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GEI Consultants, Inc.

REPORT

FINAL SOIL SAMPLING REPORT
SOIL REMOVAL ACTION
CANNONS ENGINEERING CORPORATION
PLYMOUTH HARBOR SITE
PLYMOUTH, MASSACHUSETTS

Submitted to

Responsible Party Project Managers
Cannons Engineering Corporation
Plymouth Harbor Site
Plymouth, Massachusetts



SDMS DocID 000212311

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February 2, 1989
Project 88264

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by

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Project 88264



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1. INTRODUCTION

1.1 Objective

The objective of the Soil Sampling Program at the Cannons Engineering Corporation - Plymouth Harbor (CEC/PH) site in Plymouth, Massachusetts (Fig. 1 and 2) was to document the results of the Soil Removal Action which took place on September 13, 1988 within the bermed areas for three former aboveground tanks and to evaluate the distribution of contaminants in the removal area. The three tanks had previously been removed in 1987.

The Soil Removal Action consisted of the excavation of about 200 tons of stained soil from within a portion of the bermed area around Tank No. 1. In addition, approximately 50 tons of soil were scraped from the remaining portion of the area inside the Tank No. 1 berm and from within the bermed areas at the other two former tank locations. After sampling was completed, the excavation within the Tank No. 1 berm area was backfilled with on-site and off-site soils. Also, an approximate 6-12-inch-thick blanket of clean fill was placed over the scraped area inside the three tank berms. A detailed description of the Soil Removal Action is presented in the report entitled "Final Removal Action Summary Report," prepared by Inland Pollution Control, Division of Chemical Waste Management, Inc., dated February 2, 1989.

A detailed summary of the Soil Sampling Program performed by GEI and the results of the laboratory analysis of soil samples collected at the CEC/PH site are presented in this report.

1.2 General Description of Soil Sampling Program

The soil sampling program was performed by GEI Consultants, Inc. (GEI) on September 13, 1988. Representative grab soil samples from the base and walls of the soil excavation within the bermed area of Tank No. 1 were collected by GEI. These soil samples were composited to form two samples representative of the base and two samples representative of the sides of the excavation, respectively.

Additionally, GEI collected grab soil samples around the exterior of each of the three tank berms. These samples were composited to form one representative soil sample. Soil samples were also collected from the area inside each of the three tank berms and composited to form one representative soil sample.

GEI also collected grab soil samples from a portion of the soil removed during the excavation of the area within the berm around Tank No. 1. These samples were composited to form one representative soil sample.

Finally, a grab sample of the clean fill from an off-site source, which was placed in the bermed areas around the three tanks following sampling activities, was collected by GEI.

With the exception of the samples of the excavated soil and the clean fill material, all grab soil samples were collected in duplicate and stored for possible additional analysis, as determined by the U.S. Environmental Protection Agency's Remedial Project Manager (EPA-RPM). In addition, three duplicate composite soil samples were submitted to the laboratory for quality assurance purposes. The duplicate samples were from the Tank No. 1 excavation base and sides and from the areas inside of the three tank berms.

Soil samples were labeled in the field, placed on ice, and transported to Enseco Laboratory in Cambridge, Massachusetts on September 14, 1988 for laboratory analysis. Chain-of-custody was maintained at all times.

All soil samples which were tested, except the sample of clean fill which was a grab sample, were composited by Enseco. All soil samples submitted to Enseco were analyzed for:

- ° Base/Neutral semi-volatile organic compounds (U.S. EPA Method 8270)
- ° Polychlorinated biphenyls (PCBs) and pesticides (U.S. EPA Method 8080)
- ° Priority pollutant metals (various methods)

2. SUMMARY OF SAMPLING PROGRAM

2.1 Sample Glassware

Each soil sample and duplicate soil sample was dispensed into the following laboratory-prepared glassware:

- ° Two 8-ounce wide-mouth glass jars with Teflon-lined black phenolic caps

Glassware used for Base/Neutral Organic and Pesticide/PCB analyses was rinsed with methylene chloride while the glassware used for metals analyses was acid-rinsed.

2.2 Sample Location Designations

Soil sample locations at the site were designated as follows:

- ° Excavation Base at former Tank No. 1 EXB-00
- ° Excavation Perimeter at former Tank No. 1 EXP-00
- ° Interior of Bermed Areas (all former tanks) IBO-00
- ° Exterior of Bermed Areas (all former tanks) EBO-00
- ° Excavated Soil Taken from bermed area of former Tank No. 1 EXS-00
- ° Clean Fill Material FIL-00

2.3 Soil Sampling Procedures

2.3.1 Tank No. 1 Excavation Base

The base of the soil excavation area at the former Tank No. 1 location was gridded into eight equal areas, as shown in the idealized sketch on Fig. 3. Each grid area was given a sample location designation (e.g., EXB01, EXB02, EXB03, etc.).

Two duplicate grab soil samples were collected from each grid area. These samples were designated EXB01A and EXB01B, etc. Each duplicate grab sample consisted of soil excavated from the same sample hole as the original grab sample.

Soil samples were collected manually from between 0 to 3 inches below the ground surface with a clean hand-trowel or sampling spoon.

Each sample was dispensed into the appropriate glassware and labeled. In total, 32 pieces of glassware were filled to form 2 discrete sample sets (with 2 jars per sample) for each of the eight sample grid areas. Refer to Table 1.

2.3.2 Tank No. 1 Excavation Perimeter

The perimeter wall of the soil excavation at the former Tank No. 1 location was also divided into eight sections, as shown in Fig. 4. Each section was given a sample location designation (e.g., EXP-01, EXP-02, etc.). Two duplicate soil samples were collected from each perimeter section. These samples were designated EXP01A and EXP01B, etc. The duplicate samples consisted of soil excavated from the same sample hole as the original sample.

The samples were representative of the soil profile exposed between the ground surface and the base of the excavation. Portions of each sample were collected from the wall of the excavation at the ground surface, the bottom of the excavation and at the midpoint between the ground surface and excavation bottom, as shown in idealized sketch on Fig. 4. The excavation was about 5 to 7 feet deep.

Each sample was dispensed into the appropriate glassware and labeled. In total, 32 pieces of glassware were filled to form 2 discrete sample sets (with 2 jars per sample) for each of the 8 sample locations. Refer to Table 1.

2.3.3 Ground Surface of Interiors of Bermed Areas

The interior of each bermed area for former Tank Nos. 1, 2, and 3 was divided into four quadrants, as shown in Fig. 5. Each of these quadrants was assigned a sample location designation. For example, interior quadrants of the bermed area for former Tank No. 1 were identified as IB1-01, IB1-02, IB1-03, etc., and the quadrants for the bermed area of former Tank No. 2 were designated as IB2-01, IB2-02, etc.

Duplicate grab soil samples were collected within each interior quadrant. These samples were designated IB1-01A and IP1-01B, etc. The duplicate grab samples consisted of soil excavated from the same sample hole as the original grab sample. Soil samples were collected manually from between 0 to 3 inches below the ground surface with a clean hand trowel or sampling spoon.

Each sample was dispensed into the appropriate glassware and labeled. In total, 48 pieces of glassware were filled to form 2 discrete sample sets (with 2 jars per sample) for each of the 12 interior sample quadrants. Refer to Table 1.

2.3.4 Ground Surface of Exterior of Bermed Areas

The exterior of each bermed area also was divided into four quadrants, as shown in Fig. 5. Each of these quadrants was assigned a sample location designation. For example, exterior quadrants for the bermed area of former Tank No. 2 were designated as EB2-01, EB2-02, EB2-03, etc.

Duplicate grab soil samples were collected for each exterior sample quadrant. These samples were designated EB1-01A and EB1-01B, etc. The duplicate grab samples consisted of soil excavated from the same sample hole as the original grab sample. Soil samples were collected manually from between 0 to 3 inches below the ground surface with a clean hand trowel or sampling spoon.

Each sample was dispensed into the appropriate glassware and labeled. In total, 48 pieces of glassware were filled to form 2 discrete sample sets (with 2 jars per sample) for each of the 12 exterior sample quadrants. Refer to Table 1.

2.3.5 Excavated Soil from Bermed Area of Tank No. 1

A portion of soil excavated from the bermed area of former Tank No. 1 was stockpiled to permit sampling. The pile of excavated soil was divided into four roughly equal quadrants by GEI. Each quadrant was assigned a sample location designation (e.g., EXS-01, EXS-02, etc.).

Soil samples were collected manually from each quadrant from between 0 to 3 feet below the pile surface with a clean, 2-inch-diameter soil auger.

Each sample was dispensed into the appropriate glassware and labeled. In total, 8 pieces of glassware were filled to form one sample (with two jars per sample) for each quadrant of the pile. Refer to Table 1. The soil was backfilled into the excavation after sampling.

2.3.6 Fill Material

A grab sample of the fill material placed in the bermed areas around each of the three tanks was collected and identified as FIL-01.

2.4 Sample Management

2.4.1 Container Decontamination

The exterior surface of all sample glassware was wiped dry with clean paper towels prior to labeling.

2.4.2 Labeling and Packaging

Each piece of soil sampling glassware was affixed with a self-sticking adhesive label. Each label was completed using an indelible marker and contained the following information:

Sample # CEC/PH-
Sample location
Date
Time
Sampler's initials

Labeled glassware was placed in individual, ziploc plastic bags and immediately placed on ice.

2.4.3 Sample Logs

For each sample collected, a corresponding sample log form was completed. Copies of all sample log forms are provided in Appendix A.

2.4.4 Sample Compositing

Grab soil samples were collected from each of the quadrants at each of the following sampling locations: former Tank No. 1 excavation base, former tank No. 1 excavation perimeter, interior of the bermed areas, and exterior of the bermed areas.

A summary of the samples collected at the site and the samples that were composited are presented in Tables 1 and 2, respectively. Grab Samples in the original glassware that were to be composited by the laboratory were placed by GEI in plastic bags, which were then tied and tagged with the appropriate label and composite sample number. Grab samples submitted to the laboratory for compositing were designated as composites on the chain-of-custody. Grab samples were mechanically homogenized to form composites by the contract laboratory. This technique is described in Appendix B.

The following composite samples were formed: three composite samples (one duplicate) of the former Tank No. 1 excavation base; three composite samples (one duplicate) of the former Tank No. 1 excavation perimeter,

two composites (one duplicate) of the interior of the bermed areas, one composite of the exterior of the bermed areas and, one composite sample of the excavated soil.

All remaining soil samples have been stored at GEI's office for future analysis at the discretion of the EPA-RPM.

2.4.5 Sample Assignment and Chain-of-Custody

Chain-of-custody was maintained at all times. Chain-of-custody procedures used by GEI are described in the document entitled "Quality Assurance Project Plan, Soil Removal Action, Cannons Engineering Corp., Plymouth Site, Plymouth, Massachusetts" dated September 8, 1988. Copies of the chain-of-custody forms generated during the sampling program are provided in Appendix C.

