	< 6.43J	43J	23.0	26J	20.0	40J	40J	40J	261	20
Chrysene	< 5.87	17.0	7.3	9.6J	< 6.43J	47J	29.0	31J	22.0	49J	49J	49J	384	20
Benzoc(b)fluoranthene	< 5.87	16.0	< 6.07	8.6	8.4	40J	21.0	30.0	18.0	51.0	1800	1800	NE	20
Benzok(k)fluoranthene	< 5.87	20.0	< 6.07	11.0	5.6	35J	21.0	27.0	25.0	58.0	1800	1800	NE	20
Benz(o)a)pyrene	< 5.87	20.0	< 6.07	8.4	< 6.43	50J	24.0	35.0	19.0	70.0	430	430	1600	20
Indeno(1,2,3-cd)pyrene	< 5.87	16.0	< 6.07	< 6.10	< 6.43	28J	15.0	22.0	19.0	66.0	66.0	66.0	NE	20
Dibenz(a,h)anthracene	< 5.87	< 6.73	< 6.07	< 6.10	< 6.43	< 5.97	< 5.77	< 5.28	18.0	63.4	63.4	63.4	260	20
Benzo(g,h,i)perylene	< 5.87	20.0	< 6.07	< 6.10	< 6.43	38J	20.0	31.0	26.0	92.0	92.0	92.0	670	20

NOTES

UJ - (Organics) Estimated quantitation limit.

J - (Organics) The concentration listed is an estimated value.

B - (Organics) Indicates that the analyte was found in the blanks as well as the sample.

B/J - (Organics) Indicates exceedance between IDL and quantitation limits.

IDLs - Refers to Apparent Effects Threshold (AET), ERL and ERM not established.

NE - Level not established at this time.

N - (Inorganics) Spike sample recovery not within control limits.

* Does not meet required quantitation limit as outlined in work plan.

bold - Indicates exceedance of screening level.

TABLE 1
VIBRACORE SAMPLE ANALYTICAL RESULTS
ISLANDER EAST
LONG ISLAND SOUND - CONNECTICUT

SAMPLE ID	VC10.aB	VC10.b	VC10.c	VC10.d	VC10.e	VC10.f	VC10.g	VC10.h	VC10.i	VC10.j	Effects Range Low	Effects Range Med.	Required Quantitation Limit
PCBs (µg/Kg)													
Aroclor-1016	< 11.71*	< 13.08*	< 12.28*	< 12.01*	< 11.75*	< 12.01*	< 11.45*	< 11.69*	< 11.09*	22.7	180	10	
Aroclor-1221	< 23.78**	< 26.63**	< 24.92**	< 24.39**	< 28.0**	< 23.85**	< 24.38**	< 23.25**	< 21.71	22.7	180	10	
Aroclor-1232	< 11.71*	< 13.08*	< 12.28*	< 12.01*	< 11.75*	< 12.01*	< 11.45*	< 10.89*	< 11.09*	22.7	180	10	
Aroclor-1242	< 11.71*	< 13.08*	< 12.28*	< 12.01*	< 11.75*	< 12.01*	< 11.45*	< 11.45*	< 11.09*	22.7	180	10	
Aroclor-1248	< 11.71*	< 13.08*	< 12.28*	< 12.01*	< 11.75*	< 12.01*	< 11.45*	< 10.69*	< 11.09*	22.7	180	10	
Aroclor-1254	< 11.71*	3.7J	< 12.28*	< 12.01*	< 11.75*	< 12.01*	< 11.45*	< 10.59*	< 11.09*	22.7	180	10	
Aroclor-1260	< 11.71*	3.3J	< 12.28*	1.5J	< 12.60*	2.6J	2.4J	2.9J	2.4J	2.3J	22.7	180	10
ESTERIDES (µg/Kg)													
alpha-BHC	0.11J	0.20J	0.70B	0.31JB	0.39JU	0.62	< 0.61	0.61B	0.44JB	0.67B	NE	20	
beta-BHC	< 0.61	< 0.68	< 0.64UJ	< 0.65UJ	< 0.66UJ	< 0.62	< 0.61	< 0.61	< 0.56UJ	< 0.56UJ	NE	20	
delta-BHC	< 0.61	< 0.68	< 0.64	< 0.63	< 0.66UJ	< 0.62	< 0.61	< 0.59	< 0.56	< 0.56	NE	20	
gamma-BHC (Linadane)	< 0.61	< 0.68	< 0.64UJ	< 0.63UJ	< 0.66UJ	< 0.62	< 0.61	< 0.59	< 0.56UJ	< 0.56UJ	>4.9	NE	
Heptachlor	< 0.61**	< 0.68*	< 0.64UJ	< 0.63UJ	0.24J	< 0.62**	< 0.61*	< 0.59UJ	< 0.58UJ	< 0.56UJ	< 0.56UJ	0.3	
Aldrin	< 0.61	< 0.68	< 0.64	< 0.63	< 0.66UJ	0.95	< 0.61	0.67	< 0.56	< 0.56	9.5	NE	
Heptachlor Epoxide	< 0.61	< 0.68	< 0.64	< 0.63	< 0.66UJ	0.62	< 0.61	< 0.59	< 0.56UJ	< 0.56UJ	NE	20	
Endosulfan 1	< 0.61	< 0.88	< 0.64	< 0.63	< 0.66	< 0.62	< 0.61	< 0.59	< 0.56	< 0.56	NE	20	
Heptachlor Epoxide	< 0.61	< 0.88	< 0.64	< 0.63	< 0.66	< 0.62	< 0.61	< 0.59	< 0.56	< 0.56	NE	20	
Endosulfan II	< 0.61	< 1.32	< 1.24	< 1.22	< 1.20	< 1.27	< 1.20	< 1.19	< 1.14	< 1.14	NE	20	
Dieldrin	< 1.19	< 1.32	< 1.24	< 1.22	< 1.20	< 1.20	< 1.20	< 1.19	< 1.14	< 1.14	NE	20	
4,4'-DDE	< 1.19	0.86J	< 1.24	0.53J	0.63J	< 1.20	< 1.20	< 1.19	< 1.14	< 1.08	< 1.09	2.2	
Ecdrin	< 1.19	< 1.32	< 1.24	< 1.22	< 1.20	< 1.27	< 1.20	< 1.19	< 1.14	< 1.08	< 1.09	NE	20
Endosulfan II	< 1.19	< 1.32	< 1.24	< 1.22	< 1.20	< 1.27	< 1.20	< 1.19	< 1.14	< 1.08	< 1.09	NE	20
4,4'-DDD	< 1.19	< 1.32	< 1.24	< 1.22	< 1.20	< 1.27	< 1.20	< 1.19	< 1.14	< 1.08	< 1.09	NE	20
Endosulfan Sulfate	< 1.18	0.24J	< 1.22	< 1.22	< 1.27	0.60J	< 1.19	< 1.18	0.11J	0.21J	NE	20	
4,4'-DDT	< 1.19	< 1.32	< 1.24UJ	< 1.22UJ	< 1.27	< 1.20UJ	< 1.19UJ	< 1.18UJ	< 1.08UJ	< 1.08UJ	1.56	46.1	
Methoxychlor	< 6.15	6.82	< 6.37	< 6.29	< 6.56	< 6.19	< 6.16	< 5.90	< 5.58	< 5.61	NE	20	
Ecdrin Ketone	< 1.19	< 1.32	< 1.24	< 1.22	< 1.20	< 1.27	< 1.20	< 1.19	< 1.14	< 1.08	0.23J	NE	20
Ecdrin Aldehyde	< 1.41	< 1.56	< 1.46	< 1.44	< 1.50	< 1.42	< 1.41	< 1.35	< 1.46	< 1.29	NE	20	
alpha-Chlordane	< 0.61	< 0.68	< 0.64	< 0.63	< 0.66	< 0.62	< 0.61	< 0.59	< 0.56	< 0.56	NE	20	
gamma-Chlordane	< 0.61	< 0.68	< 0.64	< 0.63	< 0.66	< 0.62	< 0.61	< 0.59	< 0.56	< 0.56	NE	20	
Toxaphene	< 39.82*	< 44.11*	< 41.25*	< 40.7*	< 42.46*	< 40.04*	< 39.82*	< 38.17*	< 36.08*	< 36.3*	NE	20	
SPECIFIC GRAVITY	2.64	2.62	2.56	2.56	2.64	2.54	2.54	2.61	2.59				
TOC	14800	14700	12100	13200	14200	14500	13800	11800	9320	11000			
	13900	14500	11800	13500	13000	13500	13000	10500	8930	10600			
	14700	16300	12200	14200	13800	15000	13000	10700	9050	11500			
% MOISTURE	45	50.7	45.9	46.1	45.6	43.8	44.5	42.5	39.8	40.9			

NOTES

UJ - (Organics) Estimated Quantitation Limit.

J - (Organics) The concentration listed is an estimated value.

B - (Organics) Indicates that the analysis was found in the blanks as well as the sample.

B - (Organics) Indicates analyte result between IDL and quantitation limits.

NE - Level not established at this time.