Prior to shipment of the samples to Enseco, a sample assignment form was completed. The sample assignment form provides the contract laboratory sufficient information to composite the samples received and perform the appropriate analysis. A copy of the sample assignment forms generated are presented in Appendix D.

2.4.6 Sample Transportation and Delivery

All soil samples that were to be composited and analyzed were stored on ice and delivered to Enseco Laboratories in Cambridge, Massachusetts on September 14, 1988, within 24 hours of collection. All other soil samples were refrigerated at GEI's offices in Winchester, Massachusetts. Samples will be held for 120 days or until directed by the EPA-RPM to discard the samples.

At the request of Harish Panchel of the Massachusetts Department of Environmental Quality Engineering (DEQE), splits of the ten composite soil samples and one clean fill soil sample collected by GEI were submitted to the DEQE Lawrence Experimental Station by the contract laboratory. A copy of the letter submitted to Ms. Alba Flaherty of the Lawrence Experimental Station, regarding Mr. Panchel's request, is provided in Appendix E.

2.4.7 Field Sampling Quality Assurance

For quality assurance purposes, three of the soil samples (EBC-03, EPC-03, IBC-02) submitted to the contract laboratory for analysis were duplicate composite samples (see Table 2). Duplicate composite samples of the soils collected from the excavation base (EBC-03) and excavation perimeter (EPC-03) of the former Tank No. 1

area were submitted to the contract laboratory as originally planned. At the direction of the EPA-RPM, a third duplicate composite sample (IBC-02), collected from the interior soils around all three bermed areas, was also submitted to the laboratory. All duplicate composite samples were labeled and submitted to the contract laboratory for analysis using a discrete sample number (see Table 2). Also, after one of the duplicate samples (EBC-03) was analyzed, it was spiked and analyzed (EBC-03MS), and analyzed again (EBC-03MSD) as a quality control measure for the organic compounds (see Table 3).

Additionally, the contract laboratory provided GEI with aqueous trip blanks of organic free water and deionized water, depending on the particular chemical analyses to be performed. The laboratory also provided containers of organic free water and deionized water so that GEI personnel could prepare field blanks during site sampling activities. Field blanks were prepared by decanting either organic free water or deionized water into the appropriate glassware.

2.5 Health and Safety

All health and safety measures taken at the site were performed in accordance with the Health and Safety Plan [Document number: CEC/PH-HS-01] provided in the Soil Sampling Plan submitted on September 8, 1988.

3. RESULTS OF SOIL ANALYSES

3.1 Introduction

All eleven soil samples were analyzed by Enseco Laboratories of Cambridge, Massachusetts for the following parameters:

- a) Base/Neutral semi-volatile organic compounds (U.S. EPA Method 8270).
- b) Polychlorinated biphenyls (PCBs) and pesticides (U.S. EPA Method 8080).
- c) Priority pollutant metals (various methods).

Samples were analyzed following the current EPA Contract Laboratory Program (CLP) "Statement of Work for Organic Analysis" and "Statement of Work for Inorganic Analysis."

Upon receipt of the CLP data packages, GEI reviewed all data to validate the results of the laboratory analyses. Validation procedures used by GEI, and the results of the data validation are summarized in Appendix F.

3.2 Results of Soil Analyses

No PCBs or pesticides were detected in any of the soil samples analyzed.

Tables 3 and 4 provide a summary of the semi-volatile organic compounds and metals detected in the soil samples analyzed. Chemical analysis data sheets for each sample are provided in Appendix G.

Semi-volatile organic compounds (SVOCs) were detected in all of the soil samples. Concentrations of total SVOCs ranged from about 6.3 to 250 ppm in the on-site soils. The higher total concentrations of SVOCs were found in the samples obtained from the Tank No. 1 excavation perimeter, the excavation stockpile, and the near surface soil inside the three bermed areas. SVOC concentrations were lower in the samples from the excavation base. The lowest total concentrations of SVOC were detected in the composite sample from the ground surfaces around the exterior of the three bermed areas (XBC-01).

Disparities in the analytical data between composite samples and the duplicate sample were observed. These disparities may be the result of variations inherent in sampling, homogenization, and compositing processes.

The concentrations of metals detected in the samples were, in general, within the concentration range expected in naturally occurring soils, which are presented in Table 5.

TABLE 1 - SUMMARY OF SOIL SAMPLE LOCATIONS
 Soil Removal Action
 Cannons Engineering Corp. - Plymouth Site
 Plymouth, Massachusetts

Sample Location	Sample Grid, Area, or Quadrant	Sample #	No. of Glassware	Composite
Excavation Base	CEC/PH-EXB-01	EXB-01A	2	EBC-01
		EXB-01B	2	EBC-03 (dup.)
	CEC/PH-EXB-02	EXB-02A	2	EBC-02
		EXB-02B	2	
	CEC/PH-EXB-03	EXB-03A	2	EBC-01
		EXB-03B	2	EBC-03 (dup.)
	CEC/PH-EXB-04	EXB-04A	2	EBC-02
		EXB-04B	2	
CEC/PH-EXB-05	EXB-05A	2	EBC-01	
	EXB-05B	2	EBC-03 (dup.)	
CEC/PH-EXB-06	EXB-06A	2	EBC-02	
	EXB-06B	2		
CEC/PH-EXB-07	EXB-07A	2	EBC-01	
	EXB-07B	2	EBC-03 (dup.)	
CEC/PH-EXB-08	EXB-08A	2	EBC-02	
	EXB-08B	2		
Excavation Perimeter	CEC/PH-EXP-01	EXP-01A	2	EPC-01
		EXP-01B	2	EPC-03 (dup.)
	CEC/PH-EXP-02	EXP-02A	2	EPC-02
EXP-02B		2		
CEC/PH-EXP-03	EXP-03A	2	EPC-01	
	EXP-03B	2	EPC-03 (dup.)	

TABLE 1 - SUMMARY OF SOIL SAMPLE LOCATIONS
 Soil Removal Action
 Cannons Engineering Corp. - Plymouth Site
 Plymouth, Massachusetts

Sample Location	Sample Grid, Area, or Quadrant	Sample #	No. of Glassware	Composite
	CEC/PH-EXP-04	EXP-04A EXP-04B	2 2	EPC-02
	CEC/PH-EXP-05	EXP-05A EXP-05B	2 2	EPC-01 EPC-03 (dup.)
	CEC/PH-EXP-06	EXP-06A EXP-06B	2 2	EPC-02
	CEC/PH-EXP-07	EXP-07A EXP-07B	2 2	EPC-01 EPC-03 (dup.)
	CEC/PH-EXP-08	EXP-08A EXP-08B	2 2	EPC-02
Interior - Berm of Tank 1	CEC/PH-IB1-01	IB1-01A IB1-01B	2 2	IBC-01 IBC-02 (dup.)
	CEC/PH-IB1-02	IB1-02A IB1-02B	2 2	
	CEC/PH-IB1-03	IB1-03A IB1-03B	2 2	IBC-01 IBC-02 (dup.)
	CEC/PH-IB1-04	IB1-04A IB1-04B	2	
Interior - Berm of Tank 2	CEC/PH-IB2-01	IB2-01A IB2-01B	2 2	
	CEC/PH-IB2-02	IB2-02A IB2-02B	2 2	IBC-01 IBC-02 (dup.)

TABLE 1 - SUMMARY OF SOIL SAMPLE LOCATIONS
 Soil Removal Action
 Cannons Engineering Corp. - Plymouth Site
 Plymouth, Massachusetts

Sample Location	Sample Grid, Area, or Quadrant	Sample #	No. of Glassware	Composite
	CEC/PH-IB2-03	IB2-03A IB2-03B	2 2	
	CEC/PH-IB2-04	IB2-04A IB2-04B	2 2	IBC-01 IBC-02 (dup.)
Interior - Berm of Tank 3	CEC/PH-IB3-01	IB3-01A IB3-01B	2 2	IBC-01 IBC-02 (dup.)
	CEC/PH-IB3-02	IB3-02A IB3-02B	2 2	
	CEC/PH-IB3-03	IB3-03A IB3-03B	2 2	IBC-01 IBC-02 (dup.)
	CEC/PH-IB3-04	IB3-04A IB3-04B	2 2	
Exterior - Berm of Tank 1	CEC/PH-EB1-01	EB1-01A EB1-01B	2 2	XBC-01
	CEC/PH-EB1-02	EB1-02A EB1-02B	2 2	
	CEC/PH-EB1-03	EB1-03A EB1-03B	2 2	XBC-01
	CEC/PH-EB1-04	EB1-04A EB1-04B	2 2	
Exterior - Berm of Tank 2	CEC/PH-EB2-01	EB2-01A EB2-01B	2 2	

TABLE 1 - SUMMARY OF SOIL SAMPLE LOCATIONS
 Soil Removal Action
 Cannons Engineering Corp. - Plymouth Site
 Plymouth, Massachusetts

Sample Location	Sample Grid, Area, or Quadrant	Sample #	No. of Glassware	Composite
	CEC/PH-EB2-02	EB2-02A EB2-02B	2 2	XBC-01
	CEC/PH-EB2-03	EB2-03A EB2-03B	2 2	
	CEC/PH-EB2-04	EB2-04A EB2-04B	2 2	XBC-01
Exterior - Berm of Tank 3	CEC/PH-EB3-01	EB3-01A EB3-01B	2 2	XBC-01
	CEC/PH-EB3-02	EB3-02A EB3-02B	2 2	
	CEC/PH-EB3-03	EB3-03A EB3-03B	2 2	XBC-01
	CEC/PH-EB3-04	EB3-04A EB#-04B	2 2	
Excavated Soil Pile	CEC/PH-EXS-01	EXS-01	2	EXS-05
	CEC/PH-EXS-02	EXS-02	2	EXS-05
	CEC/PH-EXS-03	EXS-03	2	EXS-05
	CEC/PH-EXS-04	EXS-04	2	EXS-05
Fill Material	CEC/PH-FIL-01	FIL-01	2	Grab Sample

TABLE 2 - SUMMARY OF COMPOSITE SOIL SAMPLES
 Soil Removal Action
 Cannons Engineering Corp. - Plymouth Site
 Plymouth, Massachusetts

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<u>Location</u>	<u>Composite Sample</u>	<u>Source</u>
Excavation Base	CEC/PH-EBC-01	EXB-01A EXB-03A EXB-05A EXB-07A
Excavation Base	CEC/PH-EBC-02	EXB-02A EXB-04A EXB-06A EXB-08A
Excavation Base (Composite Duplicate)	CEC/PH-EBC-03	EXB-01B EXB-03B EXB-05B EXB-07B
Excavation Perimeter	CEC/PH-EPC-01	EXP-01A EXP-03A EXP-05A EXP-07A
Excavation Perimeter	CEC/PH-EPC-02	EXP-02A EXP-04A EXP-06A EXP-08A
Excavation Perimeter (Composite Duplicate)	CEC/PH-EPC-03	EXP-01B EXP-03B EXP-05B EXP-07B
Interior of Bermed Areas	CEC/PH-IBC-01	IB1-01A IB1-03A IB2-02A IB2-04A IB3-01A IB3-03A
Interior of Bermed Areas (Composite Duplicate)	CEC/PH-IBC-02	IB1-01B IB1-03B IB2-02B IB2-04B IB3-01B IB3-03B