Italics - Refers to Apparent Effects Threshold (AET). ERL and ERM not established.

c/- Quantitation limit exceeds ERL.

Bold - Indicates exceedance of screening level.

* - Does not meet required quantitation limit as outlined in work plan.

TABLE 2
VIBRACORE SAMPLE ANALYTICAL RESULTS
ISLANDER EAST
LONG ISLAND SOUND - NEW YORK

SAMPLE ID	VC10.K	VC15.b ^a	VC10.L	VC10.mB	VC10.n	VC10.oA	VC10.p	VC10.q	VC10.tA	VC10.s	VC10.t	VC10.uB	VC10.v	VC15.a ^b	VC10.w	EFFECTS RANGE LOW	EFFECTS RANGE MED.	NY BALAT	Required Quantitation Limit
METALS (mg/kg)																			
Arsenic	5.3	5.8	6.8	6.8	8.1	8.8	9.4	8.3	2.4B	6.1	1.1Ba ^c	1.6B	<0.89*	6.2	70	NE	0.5		
Cadmium	<0.16*	<0.20*	<0.23*	<0.21*	<0.26*	<0.19*	<0.26*	<0.30*	<0.32*	<0.51*	<0.18*	<0.17*	<0.16*	1.2	9.6	NE	0.1		
Chromium	31.7	32.3	34.3	30	37.4	31.5	34.8	37	26.1	46.5	59.4	29.3	2.4	1.5B	61	370	NE	1	
Copper	29.8	24.3	25	14.9	32.6	17.6	15.9	18.3	10.3	31	28.2	14.9	0.88B	0.97B	1.2B	34	270	NE	1
Lead	16.6	16	16.4	10.5	19.4	11.4	11.8	12.6	7.7	21	20.3	10.3	0.9	0.63	0.84	46.7	218	NE	1
Mercury	0.022	0.021	0.064	0.016	0.025	0.02	0.027	0.05	0.047	0.023	0.022	0.022	<0.0037	<0.0030	<0.0038	0.15	0.7	NE	0.02
Nickel	17.7	18.8	20	19.6	21.1	21.1	21.1	21.1	17.6	17.2	19.9	18.4	1.8	0.59B	20.9	51.6	NE	1	
Zinc	80.9	76.5	79.6	61.4	93.7	66.4	69	74.4	55.7	101	117	57.8	3.0B	2.9B	3.4B	150	410	NE	1
PAHs (ug/kg)																			
Naphthalene	4.5	4.3	2.8	2.6	3.2J	3.0J	<6.30	2.2J	2.6J	3.1J	<7.16	<7.62	<3.83	<3.76	<3.69	160	2100	320	20
2-Methylnaphthalene	3.3	2.8	2.1	1.7	2.1J	2.0J	<6.30	1.7J	2.0J	<7.13	<7.16	<7.62	<3.83	<3.76	<3.69	70	670	346	20
Acenaphthylene	11	13	5.2	3	8.6	11	<6.30	5.1J	7.8J	9.7	<7.16	<7.62	<3.83	<3.76	<3.69	44	640	NE	20
Acenaphthene	1.9	1.9	0.53	<5.35	<5.74	<5.94	<8.30	0.73J	1.3J	1.2J	<7.16	<7.62	<3.83	<3.76	<3.69	18	500	NE	20
Fluorene	3	2.6	<54	0.86	<5.74	<5.94	<8.30	1.1J	1.6J	2.3J	<7.16	<7.62	<3.83	<3.76	<3.69	19	540	346	20
Phenanthrene	26J	23J	11J	7.3J	17	18	6.5	11	15	21	3.8J	4.2J	<3.83	<3.76	<3.69	240	1500	NE	20
Anthracene	9.8J	8.5J	5.4J	2.6J	6.7	8	<6.30	4.1J	5.4J	9.8	<7.16	<7.62	<3.83	<3.76	<3.69	1100	NE	20	
Fluoranthene	40J	36A	18J	9.7J	27	33	10	17	22	28	5.3J	7.4J	<3.83	<3.76	<3.69	600	5100	NE	20
Pyrene	120J	110J	48J	30J	74	68J	24	48J	65J	75J	12	16	<3.83	<3.76	<3.69	665	2800	NE	20
Benz(a)anthracene	35J	34J	16J	8.5J	24	32	8	13	19	29	<7.16	4.0J	<3.83	<3.76	<3.69	261	1600	NE	20
Chrysene	35J	39J	16J	9.8J	29	35	10	17	25	39	<7.16	6.0J	<3.83	<3.76	<3.69	384	2800	NE	20
Benz(b)fluoranthene	40	38	17	8.3	33	36	10	18	29	43	<7.16	7.2J	<3.83	<3.76	<3.69	1600	NE	NE	20
Benz(k)fluoranthene	37	40	17	10	32	49	11	18	29	34	<7.16	8.2	<3.83	<3.76	<3.69	1800	NE	NE	20
Benz(a)pyrene	49	48	22	12	39	44	11	22	31	46	<7.16	<7.62	<3.83	<3.76	<3.69	450	1600	NE	20
Indeno(1,2,3-cd)pyrene	51J	53J	22J	12J	32	39	8.2	19	37	43	<7.16	<7.62	<3.83	<3.76	<3.69	400	NE	NE	20
Dibenz(a,h)anthracene	<5.28	<5.44	<5.35	<5.74	<5.94	<6.47	<6.30	<5.74	<7.13	<7.16	<7.62	<3.83	<3.76	<3.69	620	NE	NE	20	
Benz(g,h)perylene	74	72	34	18	46	52	11	27	50	66	<7.16	<7.62	<3.83	<3.76	<3.69	670	NE	NE	20
PCBs (ug/kg)																			
Aroclor-1018	<10.62*	<10.72*	<11.12*	<10.89*	<11.55*	<11.88*	<12.41*	<11.48*	<12.50*	<14.29*	<14.28*	<14.29*	<14.28*	<14.28*	<14.28*	<14.28*	13804	13804	10
Aroclor-1221	<21.57*	<21.77*	<22.58*	<22.11*	<23.45*	<24.12*	<25.19*	<23.32*	<26.20*	<28.01*	<31.09*	<15.21	<15.34	<15.21	<15.21	<15.21	13804	13804	10
Aroclor-1232	<10.62*	<10.72*	<11.12*	<10.89*	<11.55*	<11.88*	<12.41*	<11.48*	<12.50*	<14.29*	<14.28*	<14.29*	<14.28*	<14.28*	<14.28*	<14.28*	13804	13804	10
Aroclor-1242	<10.62*	<10.72*	<11.12*	<10.89*	<11.55*	<11.88*	<12.41*	<11.48*	<12.50*	<14.29*	<14.28*	<14.29*	<14.28*	<14.28*	<14.28*	<14.28*	13804	13804	10
Aroclor-1248	<10.62*	<10.72*	<11.12*	<10.89*	<11.55*	<11.88*	<12.41*	<11.48*	<12.50*	<14.29*	<14.28*	<14.29*	<14.28*	<14.28*	<14.28*	<14.28*	13804	13804	10
Aroclor-1264	<10.62*	<10.72*	<11.12*	<10.89*	<11.55*	<11.88*	<12.41*	<11.48*	<12.50*	<14.29*	<14.28*	<14.29*	<14.28*	<14.28*	<14.28*	<14.28*	13804	13804	10
Aroclor-1280	<10.62*	<10.62*	1.4J	1.7J	<10.89*	<11.55*	<11.88*	<11.88*	2.1J	4.2J	3.3J	3.0J	<7.49	<7.49	<7.49	<7.49	13804	13804	10

NOTES

J - (Organics) The concentration listed is an estimated value.

U - (Organics) Estimated Quantitation Limit.

B - (Organics) Indicates that the analyte was found in the blends as well as the sample.

B - (Inorganics) Indicates analyte result between IDL and quantitation limits.

N - (Inorganics) Spike sample recovery not within control limits.

* - Does not meet required quantification limit as outlined in work plan.

BALAT - Benthic Aquatic Life Acute Toxicity treatment criteria for salt water.

- Duplicate not within 20%.

a/ - Duplicate of VC-10K.

b/ - Duplicate of VC-10x.

c/ - Quantitation limit exceeds ERL.

Bold - Indicates exceedance of screening level.

italic - Refers to Apparent Effects Threshold (AET). ERL and ERM not established.

NE - Level not established at this time.