TABLE 2 - SUMMARY OF COMPOSITE SOIL SAMPLES
Soil Removal Action
Cannons Engineering Corp. - Plymouth Site
Plymouth, Massachusetts

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<u>Location</u>	<u>Composite Sample</u>	<u>Source</u>
Exterior of Bermed Areas	CEC/PH-XBC-01	EB1-01A
		EB1-03A
		EB2-02A
		EB2-04A
		EB3-01A
		EB3-03A
Excavated Soil Pile	CEC/PH-EXS-05	EXS-01
		EXS-02
		EXS-03
		EXS-04

TABLE 3 - CLP ORGANIC ANALYSIS
 SOIL ANALYTICAL RESULTS
 Soil Removal Action
 Cannons Engineering Corporation - Plymouth Site
 Plymouth, Massachusetts

Sample No.	Concentration (ppb)									
	EBC-01	EBC-03 (Dup.)	EBC-02	EPC-01	EPC-03 (Dup.)	EPC-02	IBC-01	IBC-02 (Dup.)	XBC-01	EXS-05
<u>Semi-volatile Compounds:</u>										
Naphthalene	160 J	260 J	110 J	3500 J*	770 J	420 J			89 J	510 J
2-Methylnaphthalene	120 J		76 J	1400 J	380 J				58 J	270 J
Dimethyl Phthalate	140 JB		100 JB	320 JB		490 JB	140 JB			160 JB
Acenaphthylene	85 J									
Acenaphthene	430 J	460 J	340 J	5300 J*	1400 J	420 J	430 J	810 J	55 J	1000 J
Dibenzofuran	200 J	280 J	190 J	4400 J*	1000 J				62 J	700 J
Diethyl phthalate						350 JB				
Fluorene	480 J	580 J	370 J	5400 J*	1300 J	520 J	480 J	810 J	48 J	1100
N-Nitrosodiphenylamine										
Phenanthrene	6600	8000	4700	48,000 J*	14,000 J*	7100	7200 J*	17,000 J*	670	12,000
Anthracene	1900	2200 J	1200	11,000 J*	3200 J*	2300 J	2000 J*	5800 J*	110 J	3200
Di-n-Butylphthalate		510 JB				730 JB				390 JB
Fluoranthene	7600	8900	4100	41,000 J*	12,000 J*	9000	12,000 J*	27,000 J*	980	12,000
Pyrene	9000	11,000	5000	41,000 J*	12,000 J*	12,000	18,000 J*	35,000 J*	970	13,000
Benzo (a) Anthracene	4000	5600	2000	16,000 J*	6000 J*	5600	7100 J*	14,000 J*	450	6000
Bis (2-Ethylhexyl) Phthalate							1100 JB	1400 JB	86 JB	
Chrysene	4300	5400	2000	16,000 J*	5500 J*	6100	7800 J*	13,000 J*	500	5900
Benzo (b) Fluoranthene	2700	4600	2400	20,000 J*	3900 J*	6300	4800 J*	9200 J*	470	7100 J
Benzo (k) Fluoranthene	1700	3100	960	8200 J*	2900 J*	4400	2900 J*	4900 J*	370	7100 J
Benzo (a) Pyrene	2900	4000	1500	14,000 J*	4700 J*	8300	5400 J*	10,000 J*	480	5200
Ideno (1,2,3-cd) Pyrene	1400 J*	3100 J*	860	6200 J*	2900 J*	4400	2300 J*	5100 J*	420	2100
Dibenz (a,h) Anthracene	540 J	790 J	290 J	2100 J	780 J	1400 J	850 J	1500 J	110 J	660 J
Benzo (g,h,i) Perylene	1600 J*	3000	830	5700 J*	2700 J*	4200	2300 J*	5200 J*	420	1900
Total	45,855	61,780	27,026	249,520	75,430	74,030	74,800	150,720	6348	80,290

See notes at end of table.

TABLE 3 - CLP ORGANIC ANALYSIS
 SOIL ANALYTICAL RESULTS
 Soil Removal Action
 Cannons Engineering Corporation - Plymouth Site
 Plymouth, Massachusetts

Sample No.	FIL-01	FIELD BLANK	TRIP BLANK	Concentration (ppb)		
				EBC-03 MS	EBC-03 MSD	EBC-03 MSD
<u>Semi-volatile Compounds:</u>						
Naphthalene						
2-Methylnaphthalene						
Dimethyl Phthalate						
Acenaphthylene						
Acenaphthene						
Dibenzofuran						
Diethyl phthalate						
Fluorene		3 JB	2 JB	1900 J	3900	250 J
N-Nitrosodiphenylamine				450 J	1000 J	
Phenanthrene				2000	3700	
Anthracene				1100 J	2100 J	
Di-n-Butylphthalate	180 JB	1 JB				
Fluoranthene						
Pyrene						
Benzo (a) Anthracene						
Bis (2-Ethylhexyl) Phthalate	44 JB					
Chrysene				1300 J	4400	
Benzo (b) Fluoranthene				1400 J	2500	
Benzo (k) Fluoranthene				740 J	1100 J	
Benzo (a) Pyrene				1000 J	310 J	
Ideno (1,2,3-cd) Pyrene				410 J	1100 J	
Dibenz (a,h) Anthracene					350 J	
Benzo (g,h,i) Perylene				310 J	1300 J	
Total	224	4	2	10,610	22,010	

Notes:

- 1) All concentrations reported in parts per billion (ppb).
- 2) J indicates quantitation is approximate due to limitations identified during the data validation process.
- 3) JB indicates quantitation is approximate due to contamination of blanks (field, trip, instrument, etc.) by this constituent.
- 4) MS indicates matrix spike.
- 5) MSD indicates matrix spike duplicate.
- * indicates compound was flagged approximate due to GEI's data validation review process and not by the laboratory.

TABLE 4 - CLP INORGANIC ANALYSIS
 SOIL ANALYTICAL RESULTS
 Soil Removal Action
 Cannons Engineering Corporation - Plymouth Site
 Plymouth, Massachusetts

Sample No.	Concentration (ppm)									
	EBC-01	EBC-03 (Dup.)	EBC-02	EPC-01	EPC-03 (Dup.)	EPC-02	IBC-01	IBC-02 (Dup.)	XBC-01	EXS-05
Antimony	14.7	23.7	9.5	7.7	10.1 JB	8.7 JB	3.3	3.1	5.5	9.0
Arsenic	0.31	0.31	0.30	7.7	9.7	6.2	3.3	0.29		
Beryllium	1.2	1.5			0.45					
Cadmium	8.3	8.9	7.0	6.9	8.5	1.2	11.1	9.6	4.8	7.5
Chromium	34 JB	27.4 JB	26.6 JB	25.8 JB	40.2 JB	27.3 JB	37.2 JB	56.2 J	17.1 JB	26.5 JB
Copper	106 J	166 J	142 J	79.2 J	104 J	145 J	219 J	165 J	78.2 J	142 J
Lead	3.6	5.5	7.0	6.8	8.0	4.8	9.3	12.4	5.1	6.5
Nickel				0.22 J	0.46 J					
Selenium	234 J*	548 J*	128	62.6	70.5	64.2	114	137	43.7	89.7
Zinc										

See notes at end of table.

TABLE 4 - CLP INORGANIC ANALYSIS
 SOIL ANALYTICAL RESULTS
 Soil Removal Action
 Cannons Engineering Corporation - Plymouth Site
 Plymouth, Massachusetts

Sample No.	FIL-01		Field		Trip		Concentration (ppm)
	Blank		Blank		Blank		
<u>Elements:</u>							
Antimony							
Arsenic		2.5					
Beryllium							
Cadmium							
Chromium		2.7					
Copper		6.5 JB	2.2 J		2.6 J		
Lead		2.7 J	0.40 J		0.50 J		
Nickel		3.1					
Selenium							
Zinc		15.3 JB*	3.2 J		3.7		

Notes:

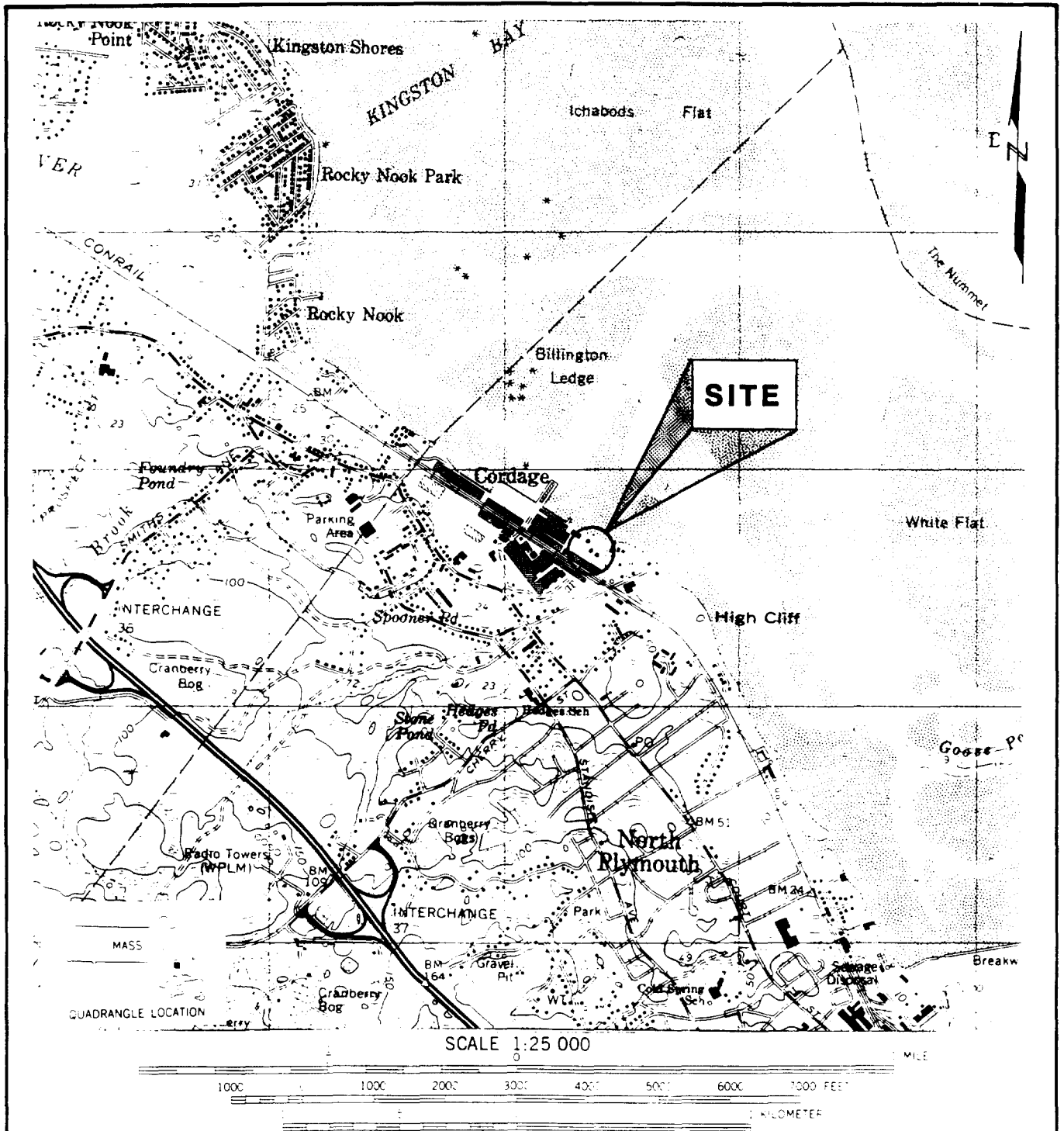
- 1) All concentrations reported in parts per million (ppm).
 - 2) J indicates quantitation is approximate due to limitations identified during the data validation.
 - 3) JB indicates quantitation is approximate due to contamination of blanks (field, trip, instrument, etc.) by this constituent.
- * indicates element was flagged approximate due to GEI's data validation review process and not by the laboratory.