TABLE 2
VIBRACORE SAMPLE ANALYTICAL RESULTS
ISLANDER EAST
LONG ISLAND SOUND - NEW YORK

SAMPLE ID	VC10.k	VC15.b ^a	VC10.L	VC10.mB	VC10.n	VC10.oA	VC10.p	VC10.q	VC10.rA	VC10.s	VC10.t	VC10.uB	VC10.v	VC15.a ^b	VC10.w	EFFECTS RANGE LOW	EFFECTS RANGE MED.	NY BALAT	Required Quantitation Limit	
PESTICIDES (ug/Kg)																				
alpha-BHC	0.41Bg ^c	0.56Jb	0.67Jb	0.69J	0.59J	0.35J	0.50J	<0.59	<0.68	<0.64	<0.59	0.30J	<0.39	0.094J	<0.40	NE	NE	1	20	
beta-BHC	<0.54	<0.55J	<0.57	<1.12U	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.65	<0.73	<0.78	<0.39	<0.40	NE	NE	1	20	
delta-BHC	<0.54	<0.55	<0.57	<1.12U	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.65	<0.73	<0.78	<0.39	<0.40	NE	NE	1	20	
gamma-BHC (Uldane)	<0.54	<0.55J	<0.57	<1.12U	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.65	<0.73	<0.78	<0.39*	<0.40*	>4.8	NE	1	20	
Hetcchlor	<0.54 ^c	<0.55J	<0.57	<1.12U ^d	<0.59*	<0.61*	<0.61*	<0.64*	<0.66*	<0.64*	<0.65*	<0.73*	<0.78*	<0.39*	<0.39*	0.3	NE	1.3	20	
Aldrin	0.39 ^e	0.44J	<0.57	<1.12U	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.65	<0.73	<0.78	<0.39	<0.40	9.5	NE	20	20	
Heptachlor Epoxide	<0.54	<0.55J	<0.57	<1.12U	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.65	<0.73	<0.78	<0.39	<0.40	NE	NE	20	20	
Endosulfan I	<0.54	<0.55	<0.57	<1.12	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.65	<0.73	<0.78	<0.39	<0.40	NE	NE	1.3	20	
Endosulfan II	0.30J#	0.14J	<1.11	<2.37	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.28	<1.34	<0.39	<0.40	NE	NE	0.12	20	
Clethod	<0.05	<1.07	<1.11	<2.17	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<0.75	<0.76	NE	NE	20	20	
4,4'-DDDE	<0.05	<1.07	<1.11	<2.17	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<0.75	<0.76	NE	NE	20	20	
Endrin	<0.05	<1.07	<1.11	<2.17	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<0.75	<0.76	NE	NE	20	20	
Endosulfan II	<0.05	<1.07	<1.11	<2.17	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<0.75	<0.76	NE	NE	20	20	
4,4'-DDO	<0.05	<1.07	<1.11	<2.17	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<0.75	<0.76	NE	NE	0.12	20	
Endosulfan Sulfate	0.17J#	0.28J	<1.11	<2.17	<1.14	<1.18	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<0.75	<0.76	NE	NE	20	20	
4,4'-DDT	<1.07U	<1.10U	<1.11U	<2.17U ^d	<1.14U	<1.18U	<1.18U	<1.24U	<1.28U	<1.14U	<1.18U	<1.24U	<1.34	<1.41	<0.75	<0.76	NE	NE	20	20
Methoxychlor	<5.41	<5.54	<5.75	<11.19	<6.09	<6.48	<6.48	<6.90	<6.39	<6.58	<6.58	<7.34	<7.34	<3.89	<3.94	1.58	130	20	20	
Endth ketone	0.29	0.39	<1.07	<1.11	<2.17	<1.14	<1.18	<1.24	<1.28	<1.24	<1.28	<1.34	<1.42	<1.41	<1.51	<1.51	2.2	27	20	
Endth aldehyde	<1.24	<1.27	<1.32	<2.57	<1.35	<1.40	<1.40	<1.47	<1.51	<1.35	<1.47	<1.51	<1.58	<1.58	<1.57	<1.58	0.76	NE	20	
alpha-Chlordane	<0.54	<0.55	<0.57	<1.12	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.66	<0.73	<0.73	<0.69	<0.70	0.91	NE	20	20	
gamma-Chlordane	<0.54	<0.55	<0.57	<1.12	<0.59	<0.61	<0.61	<0.64	<0.66	<0.64	<0.66	<0.73	<0.73	<0.69	<0.70	0.40	NE	20	20	
Toxaphene	<34.98*	<35.88*	<37.18*	<72.38*	<36.08*	<41.36*	<41.36*	<42.57*	<47.52*	<47.52*	<47.52*	<47.52*	<47.52*	<47.52*	<25.52*	<25.52*	NE	NE	0.05	20
VOLATILE ORGANICS (ug/Kg)																				
Benzene	NT	NT	<1.7	<1.7	<1.8	<1.8	<1.8	<2.0	<1.8	<1.9	<1.9	<2.0	<1.8	<2.2*	<2.2*	<1.12	NT	NE	2	
Ethylbenzene	NT	NT	<1.7	<1.7	<1.8	<1.8	<1.8	<2.0	<1.8	<1.9	<1.9	<2.0	<1.8	<2.2*	<2.2*	<1.12	NT	NE	2	
Toluene	NT	NT	<1.7	<1.7	<1.8	<1.8	<1.8	<2.0	<1.8	<1.9	<1.9	<2.0	<1.8	<2.2*	<2.2*	<1.12	NT	NE	2	
Xylenes (total)	NT	NT	<1.7	<1.7	<1.8	<1.8	<1.8	<2.0	<1.8	<1.9	<1.9	<2.0	<1.8	<2.2*	<2.2*	<1.12	NT	NE	240	
SPECIFIC GRAVITY	2.59	2.57	2.64	2.32	2.57	2.62	2.57	2.6	2.48	2.6	2.6	2.6	2.6	2.6	2.6	2.64				
TOC (mg/Kg)	10700	11080	9630	12100	11200	12700	13300	11200	15500	15700	14700	17900	405	302						
	10900	11200	10100	11300	12800	10500	15600	11200	14700	15800	14700	18400	438	276						
	11200	12000	10900	11400	11600	13400	15300	11400	15300	15000	15000	18400	487	333						
% MOISTURE	41.8	42.3	40.5	44	44.9	46.6	48	40.8	52.1	56	56.5	56	56.5	13.1	15.9					

NOTES

NT - Not tested

J - (Organics) The concentration listed is an estimated value.

UJ - (Organics) Estimated Quantitation Limit.

B - (Organics) Indicates that the analyte was found in the blanks as well as the sample.

B - (Organics) Indicates analyte result between IDL and quantitation limits.

* - Does not meet required quantitation limit as outlined in work plan.

BALAT - Benthic Aquatic Life Acute Toxicity sediment criteria for salt water.

e/ - Duplicate of VC-10k

b/ - Duplicate of VC-10k

d/ - Quantitation limit exceeds ERL.

Bold - Indicates precedence of screening level.

/a/c - Refers to Apparent Effects Threshold (AET). ERL and ERM not established.

- Duplicate not within 20%.

NE - Level not established at this time.

TABLE 3
EQUIPMENT BLANK AND FIELD BLANK ANALYTICAL RESULTS
ISLANDER EAST
LONG ISLAND SOUND

SAMPLE ID	EB110601	EB110801	EB111301	EB111701	EB111501	FB110801	FB111301	FB111501
METALS (ug/L)								
Arsenic	< 4.4	< 4.4	< 4.6	< 4.6	< 4.6	NT	NT	NT
Cadmium	< 0.80	< 0.80	< 0.80	< 0.8	< 0.80	NT	NT	NT
Chromium	< 0.90	< 0.90	< 1.0	< 1.0	< 1.0	NT	NT	NT
Copper	24.28	< 1.3	< 1.5	< 1.5	< 1.5	NT	NT	NT
Lead	< 2.0	< 2.0	< 2.3	< 2.3	< 2.3	NT	NT	NT
Mercury	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	NT	NT	NT
Nickel	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	NT	NT	NT
Zinc	15.18	< 4.6	< 5.0	< 5.2	< 5.0	NT	NT	NT
PAHs (ug/L)								
Naphthalene	< 10.9	< 10.0	< 10.0	1.0J	< 10.0	NT	NT	NT
2-Methylnaphthalene	< 10.9	< 10.0	< 10.0	0.4J	< 10.0	NT	NT	NT
Acenaphthene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Acenaphthene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Fluorene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Phenanthrene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Anthracene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Fluoranthene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Pyrene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Benz(a)anthracene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Chrysene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Benz(b)fluoranthene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Benz(k)fluoranthene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Benz(a)pyrene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Indeno(1,2,3-cd)pyrene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Dibenzo(a,j)anthracene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
Benz(g,h,i)perylene	< 10.9	< 10.0	< 10.0	< 10.0	< 10.0	NT	NT	NT
PCBs (ug/L)								
Aroclor-1016	< 1.0	< 1.0	< 1.0	< 1.05	< 1.0	NT	NT	NT
Aroclor-1221	< 2.0	< 2.0	< 2.0	< 2.1	< 2.0	NT	NT	NT
Aroclor-1232	< 1.0	< 1.0	< 1.0	< 1.05	< 1.0	NT	NT	NT
Aroclor-1242	< 1.0	< 1.0	< 1.0	< 1.05	< 1.0	NT	NT	NT
Aroclor-1248	< 1.0	< 1.0	< 1.0	< 1.05	< 1.0	NT	NT	NT
Aroclor-1254	< 1.0	< 1.0	< 1.0	< 1.05	< 1.0	NT	NT	NT
Aroclor-1260	< 1.0	< 1.0	< 1.0	< 1.05	< 1.0	NT	NT	NT
PESTICIDES (ug/L)								
alpha-BHC	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
beta-BHC	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
delta-BHC	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
gamma-BHC (Lindane)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Heptachlor	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Aldrin	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Heptachlor Epoxide	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Endosulfan I	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Dieldrin	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
4,4'-DDE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
Endrin	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
Endosulfan II	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
4,4'-DDD	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
Endosulfan Sulfate	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
4,4'-DDT	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
Methoxychlor	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Endrin ketone	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
Endrin aldehyde	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NT	NT	NT
alpha-Chlordane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
gamma-Chlordane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NT	NT	NT
Toxaphene	< 2.5	< 2.5	< 2.5	< 2.6	< 2.5	NT	NT	NT
VOLATILE ORGANICS								
(ug/L)								
Benzene	NT	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	NT	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	NT	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes (total)	NT	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0

NOTES

B - (Inorganics) Indicates analyte result between IDL and quantitation limits

NT - Not tested

Table 4
Data Validation for Semivolatile Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comment
Equipment Blank	1 per day	• Requirement met	• None
Sample Duplicate	1 per week or 10% (whichever is greater)	• Requirement met	• None
MS/MSD	1 per 20 samples	• Requirement met	• None
Parameter	Requirement	Performance	Comment
Sample receipt	4 °C ± 2 °C	• Samples received between 6 and 10°C	• None
Holding times	Method specified	• Holding times and preservation requirements met	• None
DFTPP Tuning	Daily	• Within method limits.	• None
SPCC	Daily	• Within method limits.	• None
CCC	Daily	• Within method limits.	• None
MS/MSD	One spike and spike duplicate per analytical batch	<ul style="list-style-type: none"> • MS % recovery-all compounds high for VC10.w. • MSD % recovery- all compounds high except Naphthalene, 2-Methylnaphthalene, Fluoranthene for VC10.w. 	<ul style="list-style-type: none"> • No PAHs detected, no flags applied to sample results from VC10.w (j flags would have been applied to positive results)
Equipment Blank	None specified	<ul style="list-style-type: none"> • Naphthalene and 2-methylnaphthalene detected in the equipment blank from 11/17/01 	<ul style="list-style-type: none"> • B flag positive results for analytes in effected samples (VC10.d, VC10.e, VC10.f, VC10.g, VC10.h)
Lab Check	One spike per analytical batch	• Within method limits.	• None.

Table 4 (continued)
Data Validation for Soil Semivolatile Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comment
Surrogate	Every sample	<ul style="list-style-type: none"> Fluorene-d10 low recovery for VC10.d, VC10.dMSD, VC10.f, VC10.g, VC10.h. Pyrene-d10 - high recovery for SBLKWPFFMS, SBLKFPFMS, VC10.mB, VC10k, VC10.b, VC10.j, VC10.e, VC10.d, VC10.s, VC10.q, VC10.rA, VC10.l, VC10.c, VC10.oA, VC10.oAD1, VC10.oAD2, VC10.dMS, VC10.dMSD, VC10.f, VC10.h, VC10.wMSB 	<ul style="list-style-type: none"> J flag positive results, UJ non-detect results in samples VC10.d, VC10.f, and VC10.h because two surrogates were outside recovery limits.
Internal Standard Area	Every sample	<ul style="list-style-type: none"> Phenanthrene-d10, Chrysene-d12 low recovery for VC15.b, VC10.mB, VC10.l, VC10.k, VC10.j, VC10.e, VC10.f, VC10.h, VC10.d, VC10.dMS, VC10.dMSD. Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12 low recovery for VC10.g. 	<ul style="list-style-type: none"> J flag positive results for analytes quantified using listed internal standards for listed samples UJ non-detect results for analytes quantified using listed internal standards for listed samples
Quantitation limits	0.02 mg/kg	<ul style="list-style-type: none"> Within method limits. 	<ul style="list-style-type: none"> None.

Notes: MS/MSD - matrix spike and matrix spike duplicate
 DFTPP - decafluorotriphenylphosphine
 SPCC - system performance check compounds
 CCC - calibration check compounds

Table 5
Data Validation for Pesticide Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comments
Equipment Blank	1 per day	• Requirement met	• None
Sample Duplicate	1 per week or 10% (whichever is greater)	• Requirement met	• None
MS/MSD	1 per 20 samples	• Requirement met	• None
Parameter	Requirement	Performance	Comments
Sample Receipt	4 °C ± 2 °C	• Samples received between 6 to 10°C	• None
Holding Times	Method specified	• Holding times and preservation requirements met	• None
Initial Calibration	Method specified	• Within limits	• None
Calibration Check	Method specified	• Within limits	• None
RT Check	Method specified	• Retention time for analytes within limits	• None
DDT/Endrin Breakdown	Method specified	• DDT breakdown exceeded limits for QC associated with VC10.MB, VC10.L, VC10.K, VC15.B, VC10.J, VC10.G, VC10.D, VC10.F, VC10.H, VC10.I, VC10.C, VC10.Q, VC10.RA, VC10.OA, VC10.OAD1, VC10.OAD2 VC10.W, VC10.V, VC10.T, VC10.A, VC10.N, VC10.S, VC10.P	• J flag positive results for DDT, DDD, and DDE in samples listed • UJ flag non-detect results for DDT in sample listed
Surrogate	Lab specified	• TCMX below limits for method blank, lab control, and matrix spike blank	• None
MS/MSD	Lab specified	• RPD and percent recovery within limits	• None

Table 5 (continued)
Data Validation for Pesticide Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comments
Lab Check	Lab specified	<ul style="list-style-type: none"> • Per cent recovery for beta-BHC, gamma-BHC, Heptachlor, and Heptachlor epoxide below limits for lab check associated with VC15.B, VC10.L, VC10.MB, VC10.C, VC10.D, VC10.E, VC10.H, VC10.I, VC10.J 	<ul style="list-style-type: none"> • J flag positive results for analytes and samples listed. • UJ flag non-detect results for analytes and samples listed
Quantitation limits	Total < 0.02 mg/kg	<ul style="list-style-type: none"> • Required detection limits achieved 	<ul style="list-style-type: none"> • None
Equipment Blank	Work plan specified	<ul style="list-style-type: none"> • No analytes detected 	<ul style="list-style-type: none"> • None
Method Blank	Method specified	<ul style="list-style-type: none"> • alpha-BHC detected in method blank associated with VC15.B, VC10.L, VC10.MB, VC10.C, VC10.D, VC10.E, VC10.H, VC10.I, VC10.J, VC10.K 	<ul style="list-style-type: none"> • B flag positive results for analyte and samples listed.

Notes: -MS/MSD - matrix spike and matrix spike duplicate

- RT - retention time
- DDT - 4, 4'-DDT
- TCMX - tetrachlorometaxylyene
- RPD - relative per cent difference

Table 6
Data Validation for PCB Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comment
Equipment Blank	1 per day	• Requirement met	• None
Sample Duplicate	1 per week or 10% (whichever is greater)	• Requirement met	• None
MS/MSD	1 per 20 samples	• Requirement met	• None
		100% of QAQC	
Parameter	Requirement	Performance	Comment
Sample Receipt	4 °C ± 2 °C	• Samples received between 6 to 10°C	• None
Holding Times	Method specified	• Holding times and preservation requirements met	• None
Initial Calibration	Method specified	• Within method limits	• None
Calibration Check	Method specified	• Within method limits	• None
RT Check	Method specified	• Within method limits	• None
Surrogate	Method specified	• Within method limits	• None
MS/MSD	Laboratory specified	• Per cent RPD exceeded criteria for VC10.DMS and VC10.DMSD	• J flag positive results in sample VC10.D
Lab Check	Laboratory specified	• Within method limits	• None
Quantitation limits	0.01 mg/kg	• Within method limits except for Aroclor 1221	• None
Equipment Blank	Work plan specified	• No analytes detected	• None
Method Blank	Method specified	• No analytes detected	• None

Notes: MS/MSD - matrix spike and matrix spike duplicate

RT - retention time

RPD - relative per cent difference

Table 7

**Data Validation for Metals Sample Results
Islander East Pipe Line Project**

Parameter	Requirement	Performance	Comments
Equipment Blank	1 per day	• Within specified limits	• None
Sample Duplicate	1 per week or 10% (whichever is greater)	• Within specified limits	• None
MS/MSD	1 per 20 samples	• Within specified limits	• None
Parameter	Requirement	Performance	Comments
Holding times	Method specified	• Holding times and preservation requirements met	• None
Initial Calibration Verification	Method specified	• Within method limits.	• None
Initial Calibration Blank	Method specified	• Within method limits.	• None
Continuing Calibration Verification	Method specified	• Within method limits.	• None
Continuing Calibration Blank	Method specified	• Within method limits.	• None
Matrix Spike	Method specified	• Within method limits.	• None
Lab Control	Method specified	• Within method limits.	• None
Duplicate	Method specified	• Within method limits.	• None
Quantitation limits	Work plan specified	• Achieved for all analytes except cadmium	• None
Interference check sample	Method specified	• Within method limits	• None
Equipment Blank	Method specified	• Zinc and copper detected in equipment blank from 11/06/01	• B flag added to positive results for effected samples (VC10.b, VC10.ab)
Method Blank	Method specified	• Within method limits	• None