TABLE 5 - TRACE ELEMENT CONTENT OF SOILS
 Soil Removal Action
 Cannons Engineering Corporation - Plymouth Site


Element	Common Range (ppm)	Average (ppm)
Antimony	2-10	---
Arsenic	1-50	5
Beryllium	0.1-40	6
Cadmium	0.01-0.7	0.06
Chromium	1-1000	100
Copper	2-100	30
Lead	2-200	10
Nickel	5-500	40
Selenium	0.1-2	0.3
Zinc	10-300	50

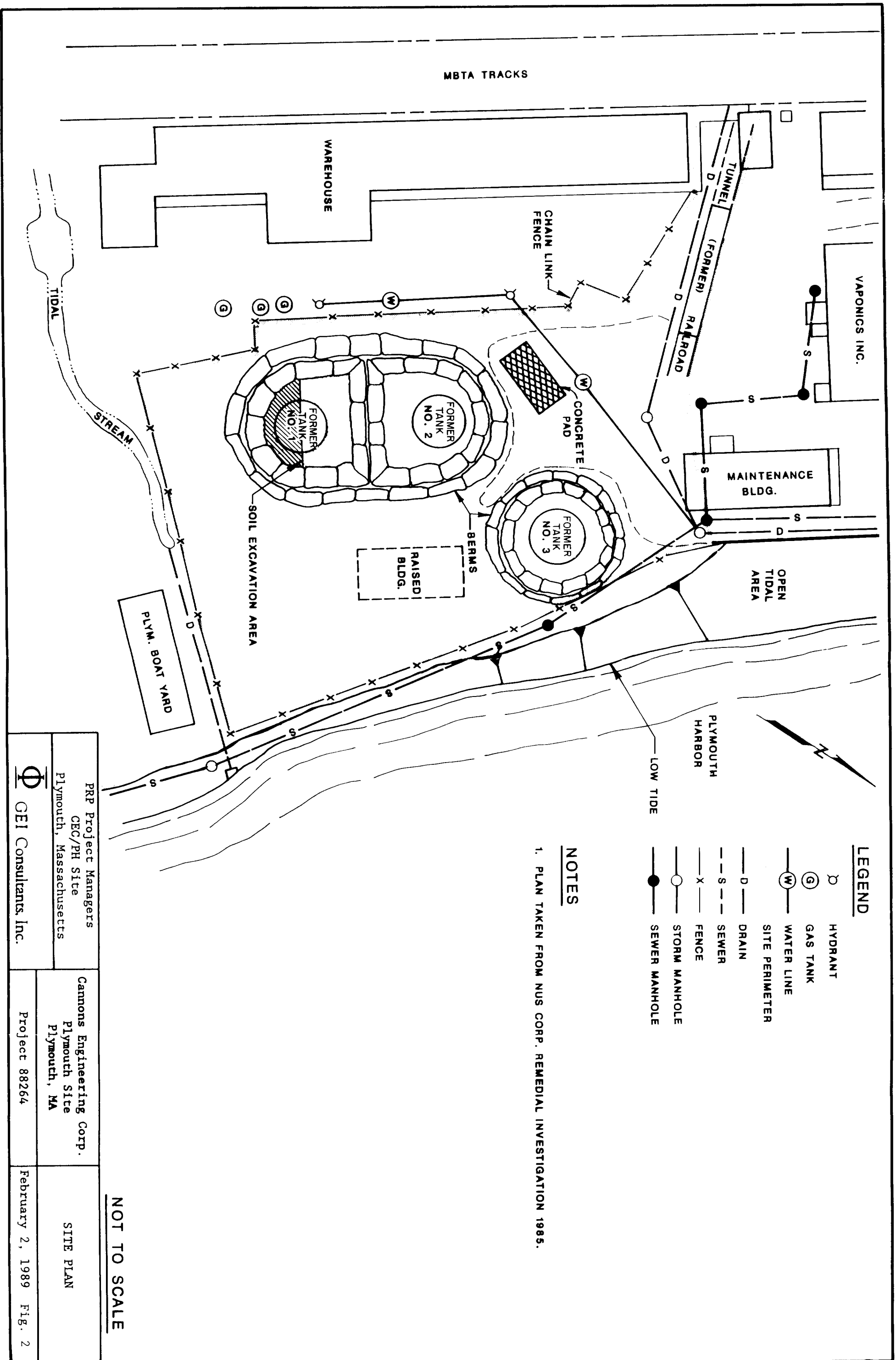
Reference

Taken from Hazardous Waste Land Treatment, EPA, SW-874,
 April 1983.



Map taken from U.S.G.S. Topographic 7.5 Minute Series Map
 Plymouth, Massachusetts Quadrangle, 1977
 Datum is National Geodetic Vertical Datum (NGVD)
 Contour Interval 10 Feet

PRP Project Managers CEC/PH Site Plymouth, Massachusetts	Cannons Engineering Corp. Plymouth Site Plymouth, MA	SITE LOCATION
 GEI Consultants, Inc.	Project 88264	February 2, 1989 Fig. 1



LEGEND

- D ○ HYDRANT
- ⊙ GAS TANK
- ⊙ W WATER LINE
- S — SITE PERIMETER
- D — DRAIN
- S — SEWER
- X — FENCE
- STORM MANHOLE
- SEWER MANHOLE

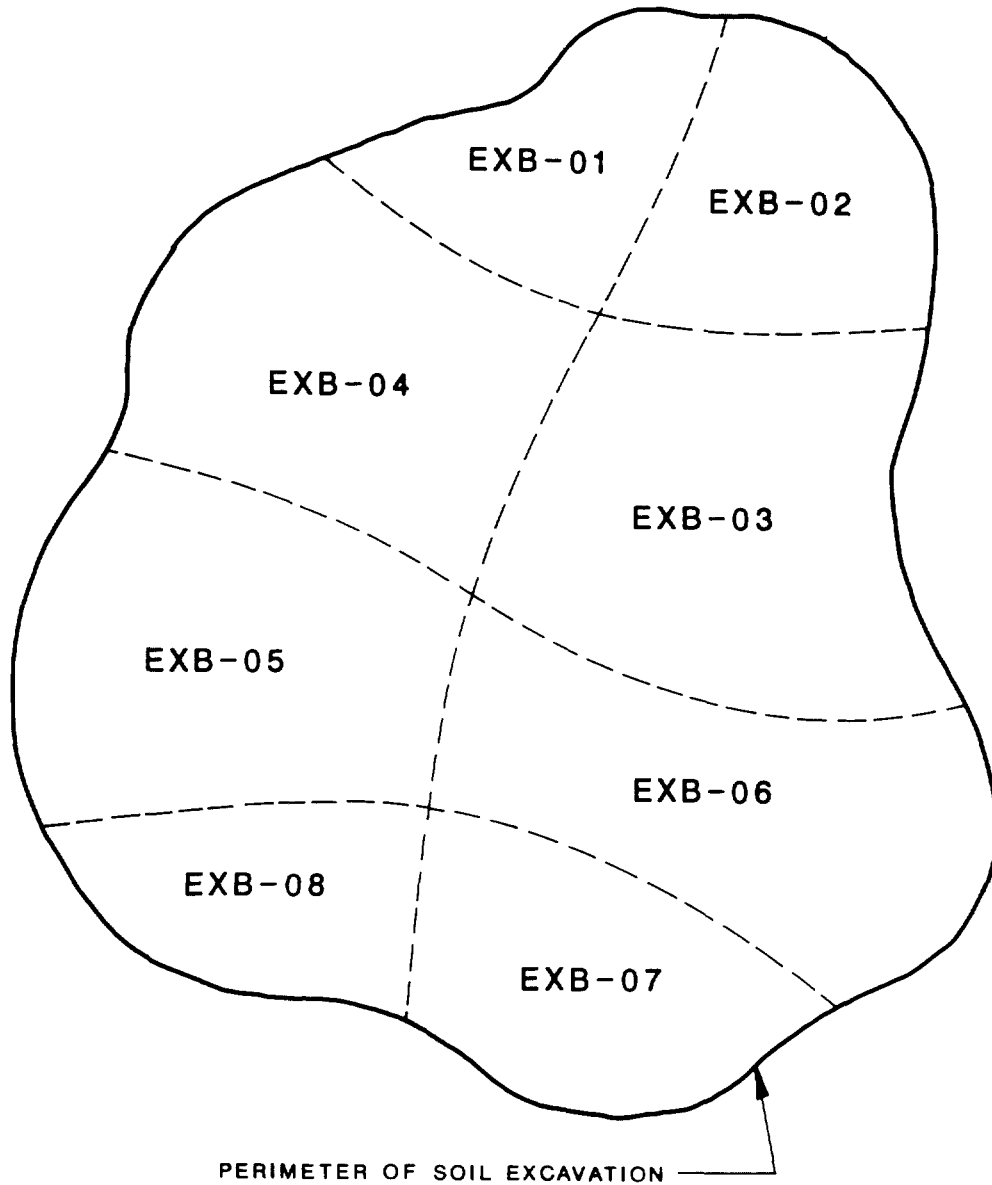
NOTES

1. PLAN TAKEN FROM NUS CORP. REMEDIAL INVESTIGATION 1985.

NOT TO SCALE

PRP Project Managers GEC/PH Site Plymouth, Massachusetts	Canons Engineering Corp. Plymouth Site Plymouth, MA	SITE PLAN
GEI Consultants, Inc.	Project 88264	