Notes: -MS/MSD - matrix spike and matrix spike duplicate

Table 8
Data Validation for Mercury Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comment
Equipment Blank	1 per day	• Requirement met	• None
Sample Duplicate	1 per week or 10% (whichever is greater)	• Requirement met	• None
MS/MSD	1 per 20 samples	• Requirement met	• None
Parameter	Requirement	Performance	Comment
Sample receipt	4 °C ± 2 °C	• Samples received between 6 and 10°C	• None
Holding times	Method specified	• Holding times and preservation requirements met	• None
Initial Calibration	Daily	• Within method limits.	• None
Initial Calibration Verification	Daily	• Within method limits.	• None
Initial Calibration Blank	Daily	• Within method limits.	• None
Continuing Calibration Verification	Every 10 samples	• Within method limits.	• None
Continuing Calibration Blank	Every 10 samples	• Within method limits.	• None
MS/MSD	1 per analytical batch	• Within method limits.	• None
Lab Control	Laboratory specified	• Within laboratory limits.	• None
Duplicate	Method specified	• Within method limits.	• None
Quantitation limits	0.02 mg/kg	• Within specified limits	• None
Sample Dilution	1 per analytical batch	• Inferences found, corrections made	• None

Notes: MS/MSD - matrix spike and matrix spike duplicate

Table 9
Data Validation for TOC Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Field QA/QC		Laboratory QA/QC	
		Performance	Comment	Performance	Comment
Equipment Blank	1 per day	• Requirement met	• None		
Sample Duplicate	1 per week or 10% (whichever is greater)	• Requirement met	• None		
MS/MSD	1 per 20 samples	• Requirement met	• None		
<hr/>					
Parameter	Requirement	Field QA/QC		Laboratory QA/QC	
Sample Receipt	4 °C ± 2 °C	• Samples received between 6 and 10°C	• None		
Holding Times	Method Specified	• Holding times and preservation requirements met	• None		
Calibration	1 per analytical batch	• Within specified limits	• None		
Method Blank	1 per analytical batch	• Within specified limits	• None		
CCV	1 per 15 samples	• Within specified limits	• None		
Duplicate	1 per 10 samples	• Within specified limits	• None		
Quantitation limits	0.1%	• Within specified limits	• None		
Triplicate Analysis	Every samples	• Within specified limits	• None		
Spike Duplicates	1 per 10 samples	• Within specified limits	• None		
Lab Control	Laboratory specified	• Within specified limits	• None		

Notes: -MS/MSD - matrix spike and matrix spike duplicate
 CCV - continuing calibration verification

Table 10
Data Validation for Volatiles Sample Results
Islander East Pipe Line Project

Parameter	Requirement	Performance	Comment
Equipment Blank	1 per day	• Within specified limits	• None
Field Blank	1 per day	• Within specified limits	• None
Sample Duplicate	1 per week or 10% (whichever is greater)	• Within specified limits	• None
MS/MSD	1 per 20 samples	• Within specified limits	• None
Parameter	Requirement	Performance	Comment
Sample Receipt	4 °C ± 2 °C	• Samples received between 6 and 8°C	• None
Holding Times	Method specified	• Holding times and preservation requirements met	• None
Calibration	Method specified	• Within specified limits	• None
Calibration Verification	Method specified	• Within specified limits	• None
Lab Control	Lab specified	• Within specified limits	• None
MS/MSD	Lab specified	• Not performed for one analytical batch	• Lab control samples performed with analytical batch were within specified limits
Surrogate	Lab specified	• Within specified limits	• None
Internal Standard	Lab specified	• Within specified limits	• None
Quantitation limits	0.002 mg/kg	• Quantitation limits not achieved for samples VC10.UB, VC10.T, and VC10.S	• Percent moistures greater than 50%, no effect on data quality

Notes: -MS/MSD = matrix spike and matrix spike duplicate

ATTACHMENT III

LABORATORY ANALYTICAL RESULTS

SEVERN
TRENT
SERVICES

December 12, 2001

Ms. Megan Brown
TRC ENVIRONMENTAL
5 Waterside Crossing
Windsor, CT 06095

STL Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

Tel: 203 929 8140
Fax: 203 929 8142
www.stlinc.com

Dear Ms. Brown :

Please find enclosed the analytical results of 33 sample(s) received at our laboratory on November 7-16, 2001. This report contains sections addressing the following information at a minimum:

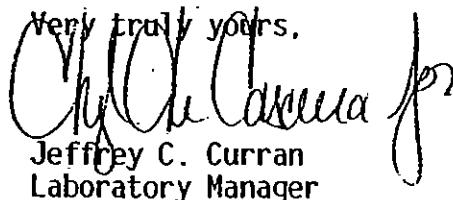
- sample summary
- analytical methodology
- state certifications
- definition of data qualifiers and terminology
- analytical results
- chain-of-custody

STL Report #7001-2791A	Purchase Order #38077
Project ID: ISLANDER EAST	

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 929-8140 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,

Jeffrey C. Curran
Laboratory Manager

JCC

This report contains 58 pages.

7001-2791A
TRC ENVIRONMENTAL

Case Narrative

Sample Receipt -The samples that were received on November 7th and 14th were received at 9°C and samples that were received on November 9th were received at 10°C and the samples received on November 16th were received at 8°C. The client was notified, and the laboratory was instructed to proceed with the analyses.

The following analyses were subcontracted out to the indicated laboratories:

Specific Gravity sent to STL - VT, 55 South Park Dr., Colchester, VT 05446.

8021 BTEX sent to STL - North Canton (OH), 4101 Shuffel Dr. NW, North Canton, OH 44720.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/3550B/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All soil samples were acid cleaned up prior to analysis..

Samples VC10.I, VC10.C, VC10.AB, VC10.B, VC10.T, VC10.S, VC10.P, VC10.Q, and VC10.RA required sulfur cleanup and reanalysis. The extracts really could have used more sulfur cleanup but due to limited extract volume this was not possible.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initiated by the analyst that performed the integration.

Sample Calculation:

Sample ID -VC10.B

Compound - Aroclor 1260 peak at retention time 21.30 on the RTX-35 column.

$$\frac{(14769\text{area})(2000\mu\text{l})}{(646439\text{area/ng})(30.9\text{g})(.49)(1\mu\text{l})} = 3.02\mu\text{g/kg}$$

Classical Chemistry - The samples in this SDG were analyzed for percent solids and total organic carbon according to Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986. Percent moisture results were obtained by calculation. Samples were analyzed in triplicate for total organic carbon by method 9060. No analytical problems were encountered.

Metals - ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

Mercury failed the controls for spike recovery analysis of sample VC10.OA resulting in one "N" flag.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3550C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

The following samples exhibited internal standard area suppression. The samples were re-analyzed with similar results confirming matrix interference. Only the original analyses are reported.

VC10.I	VC10.C	VC10.B
VC10.UB	VC10.T	VC10.N
VC10.S	VC10.Q	VC10.RA
VC10.OA	VC10.OAD1	VC10.0AD2

The spike recovery for the compounds pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene, were above recovery limits for SBLKFPFMS and SBLKWPFMS.

The spike recovery for the compounds pyrene, benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene, were above recovery limits for VC10.WMS and VC10.MSB. The recovery for the compounds pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene, were above recovery for VC10.WMSD

Surrogate recoveries were above the limits for pyrene-d10 on twelve samples and fluorene-d10 was below the limits on two samples.

The laboratory does not have enough data to establish control limits for the low concentration soils based on historical data. The limits presented here are based on method TO13A.

Sample Calculation:

Sample ID - VC10.S

Compound - acenaphthylene

$$\frac{(26376)(1)(1000)(1.0)}{(58757)(1.671)(2)(30.2)(.46)} = 9.66 = 9.7$$

TABLE SV-1.0
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank SBLKFP 1.00	VC10.AB 012791A-02 SBLKFP 1.78	VC10.B 012791A-03 SBLKFP 2.04	Quant. Limits with no Dilution
Naphthalene	U	U	U	3.3
2-Methylnaphthalene	U	U	U	3.3
Acenaphthylene	U	U	4.8J	3.3
Acenaphthene	U	U	U	3.3
Fluorene	U	U	U	3.3
Phenanthrene	U	U	11	3.3
Anthracene	U	U	4.3J	3.3
Fluoranthene	U	3.1J	21	3.3
Pyrene	U	5J	45	3.3
Benzo(a)anthracene	U	U	13	3.3
Chrysene	U	U	17	3.3
Benzo(b)fluoranthene	U	U	16	3.3
Benzo(k)fluoranthene	U	U	20	3.3
Benzo(a)pyrene	U	U	20	3.3
Indeno(1,2,3-cd)pyrene	U	U	16	3.3
Dibenzo(a,h)anthracene	U	U	0	3.3
Benzo(g,h,i)perylene	U	U	20	3.3
Date Received				
Date Extracted	11/16/01	11/07/01	11/07/01	
Date Analyzed	11/30/01	11/16/01	12/03/01	12/03/01

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

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TABLE SV-1.1
7001-2791A
TRC ENVIRONMENTAL
PAH'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.W	VC10.W MS	VC10.W MSD 012791A-05	Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	012791A-05 SBLKFP 1.18	012791A-05MS SBLKFP 1.19	MSD SBLKFP 1.17	
Naphthalene	U	73X	66X	3.3
2-Methylnaphthalene	U	76	70	3.3
Acenaphthylene	U	69X	66X	3.3
Acenaphthene	U	72X	68X	3.3
Fluorene	U	76X	72X	3.3
Phenanthrene	U	76X	72X	3.3
Anthracene	U	75X	69X	3.3
Fluoranthene	U	77X	70X	3.3
Pyrene	U	100EX	81X	3.3
Benzo(a)anthracene	U	83X	72X	3.3
Chrysene	U	78X	70X	3.3
Benzo(b)fluoranthene	U	76X	77X	3.3
Benzo(k)fluoranthene	U	81X	72X	3.3
Benzo(a)pyrene	U	73X	71X	3.3
Indeno(1,2,3-cd)pyrene	U	91X	97X	3.3
Biphenzo(a,h)anthracene	U	94X	98EX	3.3
Benzo(g,h,i)perylene	U	96X	100EX	3.3
Date Received	11/09/01	11/09/01	11/09/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/30/01	11/30/01	11/30/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.2
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.V	VC10.UB	VC10.T	Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	012791A-06 SBLKFP 1.16	012791A-07 SBLKFP 2.31	012791A-08 SBLKFP 2.17	
Naphthalene	U	U	U	3.3
2-Methylnaphthalene	U	U	U	3.3
Acenaphthylene	U	U	U	3.3
Acenaphthene	U	U	U	3.3
Fluorene	U	U	U	3.3
Phenanthrene	U	4.2J	3.9J	3.3
Anthracene	U	U	U	3.3
Fluoranthene	U	7.4J	5.3J	3.3
Pyrene	U	16	12	3.3
Benzo(a)anthracene	U	4J	U	3.3
Chrysene	U	6J	U	3.3
Benzo(b)fluoranthene	U	7.2J	U	3.3
Benzo(k)fluoranthene	U	8.2	U	3.3
Benzo(a)pyrene	U	U	U	3.3
Indeno(1,2,3-cd)pyrene	U	U	U	3.3
Dibenz(a,h)anthracene	U	U	U	3.3
Benzo(g,h,i)perylene	U	U	U	3.3
Date Received	11/09/01	11/09/01	11/09/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/30/01	12/03/01	12/03/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.3
7001-2791A
TRC ENVIRONMENTAL
PAH'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC15.A	VC10.N	VC10.S	Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	012791A-09 SBLKFP 1.14	012791A-12 SBLKFP 1.74	012791A-13 SBLKFP 2.16	
Naphthalene	U	3.2J	3.1J	3.3
2-Methylnaphthalene	U	2.1J	U	3.3
Acenaphthylene	U	8.8	9.7	3.3
Acenaphthene	U	U	1.2J	3.3
Fluorene	U	U	2.3J	3.3
Phenanthrene	U	17	21	3.3
Anthracene	U	6.7	9.8	3.3
Fluoranthene	U	27	28	3.3
Pyrene	U	74	75	3.3
Benzo(a)anthracene	U	24	29	3.3
Chrysene	U	29	39	3.3
Benzo(b)fluoranthene	U	33	43	3.3
Benzo(k)fluoranthene	U	32	34	3.3
Benzo(a)pyrene	U	39	46	3.3
Indeno(1,2,3-cd)pyrene	U	32	43	3.3
Dibenzo(a,h)anthracene	U	U	U	3.3
Benzo(q,h,i)perylene	U	46	66	3.3
Date Received	11/09/01	11/14/01	11/14/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/30/01	12/03/01	12/03/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.4
7001-2791A
TRC ENVIRONMENTAL
PAH'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.P	VC10.Q	VC10.RA	Quant. Limits with no Dilution
Lab Sample I.D.	012791A-15	012791A-16	012791A-17	
Method Blank I.D.	SBLKFP	SBLKFP	SBLKFP	
Quant. Factor	1.91	1.96	1.74	
Naphthalene	U	2.2J	2.6J	3.3
2-Methylnaphthalene	U	1.7J	2J	3.3
Acenaphthylene	U	5.1J	7.8	3.3
Acenaphthene	U	7.3J	1.3J	3.3
Fluorene	U	1.1J	1.6J	3.3
Phenanthrene	6.5	11	15	3.3
Anthracene	U	4.1J	5.4J	3.3
Fluoranthene	10	17	22	3.3
Pyrene	24	46	65	3.3
Benzo(a)anthracene	8	13	19	3.3
Chrysene	10	17	25	3.3
Benzo(b)fluoranthene	10	18	29	3.3
Benzo(k)fluoranthene	11	18	29	3.3
Benzo(+)pyrene	11	22	31	3.3
Indeno(1,2,3-cd)pyrene	8.2	19	37	3.3
Di-Benzo(a,h)anthracene	U	11	U	3.3
Benzo(q,h,i)perylene	11	27	50	3.3
Date Received	11/14/01	11/14/01	11/14/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	12/01/01	12/03/01	12/03/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.5
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.0A			Quant. Limits with no Dilution
Lab Sample I.D.	012791A-18	SBLKFP		
Method Blank I.D.		1.80		
Quant. Factor				
Naphthalene	3J			3.3
2-Methylnaphthalene	2J			3.3
Acenaphthylene	11			3.3
Acenaphthene	U			3.3
Fluorene	U			3.3
Phenanthrene	18			3.3
Anthracene	8			3.3
Fluoranthene	33			3.3
Pyrene	88			3.3
Benzo(a)anthracene	32			3.3
Chrysene	36			3.3
Benzo(b)fluoranthene	36			3.3
Benzo(k)fluoranthene	49			3.3
Benzo(a)pyrene	44			3.3
Indeno(1,2,3-cd)pyrene	39			3.3
Dibenzo(a,h)anthracene	11			3.3
Benzo(q,h,i)perylene	52			3.3
Date Received	11/14/01			
Date Extracted	11/16/01			
Date Analyzed	12/01/01			

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000100

TABLE SV-1.6
7001-2791A
TRC ENVIRONMENTAL
PAH'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	VC10.OA	VC10.OA	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKWP	012791A-18D1	012791A-18D2	
Method Blank I.D.	SBLKWP	SBLKWP	SBLKWP	
Quant. Factor	1.00	1.76	1.77	
Naphthalene	U	4J	2.5J	3.3
2-Methylnaphthalene	U	2J	U	3.3
Acenaphthylene	U	8	4.1J	3.3
Acenaphthene	U	U	U	3.3
Fluorene	U	U	U	3.3
Phenanthrene	U	14	7.8	3.3
Anthracene	U	5J	3.2J	3.3
Fluoranthene	U	21	13	3.3
Pyrene	U	64	38	3.3
Benzo(a)anthracene	U	21	12	3.3
Chrysene	U	23	13	3.3
Benzo(b)fluoranthene	U	28	13	3.3
Benzo(k)fluoranthene	U	22	16	3.3
Benzo(a)pyrene	U	26	16	3.3
Indeno(1,2,3-cd)pyrene	U	22	10	3.3
Benzo(a,h)anthracene	U	U	U	3.3
Benzo(g,h,i)perylene	U	29	17	3.3
Date Received				
Date Extracted	11/28/01	11/14/01	11/14/01	
Date Analyzed	11/30/01	11/28/01	12/01/01	
		12/01/01	12/01/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.7
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.I	VC10.C		Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	012791A-19 SBLKWP 1.60	012791A-20 SBLKWP 1.84		
Naphthalene	2.3J	U		3.3
2-Methyl naphthalene	U	U		3.3
Acenaphthylene	9.6	U		3.3
Acenaphthene	U	U		3.3
Fluorene	U	U		3.3
Phenanthrene	11	3.9J		3.3
Anthracene	5.4	U		3.3
Fluoranthene	19	6.1		3.3
Pyrene	54	18		3.3
Benzo(a)anthracene	20	6.9		3.3
Chrysene	22	7.3		3.3
Benzo(b)fluoranthene	18	U		3.3
Benzo(k)fluoranthene	25	U		3.3
Benzo(a)pyrene	19	U		3.3
Indeno(1,2,3-cd)pyrene	19	U		3.3
Biphenzo(a,h)anthracene	U	U		3.3
Benzo(g,h,i)perylene	26	U		3.3
Date Received	11/16/01	11/16/01		
Date Extracted	11/28/01	11/28/01		
Date Analyzed	12/01/01	12/01/01		

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-2.0
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Aqueous