February 2, 1989 Fig. 2



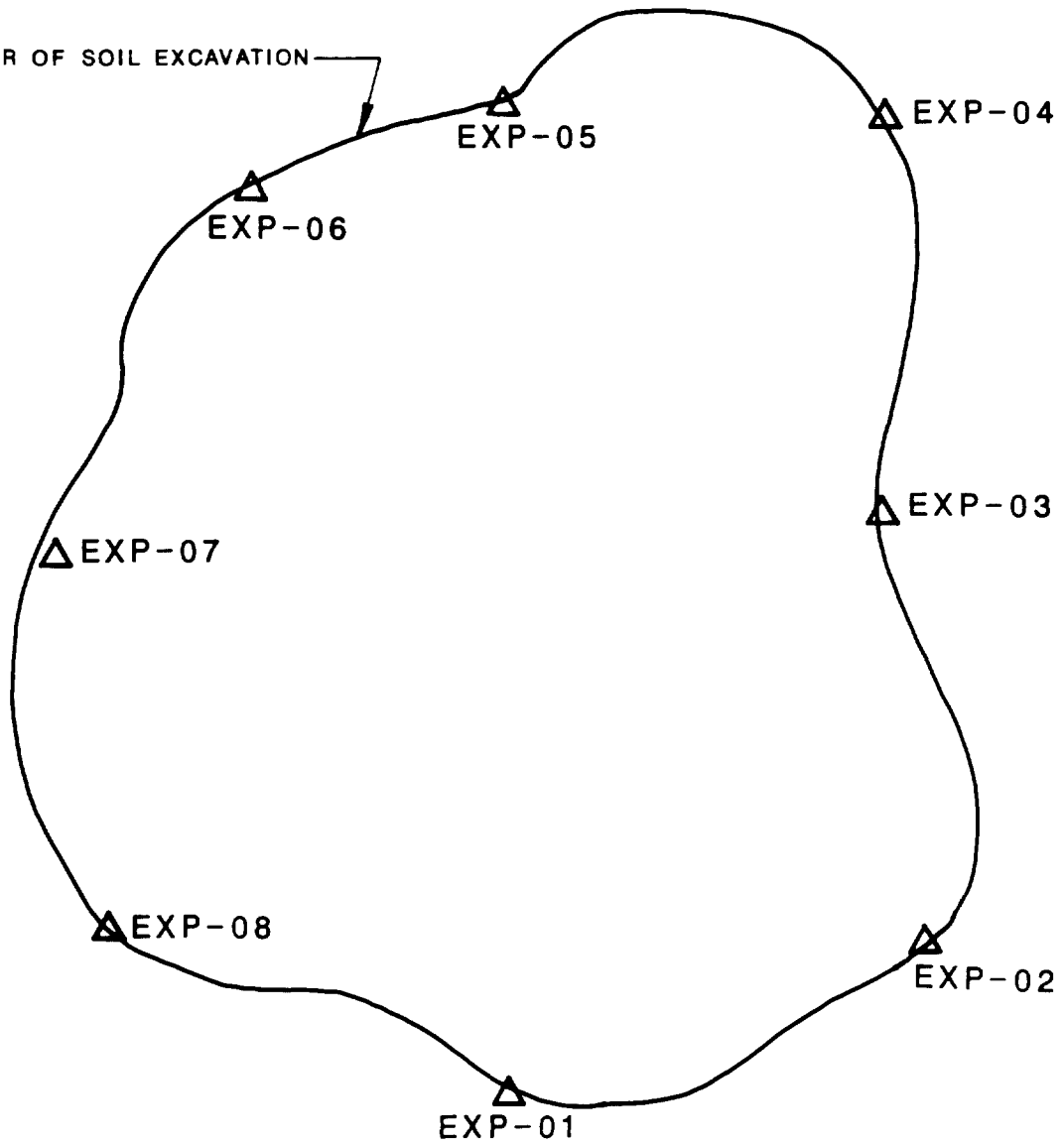
PERIMETER OF SOIL EXCAVATION

LEGEND

EXB-01 BASE SOIL SAMPLING AREA

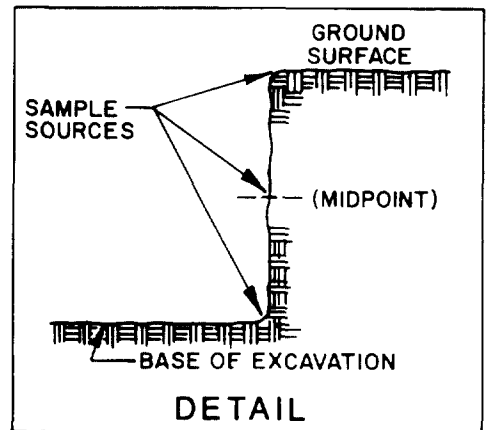
PRP Project Managers CEC/PH Site Plymouth, Massachusetts	Cannons Engineering Corp. Plymouth Site Plymouth, MA	IDEALIZED PLAN OF SAMPLE LOCATION PERIMETER OF EXCAVATION AT TANK NO. 1
 GEI Consultants, Inc.	Project 88264	February 2, 1989 Fig. 3

PERIMETER OF SOIL EXCAVATION




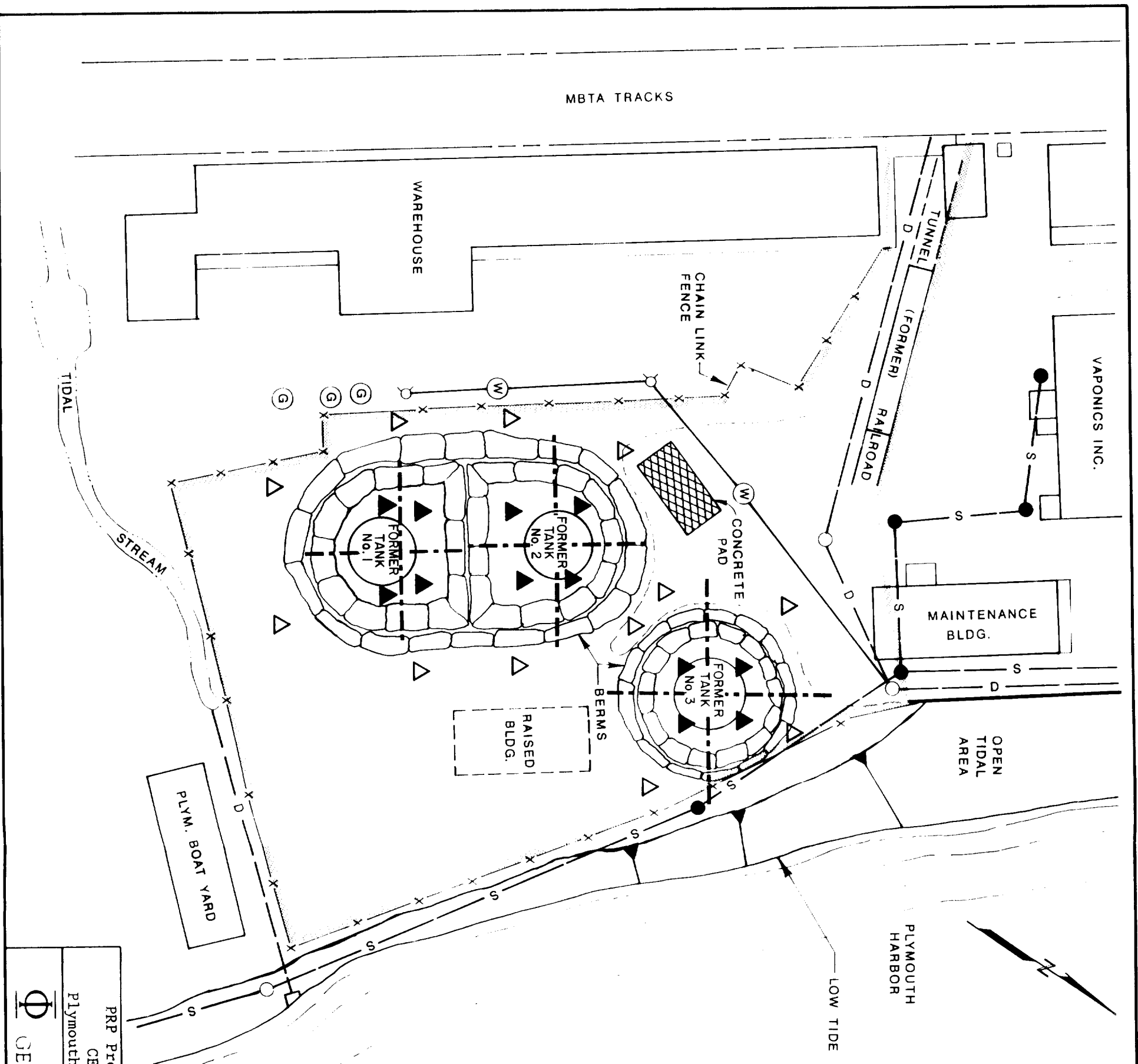
LEGEND

△ EXP-01 PERIMETER SOIL SAMPLING LOCATION



DETAIL

<p>PRP Project Managers CEC/PH Site Plymouth, Massachusetts</p>	<p>Cannons Engineering Corp. Plymouth Site Plymouth, MA</p>	<p>IDEALIZED PLAN OF SAMPLE LOCATION BASE OF EXCAVATION AT TANK NO. 1</p>
<p> GEI Consultants, Inc.</p>	<p>Project 88264</p>	<p>February 2, 1989 Fig. 4</p>




LEGEND

- HYDRANT
- ⊙ GAS TANK
- ⊙ WATER LINE
- ⋯ SITE PERIMETER
- D — DRAIN
- S — SEWER
- X — FENCE
- ○ — STORM MANHOLE
- ● — SEWER MANHOLE
- · — · — · — SAMPLE QUADRANT DIVISIONS
- ▲ SAMPLE LOCATION - INTERIOR OF BERMS
- △ SAMPLE LOCATION - EXTERIOR OF BERMS

NOTES

1. PLAN TAKEN FROM NUS CORP. REMEDIAL INVESTIGATION 1985.

NOT TO SCALE

PRP Project Managers CEC/PH Site Plymouth, Massachusetts		Cannons Engineering Corp. Plymouth Site Plymouth, MA		SOIL SAMPLE LOCATIONS INTERIOR/EXTERIOR OF BERMED AREAS	
 GEI Consultants, Inc.		Project 88264		February 2, 1989 Fig. 5	

APPENDIX A

Sample Log Forms
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth Site
Plymouth, Massachusetts

February 2, 1989

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEL PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH - 100-11236 DATE: 9/18/88
SAMPLERS: T. Spary TIME: 11:00 ACS
O. Lohmann

SAMPLE SOURCE:

Excavated Area of Tank #1

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable)

SOURCE TYPE:

Type

- Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description soils soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 50cc

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/18/88 Time: ACS

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEL/PH - EX-22A+P DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1100 hrs
D. Lehmann

SAMPLE SOURCE:

Excavation base of Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: red soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32 cc.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/13/88 Time: hrs
Lab Name: ENSRCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-EXB-03A+B DATE: 9/13/88
SAMPLERS: T. Snow TIME: 1100 hrs
O. Lohmann

SAMPLE SOURCE:

Excavation Base of Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description red soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 500 ml

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/188 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PA-57R-04A06 DATE: 9/13/88
SAMPLERS: T. Saay TIME: 1120 ACS
O. Lehmann

SAMPLE SOURCE:

Excavation Base of Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 52 cc

DISPOSITION OF SAMPLE

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: ACS
Lab Name: ENSPECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannon's Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH - ENA-15616 DATE: 9/15/88
SAMPLERS: T. Spay TIME: 1:30 AM
D. Lehman

SAMPLE SOURCE:

Excavation Area - 1 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: soil - 15' below A. 6' from
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 2.5 L

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/15/88 Time: AMS
Lab Name: ENSECO
Lab Address: 205 Newgate Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH - ER-OSP-R DATE: 9/15/88
SAMPLERS: T. Sney TIME: 1130 hrs
O. Lohmann

SAMPLE SOURCE:

Excavation Area of Pond #1 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 700g.