All values are ug/L.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank SBLKRQ 1.00	EB110601 012791A-01 SBLKRQ 1.09		Quant. Limits with no Dilution
Naphthalene	U	U		10
2-Methylnaphthalene	U	U		10
Acenaphthylene	U	U		10
Acenaphthene	U	U		10
Fluorene	U	U		10
Phenanthrene	U	U		10
Anthracene	U	U		10
Fluoranthene	U	U		10
Pyrene	U	U		10
Benzo(a)anthracene	U	U		10
Chrysene	U	U		10
Benzo(b)fluoranthene	U	U		10
Benzo(k)fluoranthene	U	U		10
Benzo(a)pyrene	U	U		10
Indeno(1,2,3-cd)pyrene	U	U		10
Dibenzo(a,h)anthracene	U	U		10
Benzo(q,h,i)perylene	U	U		10
Date Received				
Date Extracted	11/09/01	11/07/01		
Date Analyzed	11/15/01	11/09/01	11/15/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0006012

TABLE SV-2.1
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	EB110801		Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	SBLKVQ SBLKVQ 1.00	012791A-04 SBLKVQ 1.00		
Naphthalene	U	U		10
2-Methylnaphthalene	U	U		10
Acenaphthylene	U	U		10
Acenaphthene	U	U		10
Fluorene	U	U		10
Phenanthrene	U	U		10
Anthracene	U	U		10
Fluoranthene	U	U		10
Pyrene	U	U		10
Benzo(a)anthracene	U	U		10
Chrysene	U	U		10
Benzo(b)fluoranthene	U	U		10
Benzo(k)fluoranthene	U	U		10
Benzo(a)pyrene	U	U		10
Indeno(1,2,3-cd)pyrene	U	U		10
Dibenzo(a,h)anthracene	U	U		10
Benzo(g,h,i)perylene	U	U		10
Date Received				
Date Extracted	11/13/01	11/09/01		
Date Analyzed	11/15/01	11/13/01	11/15/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-2.2
7001-2791A
TRC ENVIRONMENTAL
PAH'S

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	EB111301		Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	SBLKEQ SBLKEQ 1.00	012791A-11 SBLKEQ 1.00		
Naphthalene	U	U		10
2-Methylnaphthalene	U	U		10
Acenaphthylene	U	U		10
Acenaphthene	U	U		10
Fluorene	U	U		10
Phenanthrene	U	U		10
Anthracene	U	U		10
Fluoranthene	U	U		10
Pyrene	U	U		10
Benzo(a)anthracene	U	U		10
Chrysene	U	U		10
Benzo(b)fluoranthene	U	U		10
Benzo(k)fluoranthene	U	U		10
Benzo(a)pyrene	U	U		10
Indeno(1,2,3-cd)pyrene	U	U		10
Dibenz(a,h)anthracene	U	U		10
Benzo(g,h,i)perylene	U	U		10
Date Received				
Date Extracted	11/16/01	11/14/01		
Date Analyzed	11/21/01	11/16/01	11/21/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.0
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	EB110601	PBLK61 QC2 111401-B04	Quant. Limits with no Dilution
Lab Sample I.D.	111401-B04	012791A-01	QC2	
Method Blank I.D.	PBLK61	PBLK61	PBLK61	
Quant. Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	4.3X	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	5.0X	1.0
Date Received		11/07/01		
Date Extracted	11/14/01	11/14/01	11/14/01	
Date Analyzed	11/20/01	11/20/01	11/20/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000015

TABLE GC-2.1
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	EB110801	EB111301	Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	111601-B06 PBLK65 1.00	012791A-04 PBLK65 1.00	012791A-11 PBLK65 1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	U	1.0
Date Received		11/09/01	11/14/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/22/01	11/21/01	11/21/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000016

TABLE GC-2.2
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

Aqueous

All values are ug/L.

Client Sample I.D.	PBLK65 QC2 111601-B06			Quant. Limits with no Dilution
Lab Sample I.D.				
Method Blank I.D.	QC2			
Quant. Factor	PBLK65 1.00			
Aroclor-1016	U			1.0
Aroclor-1221	U			2.0
Aroclor-1232	U			1.0
Aroclor-1242	4.6X			1.0
Aroclor-1248	U			1.0
Aroclor-1254	U			1.0
Aroclor-1260	4.6X			1.0
Date Received				
Date Extracted	11/16/01			
Date Analyzed	11/22/01			

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000017

TABLE GC-2.3
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	VC10.W	VC10.W MS1 012791A-05	Quant. Limits with no Dilution
Lab Sample I.D.	111601-B02	012791A-05	MS1	
Method Blank I.D.	PBLK63	PBLK63	PBLK63	
Quant. Factor	0.200	0.235	0.236	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	U	33.
Aroclor-1260	U	U	51.X	33.
Date Received		11/09/01	11/09/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/22/01	11/21/01	11/22/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000018

TABLE GC-2.4
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.W MSB1 012791A-05	VC10.W MSD1 012791A-05	VC10.V PBLK63 0.235	Quant. Limits with no Dilution
Lab Sample I.D.				
Method Blank I.D.				
Quant. Factor	0.200	0.235	0.227	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	U	33.
Aroclor-1260	51.X	49.X	U	33.
Date Received	11/09/01	11/09/01	11/09/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/22/01	11/22/01	11/21/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.5
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.UB	VC15.A	VC10.OA	Quant. Limits with no Dilution
Lab Sample I.D.	012791A-07	012791A-09	012791A-18	
Method Blank I.D.	PBLK63	PBLK63	PBLK63	
Quant. Factor	0.464	0.229	0.360	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	U	33.
Aroclor-1260	U	U	U	33.
Date Received	11/09/01	11/09/01	11/14/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/21/01	11/22/01	11/22/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.6
 7001-2791A
 TRC ENVIRONMENTAL
 8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	PBLK63 QC2 111601-B02 QC2 PBLK63 0.200			Quant. Limits with no Dilution
Aroclor-1016	U			33.
Aroclor-1221	U			67.
Aroclor-1232	U			33.
Aroclor-1242	130X			33.
Aroclor-1248	U			33.
Aroclor-1254	U			33.
Aroclor-1260	150X			33.
Date Received Date Extracted Date Analyzed	11/16/01 11/22/01			

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.7
 7001-2791A
 TRC ENVIRONMENTAL
 8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	VC10.OA D1	VC10.OA D2	Quant. Limits with no Dilution
Lab Sample I.D.	112601-B04	012791A-18D1	012791A-18D2	
Method Blank I.D.	PBLK83	PBLK83	PBLK83	
Quant. Factor	0.200	0.356	0.354	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	U	33.
Aroclor-1260	U	4.2J	3.4J	33.
Date Received		11/14/01	11/14/01	
Date Extracted	11/26/01	11/26/01	11/26/01	
Date Analyzed	12/04/01	12/04/01	12/04/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.8
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	PBLK83 QC2 112601-B04			Quant. Limits with no Dilution
Lab Sample I.D.	QC2			
Method Blank I.D.	PBLK83			
Quant. Factor	0.200			
Aroclor-1016	U			33.
Aroclor-1211	U			67.
Aroclor-1232	U			33.
Aroclor-1242	120X			33.
Aroclor-1248	U			33.
Aroclor-1254	U			33.
Aroclor-1260	150X			33.
Date Received				
Date Extracted	11/26/01			
Date Analyzed	12/04/01			

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000023

TABLE GC-2.9
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	VC10.AB	VC10.B	Quant. Limits with no Dilution
Lab Sample I.D.	111601-S02	012791A-02	012791A-03	
Method Blank I.D.	PCBLK63	PCBLK63	PCBLK63	
Quant. Factor	0.200	0.355	0.396	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	3.7J	33.
Aroclor-1260	U	U	3.3J	33.
Date Received		11/07/01	11/07/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/26/01	11/26/01	11/26/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0000024

TABLE GC-2.10
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.T	VC10.N	VC10.S	Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	012791A-08 PCBLK63 0.432	012791A-12 PCBLK63 0.350	012791A-13 PCBLK63 0.433	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	3.0J	33.
Aroclor-1260	U	2.1J	2.7J	33.
Date Received	11/09/01	11/14/01	11/14/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	11/26/01	11/26/01	12/03/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

**TABLE GC-2.11
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S**

All values are ug/Kg dry weight basis.

Client Sample I.D.	VC10.P	VC10.Q	VC10.RA	Quant. Limits with no Dilution
Lab Sample I.D.	012791A-15	012791A-16	012791A-17	
Method Blank I.D.	PCBLK63	PCBLK63	PCBLK63	
Quant. Factor	0.376	0.391	0.348	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	2.1J	4.2J	3.3J	33.
Aroclor-1260	1.5J	2.8J	2.9J	33.
Date Received	11/14/01	11/14/01	11/14/01	
Date Extracted	11/16/01	11/16/01	11/16/01	
Date Analyzed	12/03/01	12/03/01	12/03/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.12
7001-2791A
TRC ENVIRONMENTAL
8082 POLYCHLORINATED BIPHENYL'S

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	VC10.I	VC10.C	Quant. Limits with no Dilution
Lab Sample I.D. Method Blank I.D. Quant. Factor	112601-S04 PCBLK83 0.200	012791A-19 PCBLK83 0.324	012791A-20 PCBLK83 0.372	
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	U	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	U	33.
Aroclor-1260	U	2.4J	U	33.
Date Received Date Extracted Date Analyzed	11/26/01 12/05/01	11/16/01 11/26/01 12/06/01	11/16/01 11/26/01 12/06/01	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
 Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

0030027

TABLE AS-1.0
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY

Aqueous

All values are ug/L.

Client Sample I.D.	EB110601	EB110801	EB111301	
Lab Sample I.D.	012791A-01	012791A-04	012791A-11	
Arsenic	4.4U	4.4U	4.6U	
Cadmium	0.80U	0.80U	0.80U	
Chromium	0.90U	0.90U	1.0U	
Copper	24.2B	1.3U	1.5U	
Lead	2.0U	2.0U	2.3U	
Mercury	0.10U	0.10U	0.10U	
Nickel	1.3U	1.3U	1.3U	
Zinc	15.1B	4.6U	5.0U	

See Appendix for qualifier definitions

0000028

**TABLE AS-1.1
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY**

Soil

All values are mg/Kg dry weight basis.

Client Sample I.D.	VC10.AB	VC10.B	VC10.W	VC10.W D
Lab Sample I.D.	012791A-02	012791A-03	012791A-05	012791A-05D
Arsenic	6.9	8.2	0.89U	0.89U
Cadmium	0.19U	0.33U	0.16U	0.16U
Chromium	27.2	34.7	1.5B	1.4B
Copper	10.9	18.9	1.2B	1.1B
Lead	7.4	11.6	0.94	1.0
Mercury	0.0051BN	0.030N	0.0038UN	0.0034U
Nickel	17.5	20.3	0.59B	0.64B
Zinc	51.1	68.1	3.8B	3.4B

See Appendix for qualifier definitions

0000029

Soil

**TABLE AS-1.2
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY**

All values are mg/Kg dry weight basis.

Client Sample I.D.	VC10.W S	VC10.V	VC10.UB	VC10.T
Lab Sample I.D.	012791A-05S	012791A-06	012791A-07	012791A-08
Arsenic	8.6	1.1B	6.1	15.7
Cadmium	1.0	0.18U	0.24U	0.51U
Chromium	42.2	2.6	29.3	59.4
Copper	53.6	0.88B	14.9	28.2
Lead	5.4	0.90	10.3	20.3
Mercury	0.031	0.0037UN	0.045N	0.022N
Nickel	103	1.4B	18.4	37.9
Zinc	104.	3.0B	57.8	117.

See Appendix for qualifier definitions

0000030

Soil

TABLE AS-1.3
 7001-2791A
 TRC ENVIRONMENTAL
 MISCELLANEOUS ATOMIC SPECTROSCOPY

All values are mg/Kg dry weight basis.

Client Sample I.D.	VC15.A	VC10.N	VC10.S	VC10.P
Lab Sample I.D.	012791A-09	012791A-12	012791A-13	012791A-15
Arsenic	1.6B	8.1	11.1	8.4
Cadmium	0.17U	0.26U	0.32U	0.28U
Chromium	2.4	37.4	46.5	34.8
Copper	0.97B	32.6	31.0	15.9
Lead	0.83	19.4	21.0	11.0
Mercury	0.0030UN	0.025N	0.023N	0.027N
Nickel	1.3B	21.8	27.2	23.0
Zinc	2.9B	93.7	101.	69.0

See Appendix for qualifier definitions

0000031

**TABLE AS-1.4
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY**

Soil

All values are mg/Kg dry weight basis.

Client Sample I.D.	VC10.Q	VC10.RA	VC10.OA	VC10.I
Lab Sample I.D.	012791A-16	012791A-17	012791A-18	012791A-19
Arsenic	9.3	2.4B	8.6	6.2
Cadmium	0.30U	0.26U	0.19U	0.14U
Chromium	37.7	28.1	33.5	29.5
Copper	18.3	10.3	17.6	17.9
Lead	12.8	7.7	11.4	11.5
Mercury	0.060N	0.047N	0.020N	0.027N
Nickel	24.5	17.6	21.6	18.9
Zinc	74.4	55.7	68.4	63.4

See Appendix for qualifier definitions

0000002

TABLE AS-1.5
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY

Soil

All values are mg/Kg dry weight basis.

Client Sample I.D.	VC10.C			
Lab Sample I.D.	012791A-20			
Arsenic	8.3			
Cadmium	0.18U			
Chromium	34.7			
Copper	14.9			
Lead	10.5			
Mercury	0.015N			
Nickel	22.7			
Zinc	67.0			

See Appendix for qualifier definitions

0000033

TABLE AS-2.0
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY

All values are mg/Kg dry weight basis.

Client Sample I.D.	D2			
Lab Sample I.D.	VC10.0A			
Lab Sample I.D.	012791A-18			
Arsenic	8.6			
Cadmium	0.220			
Chromium	31.1			
Copper	20.0			
Lead	11.4			
Mercury	0.034			
Nickel	20.4			
Zinc	73.1			

See Appendix for qualifier definitions

0000034

TABLE AS-3.0
7001-2791A
TRC ENVIRONMENTAL
MISCELLANEOUS ATOMIC SPECTROSCOPY

All values are mg/Kg dry weight basis.

Client Sample I.D.	DI VC10.0A			
Lab Sample I.D.	012791A-18			
Arsenic	8.3			
Cadmium	0.220			
Chromium	33.4			
Copper	20.9			
Lead	12.6			
Mercury	0.036			
Nickel	21.3			
Zinc	74.5			

See Appendix for qualifier definitions

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.AB

a. Name: STL

Contract: _____

ab Code: STL Case No.: 2791A

SAS No.: _____

SDG No.: A2791

matrix (soil/water) : SOIL

Lab Sample ID: 012791A-02

Solids: 55

Date Received: 11/07/01

Comments:

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1
WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.B

Lab Name: STL

Contract: _____

Lab Code: STL Case No.: 2791A

SAS No.: _____

SDG No.: A2791

Matrix (soil/water) : SOIL

Lab Sample ID: 012791A-03

Solids: 49.3

Date Received: 11/07/01

Comments:

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0000037

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.W

a Name: STL

Contract: _____

ab Code: STL Case No.: 2791A

SAS No.: _____

SDG No.: A2791

Matrix (soil/water): SOIL

Lab Sample ID: 012791A-05

Solids: 84.1

Date Received: 11/09/01

Comments:

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0000038

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.v

Lab Name: STL

Contract: _____

Lab Code: STL Case No.: 2791A

SAS No.:

SDG No.: A2791

Latrix (soil/water): SOIL

Lab Sample ID: 012791A-06

: Solids: 86.9

Date Received: 11/09/01

Comments:

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0000039

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.UB

as Name : STL

Contract: _____

Lab Code: STL

Case No.: 2791A

SAS No.: _____

SDG No.: A2791

Matrix (soil/water) : SOIL

Lab Sample ID: 012791A-07

Solids: 43.5

Date Received: 11/09/01

Comments:

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0000040

1
WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.T

Lab Name: STL

Contract: _____

Lab Code: STL Case No.: 2791A

Case No.: 2791A

SAS No.: _____

SDG No.: A2791

Matrix (soil/water) : SOIL

Lab Sample ID: 012791A-08

Solids:

Date Received: 11/09/01

Comments:

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00000041

1
WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.N

ab Name: STL

Contract: _____

ab Code: STL Case No.: 2791A

SAS No.: _____

SDG No.: A2791

matrix (soil/water): SOIL

Lab Sample ID: 012791A-12

Solids: 56

Date Received: 11/14/01

Comments:

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0000042

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.S:

ab Name: STL

Contract: _____

ab Code: STL Case No.: 2791A

SAS No.: _____

SDG No.: A2791

atrix (soil/water): SOIL

Lab Sample ID: 012791A-13

Solids: 47.9

Date Received: 11/14/01

Comments:

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0000043

1
WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.P

ab Name: STL

Contract: _____

ab Code: STL

Case No.: 2791A

SAS No.: _____

SDG No.: A2791

matrix (soil/water) : SOIL

Lab Sample ID: 012791A-15

Solids: 53.4

Date Received: 11/14/01

Comments:

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FIGURE 2A

1
WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.Q

Lab Name: STL

Contract: _____

Lab Code: STL

Case No.: 2791A

SAS No.:

SDG No.: A2791

Matrix (soil/water): SOIL

Lab Sample ID: 012791A-16

Solids: 52

Date Received: 11/14/01

Comments:

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1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.RA

ab Name: STL

Contract: _____

ab Code: STL Case No.: 2791A

SAS No.: _____

SDG No.: A2791

Matrix (soil/water) : SOIL

Lab Sample ID: 012791A-17

Solids: 59.2

Date Received: 11/14/01

Comments:

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00000016

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

VC10.0A

Lab Name: STL

Contract:

Lab Code: STL

Case No.: 2791A

SAS No.: _____

SDG No. : A2791

Latrix (soil/water) : SOIL

Lab Sample ID: 012791A-18

· Solids: - 55.1

Date Received: 11/14/01

Comments:

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