DISTRIBUTION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: ACS

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH-EXR-D7A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1130 hrs
D. Lohmann

SAMPLE SOURCE:

Excavation Base of Trench #1
 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 3302

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/13/88 Time: hrs
Lab Name: ENSRCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-EXB-08A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1130 hrs
D. Lehmann

SAMPLE SOURCE:

Excavator Base of Tank #1 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32 oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/188 Time: hrs
Lab Name: ENSECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-EXP-01A+B DATE: 9/13/88
SAMPLERS: T. Snow TIME: 1200 hrs
D. Lohmann

SAMPLE SOURCE:

Perimeter/Sides of Excavation Environmental Sample
of Tank #1 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other: _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 9202

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CBC/PH-EXP-02A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1200 hrs
D. Lohmann

SAMPLE SOURCE:

Perimeter/sides of Excavation
of Tank #1

Environmental Sample
 Hazardous Sample

Source Location: See Figures
Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32 oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH - EXP-03A+B DATE: 9/13/88
SAMPLERS: T. Snow TIME: 1200 hrs
D. Lohmann

SAMPLE SOURCE:

Perimeter/Sides of Excavation Environmental Sample
of Tank #1 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - dark brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 3203

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time:

Lab Name: ENSCCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH - EXP-04A+B DATE: 9/13/88
SAMPLERS: T. Saay TIME: 1200 hrs
D. Lehmann

SAMPLE SOURCE:

Perimeter / Sides of Excavation Environmental Sample
of Tank #1 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Contained
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/18/88 Time:
Lab Name: ENSHCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH-EXP-05A-B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1200 hrs
O. Lohmann

SAMPLE SOURCE:

Perimeter / Sides of Excavation Environmental Sample
of Tank #1 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSAECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannon's Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CBC/PH - EXP-06A+B DATE: 9/13/88
SAMPLERS: T. Sney TIME: 1200 hrs
D. Lehmann

SAMPLE SOURCE:

Perimeter/Sides of Excavation of Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: Sandy-soil known
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 3202

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSRCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PA-EXP-07A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1200 hrs
D. Lehmann

SAMPLE SOURCE:

Perimeter Sides of Excavation
of Tank #1

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type

- Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 3200.

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-66-

Date: 9/1/88 Time: hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PA-EXP-08A+B DATE: 9/13/88
SAMPLERS: T. Snow TIME: 1200 hrs
D. Lohmann

SAMPLE SOURCE:

Perimeter/Sides of Excavation of
Tank #1

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable)

SOURCE TYPE:

Type

- Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 220L

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: hrs

Lab Name: ENSFECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH-FXS-01 DATE: 9/13/88
SAMPLERS: T. Spay TIME: 12:40 hrs
D. Lehmann

SAMPLE SOURCE:

Excavated Soil @ Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Contained
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 15 oz

DISTRIBUTION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/13/88 Time: ACS

Lab Name: EMSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEL/PH - EXS-02 DATE: 9/19/88
SAMPLERS: T. Snay TIME: 0940 hrs
D. Lehmann

SAMPLE SOURCE:

Excavator Site at Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description soils

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 1.62

DISTRIBUTION OF SAMPLES:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/19/88 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH - EXS-03 DATE: 9/13/88
SAMPLERS: T. Snay TIME: 0910 hrs
D. Lehmann

SAMPLE SOURCE:

Excavated Soil @ Tank #1
 Environmental Sample
 Hazardous Sample

Source Location: See Figures
Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 1602

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH-ERS-04 DATE: 9/13/88
SAMPLERS: T. Snow TIME: 0940 hrs
O. Lehmann

SAMPLE SOURCE:

Excavated Soil Tank #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 15oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: ACS
Lab Name: ENSHCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CBC/PH-1A1-1234 DATE: 9/18/88
SAMPLERS: T. Snay TIME: 12:00 hrs
D. Lehmann

SAMPLE SOURCE:

Interior of area #1

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable)

SOURCE TYPE:

Type

- Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 500g

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/18/88 Time: 12:00 hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C&C/PH-71-27-21 DATE: 9/1/88
SAMPLERS: T. Spay TIME: hrs
O. Lohmann

SAMPLE SOURCE:

_____ Environmental Sample
_____ Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Contained
 Spring Stream Soil Waste Pile Other

Description _____

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample _____

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH-183-05A/R DATE: 9/17/88
SAMPLERS: T. Snow TIME: 10:45 hrs
D. Lehmann

SAMPLE SOURCE:

3rd Street - Run #2 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description soil from 3rd Street
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 3000

DISTRIBUTION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/18/88 Time: 1:15
Lab Name: ENHCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PH-TR-001A DATE: 9/17/88
SAMPLERS: T. Spay TIME: 12:50 hrs
O. Lehmann

SAMPLE SOURCE:

Interior of Form #1

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description soil

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample TRC

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/17/88 Time: hrs

Lab Name: ENSGCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CBC/PH-18A-01A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 0950 hrs
D. Lehmann

SAMPLE SOURCE:

Interior of Barn #2 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste File Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 3200

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/13/88 Time: hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannos Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-162-020-A DATE: 9/13/88
SAMPLERS: T. Spay TIME: 1000 hrs
D. Lehmann

SAMPLE SOURCE:

Interior of Barn #2 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: sandy soil
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE 1

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 370g.

DISPOSITION OF SAMPLE 1

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-182-0524F DATE: 9/2/88
SAMPLERS: T. Spay TIME: 1015 hrs
D. Lehmann

SAMPLE SOURCE:

Interior of Building # 2

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable)

SOURCE TYPE:

Type

- Well Lake Lagoon/Pond Sediment Contained
 Spring Stream Soil Waste Pile Other

Description Soil from building # 2

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time:

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C6C/PA-102-C4A+E DATE: 9/15/88
SAMPLERS: T. Spary TIME: 10:25 hrs
D. Lohmann

SAMPLE SOURCE:

Interior Room #2 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description soils soil - known

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32 oz

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEL/PH-163-01A+B DATE: 9/13/88
SAMPLERS: T. Spary TIME: 0930 hrs
O. Lohmann

SAMPLE SOURCE:

Interior of Barn #3 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 320L

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/13/88 Time:

Lab Name: ENSAFCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-103-02A+B DATE: 9/3/88
SAMPLERS: T. Spay TIME: 0940 hrs
D. Lehmann

SAMPLE SOURCE:

Interior of Berm # 3 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Contained
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 3202

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEL/PH-EB3-08A+B DATE: 9/13/88
SAMPLERS: T. Snow TIME: 0935 hrs
O. Lehmann

SAMPLE SOURCE:

Interior of Barn #3 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 320L

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: ACS
Lab Name: ENSHCO
Lab Address: 205 Newire Brook Hwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C&C/PH-783-09A+R DATE: 9/13/88
SAMPLERS: T. Sney TIME: 0955 hrs
O. Lehmann

SAMPLE SOURCE:

Interior of Berm #3 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: Sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color _____
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32 cc.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/18/88 Time: hrs
Lab Name: ENSECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-EB7-01A-018 DATE: 9/13/88
SAMPLERS: T. Sney TIME: 0830 hrs
O. Lehmann

SAMPLE SOURCE:

Exterior of Beam #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color brown

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/188 Time: hrs

Lab Name: ENSRCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH - 561-02A/B DATE: 9/13/88
SAMPLERS: T. Sney TIME: 0845 hrs
O. Lehmann

SAMPLE SOURCE:

Exterior of Barn #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Contained
 Spring Stream Soil Waste Pile Other
Description sandy soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color brown
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 320g

DISPOSITION OF SAMPLER:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/13/88 Time: hrs
Lab Name: ENSCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEL PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-281-03A-B DATE: 9/13/88
SAMPLERS: T. Snay TIME: 0830 hrs
D. Lehmann

SAMPLE SOURCE:

Exterior of Broom #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description: organic - sandy soil
forbush

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other: _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample _____

DISTRIBUTION OF SAMPLE

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/13/88 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Newgate Broom Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEL PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-881-04A+B DATE: 9/13/88
SAMPLERS: T. Sney TIME: 0900 hrs
O. Lehmann

SAMPLE SOURCE:

Exterior of Berm #1 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description organic - sandy soil

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 320L

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/13/88 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CSC/PH - EAR-01A-03 DATE: 9/13/88
SAMPLERS: T. Spay TIME: 0910 hrs
D. Lehmann

SAMPLE SOURCE:

Exterior of Barn #2

- Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable) _____

SOURCE TYPE:

Type

- Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - top

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color _____

Viscosity L M H

Turbidity L M H

Other _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32oz

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/18/88 Time: ACS

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Concord, MA

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CCL/PH-282-02A-10 DATE: 9/15/88
SAMPLERS: T. Spay TIME: 0915 hrs
D. Lehmann

SAMPLE SOURCE:

Exterior of Berm #2 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - tan
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 320L

DISTRIBUTION OF SAMPLE

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/15/88 Time: ACS
Lab Name: ENSHCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PA-FBR-03A+B DATE: 9/13/88
SAMPLERS: T. Sney TIME: 0935HRS
D. Lehmann

SAMPLE SOURCE:

Exterior of Barn #2 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - tan
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE

Phase Solid Liquid
Color tan
Viscosity L M H
Turbidity L M H
Other _____
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32oz.

DISPOSITION OF SAMPLE

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: ACS
Lab Name: ENSAFCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No. _____
 In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CSC/PH-582-0410 DATE: 9/3/88
SAMPLERS: T. Spay TIME: 0930 hrs
O. Lehmann

SAMPLE SOURCE:

Exterior of Barn #2 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - tan
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 32cc.

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSGCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PA-689-01A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 0845 hrs
D. Cochran

SAMPLE SOURCE:

Exterior of Beam #3 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil - brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32 oz

DISPOSITION OF SAMPLE

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/188 Time: hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-003-02A18 DATE: 9/13/88
SAMPLERS: T. Spay TIME: 0830 hrs
O. Lehmann

SAMPLE SOURCE:

Exterior of Berm #3

Environmental Sample

Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr (if applicable) _____

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Contained

Spring Stream Soil Waste Pile Other

Description: sandy soil, brown

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase: Solid Liquid

Color: _____

Viscosity: L M H

Turbidity: L M H

Other: _____

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32cc

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/1/88 Time: hrs

Lab Name: ENSECO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No. _____

In Storage Off Site: _____

Additional Comments: _____

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: C&C/PA-253-08A+B DATE: 9/13/88
SAMPLERS: T. Spay TIME: 0905 hrs
O. Lehmann

SAMPLE SOURCE:

Exterior of Barn #3 Environmental Sample
 Hazardous Sample

Source Location:

See Figures

Radioactivity mR/hr
(if applicable)

SOURCE TYPE:

Type

Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other

Description sandy soil

Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid

Color

Viscosity L M H

Turbidity L M H

Other

Type of Sample: Grab Composite Grab - Composite

Total Approximate Volume of Sample 32 oz.

DISPOSITION OF SAMPLE:

Forwarded to Lab

Chain of Custody Document Number: 88264-CC-

Date: 9/13/88 Time: hrs

Lab Name: ENSHCO

Lab Address: 205 Alewife Brook Pkwy, Cambridge

Analyzed On-Site Project Page No.

In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CEC/PH-883-04A-08 DATE: 9/13/88
SAMPLERS: T. Snow TIME: 0915 hrs
D. Lohmann

SAMPLE SOURCE:

Exterior of Broom #3 Environmental Sample
 Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description: sandy organic soil - brown
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE:

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 320cc

DISPOSITION OF SAMPLE:

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/1/88 Time: hrs
Lab Name: ENSECO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

SAMPLE LOG FORM

PROJECT: Soil Removal - Cannons Eng. Corp., Plymouth, MA
GEI PROJECT NUMBER: 88264
SAMPLE NUMBER: CSC/PA-Fill-01 DATE: 9/13/88
SAMPLERS: T. Spay TIME: 11:50 hrs
D. Lehmann

SAMPLE SOURCE:

Fill material used to fill Environmental Sample
excavation areas Hazardous Sample

Source Location: See Figures Radioactivity mR/hr (if applicable)

SOURCE TYPE:

Type
 Well Lake Lagoon/Pond Sediment Container
 Spring Stream Soil Waste Pile Other
Description sandy soil - tan
Disposition: Sample Obtained Not Obtained

DESCRIPTION OF SAMPLE 1

Phase Solid Liquid
Color
Viscosity L M H
Turbidity L M H
Other
Type of Sample: Grab Composite Grab - Composite
Total Approximate Volume of Sample 16 cc.

DISPOSITION OF SAMPLE 1

Forwarded to Lab
Chain of Custody Document Number: 88264-CC-
Date: 9/13/88 Time: hrs
Lab Name: ENSHCO
Lab Address: 205 Alewife Brook Pkwy, Cambridge
 Analyzed On-Site Project Page No.
 In Storage Off Site:

Additional Comments:

APPENDIX B

Soil Sample Compositing Technique
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth Site
Plymouth, Massachusetts

February 2, 1989

SOIL COMPOSITING

1. Prepare a beaker or sample jar for the composited sample.
2. Tare it on the balance.
3. With a precleaned spatula (metals: use teflon, BNA/pest/VOA: use metal) transfer approximately (metals: 20.0gms, VOA: 4.0 gms, BNA/Pest: 20.0 gms) of homogenized soil from each sample jar to the beaker. Record the weight taken from each jar. The weight from each sample jar should be equal.
5. Homogenize sample by mixing well with the spatula.

APPENDIX C

Chain-of-Custody Forms
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth Site
Plymouth, Massachusetts

February 2, 1989

APPENDIX C-1

Chain-of-Custody Forms
Documenting GEI Consultants, Inc. Custody of
Samples Collected at the CEC/PH Site on
September 13, 1988 through
Delivery to GEI's Offices in Winchester, Massachusetts
February 2, 1989

PROJECT NAME AND NUMBER: 88264

Soil Removal - Carrons Eng. Corp., Plymouth, MA

SAMPLERS:

T. Snay, D. Lohmann (GEI)

STATION NO.	DATE	TIME (hours)	COMP	CRAB	SAMPLE NUMBER	NO. OF CONTAINERS	EPA 905 (P&T, R&S)	REMARKS	RELINQUISHED BY (SIGNATURE)		RECEIVED BY (SIGNATURE)	
									DATE/TIME	SIGNATURE	DATE/TIME	SIGNATURE
Excavation base	9/13/88	11:30		✓	CEC/PH - EXP - 01B	2	1					
Excavation base	9/13/88			✓	CEC/PH - EXP - 08A	2	1					
Excavation base	9/13/88			✓	CEC/PH - EXP - 08B	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 01A	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 01B	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 02A	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 02B	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 03A	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 03B	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 04A	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 04B	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 05A	2	1					
Excavation perimeter	9/13/88	12:00		✓	CEC/PH - EXP - 05B	2	1					
RELINQUISHED BY (SIGNATURE)					RECEIVED BY (SIGNATURE)							
RELINQUISHED BY (SIGNATURE)					RECEIVED BY (SIGNATURE)							
RELINQUISHED BY (SIGNATURE)					RECEIVED BY (SIGNATURE)							

NO. OF CONTAINERS
EPA 905 (P&T, R&S)
P.P. H&T/dls

RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME

PROJECT NAME AND NUMBER:		STATION NO.		DATE	TIME (hours)	COMP	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	REMARKS
Soil Removal - Cannons Eng. Corp., Plymouth, MA										
SAMPLERS:										
T. Snay, D. Lohmann (GEI)										
Interior Beam 1		9/13/88	1050		✓		CEC/PH - IB1 - 04B	2	1	
Interior Beam 2		9/13/88	0950		✓		CEC/PH - IB2 - 01A	2	1	
Interior Beam 2		9/13/88	0950		✓		CEC/PH - IB2 - 01B	2	1	
Interior Beam 2		9/13/88	1000		✓		CEC/PH - IB2 - 02A	2	1	
Interior Beam 2		9/13/88	1000		✓		CEC/PH - IB2 - 02B	2	1	
Interior Beam 2		9/13/88	1015		✓		CEC/PH - IB2 - 03A	2	1	
Interior Beam 2		9/13/88	1015		✓		CEC/PH - IB2 - 03B	2	1	
Interior Beam 2		9/13/88	1025		✓		CEC/PH - IB2 - 04A	2	1	
Interior Beam 2		9/13/88	1025		✓		CEC/PH - IB2 - 04B	2	1	
Interior Beam 3		9/13/88	0950		✓		CEC/PH - IB3 - 01A	2	1	
Interior Beam 3		9/13/88	0950		✓		CEC/PH - IB3 - 01B	2	1	
Interior Beam 3		9/13/88	0940		✓		CEC/PH - IB3 - 02A	2	1	
Interior Beam 3		9/13/88	0940		✓		CEC/PH - IB3 - 02B	2	1	
RELINQUISHED BY (SIGNATURE)		DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME
Dennis Peterson										
RELINQUISHED BY (SIGNATURE)		DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME
RELINQUISHED BY (SIGNATURE)		DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME

BB264
EP4 0290
(0/2/88)
P.P. Metals

PROJECT NAME AND NUMBER: **Soil Removal - Carrons Eng. Corp., Plymouth, MA BB264**

SAMPLERS: **T. Stacy, D. Lohmann (GEI)**

STATION NO.	DATE	TIME (hours)	COMP	CR4B	SAMPLE NUMBER	NO. OF CONTAINERS	EPA 904 (PST) (P. P. Metals)	REMARKS	RELINQUISHED BY (SIGNATURE)		RECEIVED BY (SIGNATURE)	
									DATE/TIME	SIGNATURE	DATE/TIME	SIGNATURE
Interior Beam 3	9/13/88	0935		✓	CEC/PH-IB3-03A	2	1					
Interior Beam 3	9/13/88	0935		✓	CEC/PH-IB3-03B	2	1					
Interior Beam 3	9/13/88	0955		✓	CEC/PH-IB3-04A	2	1					
Interior Beam 3	9/13/88	0955		✓	CEC/PH-IB3-04B	2	1					
Exterior Beam 1	9/13/88	0835		✓	CEC/PH-EB1-01A	2	1					
Exterior Beam 1	9/13/88	0835		✓	CEC/PH-EB1-01B	2	1					
Exterior Beam 1	9/13/88	0845		✓	CEC/PH-EB1-02A	2	1					
Exterior Beam 1	9/13/88	0845		✓	CEC/PH-EB1-02B	2	1					
Exterior Beam 1	9/13/88	0850		✓	CEC/PH-EB1-03A	2	1					
Exterior Beam 1	9/13/88	0850		✓	CEC/PH-EB1-03B	2	1					
Exterior Beam 1	9/13/88	0910		✓	CEC/PH-EB1-04A	2	1					
Exterior Beam 1	9/13/88	0910		✓	CEC/PH-EB1-04B	2	1					
Exterior Beam 2	9/13/88	0910		✓	CEC/PH-EB2-01A	2	1					
RELINQUISHED BY (SIGNATURE) _____ DATE/TIME: _____ RECEIVED BY (SIGNATURE) _____ DATE/TIME: _____												
RELINQUISHED BY (SIGNATURE) _____ DATE/TIME: _____ RECEIVED BY (SIGNATURE) _____ DATE/TIME: _____												
RELINQUISHED BY (SIGNATURE) _____ DATE/TIME: _____ RECEIVED BY (SIGNATURE) _____ DATE/TIME: _____												

PROJECT NAME AND NUMBER: **BB264**

Soil Removal - Cannon's Eng. Corp., Plymouth, MA

SAMPLERS:

T. Stacy, D. Lohmann (GEI)

STATION NO.	DATE	TIME (hours)	COMP	GRAB	SAMPLE NUMBER	NO. OF CON-TAINERS	EPA (9/13/88) (P. 101) (P. 102) (P. 103) (P. 104) (P. 105) (P. 106) (P. 107) (P. 108) (P. 109) (P. 110) (P. 111) (P. 112) (P. 113) (P. 114) (P. 115) (P. 116) (P. 117) (P. 118) (P. 119) (P. 120)		REMARKS
							Asbestos	Metals	
Exterior Berm 2	9/13/88	0915		✓	CEC/PH - EB2 - 02A	2	1	1	
Exterior Berm 2	9/13/88	0915		✓	CEC/PH - EB2 - 02B	2	1	1	
Exterior Berm 2	9/13/88	0925		✓	CEC/PH - EB2 - 03A	2	1	1	
Exterior Berm 2	9/13/88	0925		✓	CEC/PH - EB2 - 03B	2	1	1	
Exterior Berm 2	9/13/88	0930		✓	CEC/PH - EB2 - 04A	2	1	1	
Exterior Berm 2	9/13/88	0930		✓	CEC/PH - EB2 - 04B	2	1	1	
Exterior Berm 3	9/13/88	0945		✓	CEC/PH - EB3 - 01A	2	1	1	
Exterior Berm 3	9/13/88	0945		✓	CEC/PH - EB3 - 01B	2	1	1	
Exterior Berm 3	9/13/88	0950		✓	CEC/PH - EB3 - 02A	2	1	1	
Exterior Berm 3	9/13/88	0950		✓	CEC/PH - EB3 - 02B	2	1	1	
Exterior Berm 3	9/13/88	0905		✓	CEC/PH - EB3 - 03A	2	1	1	
Exterior Berm 3	9/13/88	0905		✓	CEC/PH - EB3 - 03B	2	1	1	
Exterior Berm 3	9/13/88	0915		✓	CEC/PH - EB3 - 04A	2	1	1	
RELINQUISHED BY (SIGNATURE)						RECEIVED BY (SIGNATURE)	DATE/TIME (Hours)	RECEIVED BY (SIGNATURE)	DATE/TIME
<i>D. Lohmann</i>									
RELINQUISHED BY (SIGNATURE)						RECEIVED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME
RELINQUISHED BY (SIGNATURE)						RECEIVED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME

APPENDIX C-2

Chain-of-Custody Forms
Documenting Chain-of-Custody of CEC/PH Site
Samples Delivered to GEI's Office in Winchester, Massachusetts
Through Shipment to Enseco-Erco Laboratories in
Cambridge, Massachusetts

February 2, 1989

PROJECT NAME AND NUMBER: <i>Soil Removal - Canons Eng. Corp., Plymouth, MA</i>		DOCUMENT NUMBER 88264-CC-07		REMARKS	
SAMPLERS: <i>T. Gray, D. Lahmann (GEI)</i>		NO. OF CONTAINERS		REMARKS	
STATION NO.	DATE	TIME (hours)	COMP	GRAB	SAMPLE NUMBER
Excavation base	9/13/88		X		CEC/PH - EBC - 01
Excavation base (duplicate)	9/13/88		X		CEC/PH - EBC - 02
Excavation base	9/13/88		X		CEC/PH - EBC - 03
Excavation Perimeter	9/13/88		X		CEC/PH - EPC - 01
Excavation Perimeter	9/13/88		X		CEC/PH - EPC - 02
Excavation Perimeter (dup.)	9/13/88		X		CEC/PH - EPC - 03
Interior of bermed areas	9/13/88		X		CEC/PH - IBC - 01
Interior of bermed areas (duplicate)	9/13/88		X		CEC/PH - IBC - 02
Exterior of bermed areas	9/13/88		X		CEC/PH - XBC - 01
Exterior of bermed areas (duplicate)	9/13/88		X		CEC/PH - XBC - 02
Excavated soil pile	9/13/88		X		CEC/PH - EXS - 05
Fill placed in bermed areas	9/13/88			X	CEC/PH - FIL - 01
PLEASE NOTE DIRECTIONS ON ATTACHED PAGE.					
RELINQUISHED BY (SIGNATURE)	DATE/TIME (hours)	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME
<i>Derek Lahmann</i>	9/14/88 1715				
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	DATE/TIME	RELINQUISHED BY (SIGNATURE)	DATE/TIME

APPENDIX D

Sample Analysis Assignment Forms
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth Site
Plymouth, Massachusetts

February 2, 1989



GEI Consultants, Inc.

Project No. 88264

Project Name Soil Removal-Cannons Eng. Corp., Plymouth, MA

Laboratory ENSECO
205 Alewife Brook Pkwy, Cambridge

Contact Bob Watkins (Tim Sney - GEI)

Sampler(s) T. Shay, O. Lohmann

Date Assigned 9/14/88

Date Sampled 9/13/88

GEI Sample No.	Sample Medium	Sample Container		Analyses Requested	Remarks
		Quantity	Type		
CEC/PH-EBC-01	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	Contents/Sources of composite samples in separate, labelled bags. See attached sheet.
CEC/PH-EBC-02	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-EBC-03	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-EVC-01	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-EPC-02	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-EPC-03	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-IBC-01	soil	12	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-IBC-02	soil	12	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-XBC-01	soil	12	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-XBC-02	soil	12	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-EXS-05	soil	8	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	
CEC/PH-FIL-01	soil	2	8-02 jars	EPA Method 8270 (B/N only); EPA Method 8080 (P.C.B. + A.S.T.); P.P. Metals	

Special Instructions / Remarks Please composite as directed on attached sheet.
MPC4 in Margaret Hester for Tim Sney at GEI for clarification.

TABLE SP.3 - SUMMARY OF COMPOSITE SOIL SAMPLES
 Cannons Engineering Corp. - Plymouth Site
 Plymouth, Massachusetts

<u>Location</u>	<u>Composite Sample</u>	<u>Source</u>	<u>Comments</u>
Excavation Base	CEC/PH-EBC-01	EXB-01A EXB-03A EXB-05A EXB-07A	
Excavation Base	CEC/PH-EBC-02	EXB-02A EXB-04A EXB-06A EXB-08A	
Excavation Perimeter	CEC/PH-EPC-01	EXP-01A EXP-03A EXP-05A EXP-07A	
Excavation Perimeter	CEC/PH-EPC-02	EXP-02A EXP-04A EXP-06A EXP-08A	
Interior of Bermed Areas	CEC/PH-IBC-01	IB1-01 IB1-03 IB2-02 IB2-04 IB3-01 IB3-03	
Exterior of Bermed Areas	CEC/PH-XBC-01	EB1-01 EB1-03 EB2-02 EB2-04 EB3-01 EB3-03	
Excavation Base (Duplicate)	CEC/PH-EBC-03	EXB-01B EXB-03B EXB-05B EXB-07B	
Excavation Perimeter (Duplicate)	CEC/PH-EPC-03	EXP-01B EXP-03B EXP-05B EXP-07B	

Φ G E I CONSULTANTS, INC.

	Project _____	Page <u>2 of 2</u>
Client <u>Cannons Engineering Corp - Plymouth</u>		By <u>D. Lamm</u>
Subject <u>Plymouth, Mass.</u>	Checked _____	By _____
	Approved _____	By _____

SUMMARY OF COMPOSITE SOIL SAMPLES

p. 2 of 2

<u>Location</u>	<u>Composite Sample</u>	<u>Source</u>
Excavated Soil pile	CEC/PH - EXS-05	EXS-01 EXS-02 EXS-03 EXS-04

Note:

The bags in each cooler are labelled with the number listed under "Composite Sample."
Each bag contains the samples listed under "Source".

Interior of Berm Area (duplicate)	CEC/PH - IBC-02	IB1-01B IB1-03B IB2-02B IB2-04B IB3-01B IB3-03B
--------------------------------------	-----------------	--

Exterior of Berm Area (duplicate)	CEC/PH - XBC-02	EB1-01B EB1-03B EB2-02B EB2-04B EB3-01B EB3-03B
--------------------------------------	-----------------	--

} on hold per Bill
Lamm
9.15.02

APPENDIX E

Letter to Ms. Alba Flaherty of Lawrence Experimental Station
Regarding Soil Sample Splits
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth Site
Plymouth, Massachusetts

February 2, 1989



GEI Consultants, Inc.

1021 Main Street
Winchester, MA 01890-1943
617-721-4000

September 15, 1988
Project 88264

Ms. Alba Flaherty
Lawrence Experimental Station
37 Shattuck Street
Lawrence, MA 01843

Re: Soil Samples
Cannons Engineering Corp. Plymouth Site
Plymouth, Massachusetts

Dear Ms. Flaherty:

At the request of Harish Panchel of the Massachusetts Department of Environmental Quality Engineering (DEQE) in Boston, Massachusetts, we have arranged for you to receive splits of eleven (11) composite soil samples which were collected by GEI Consultants, Inc. (GEI) at the Cannons Engineering Corporation Plymouth site in Plymouth, Massachusetts on September 14, 1988.

These samples were submitted to ERCO Laboratories in Cambridge, Massachusetts on Wednesday, September 15. ERCO was directed to mechanically composite the soil samples, split each composite sample, and send each split to you.

You will be receiving the following samples from ERCO during the next few days:

CEC/PH-EBC-01
CEC/PH-EBC-02
CEC/PH-EBC-03 (Duplicate of EBC-01)

CEC/PH-EPC-01
CEC/PH-EPC-02
CEC/PH-EPC-03 (Duplicate of EPC-01)

CEC/PH-IBC-01
CEC/PH-IBC-02 (Duplicate of IBC-01)

CEC/PH-XBC-01
CEC/PH-EXS-05
CEC/PH-FIL-01

September 15, 1988

ERCO will be analyzing each of these samples for the following compounds:

- o Base Neutral Organics (EPA Method 8270)
- o Pesticides and PCBs (EPA Method 8080)
- o Priority Pollutant Metals

Additionally, EBC-03 will be analyzed as matrix spike. Accordingly, you will receive 3 pieces of glassware for each sample.

ERCO will be shipping these samples via courier to your offices in Lawrence under chain-of-custody. Please sign the chain-of-custody form and send copies of the form to me as soon as possible. You should retain the original chain-of-custody document for your files.

If you do not receive the samples, as described in this letter, or if you have any questions regarding the nature of the samples, please call me at (617) 721-4012 or Mr. Robert Watkins at ERCO at (617) 661-3111.

Very truly yours,

GEI CONSULTANTS, INC.



M. Margaret Hanley
Project Quality Assurance Officer

MMH:lmg

cc: Mike Walters
Bob Taggart
Rob Sanoff, Esq.
Harish Panchel
Robert Watkins
Greg Roscoe

APPENDIX F

Data Validation Summary
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth site
Plymouth, Massachusetts

February 2, 1989

APPENDIX F

Data Validation Summary

F.1 Data Validation Procedures

All chemical analyses (organic and inorganic) were performed by Enseco Laboratories of Cambridge, Massachusetts following the current EPA Contract Laboratory Program (CLP) "Statement of Work for Organic Analysis" and "Statement of Work for Inorganic Analysis." The following QA/QC parameters were evaluated by Enseco and GEI during the Data Validation process.

Organics

- Holding Times
- DFTPP Performance Tuning
- Surrogate Spike Recovery
- Matrix Spike/Matrix Spike Duplicate Analysis
- Field and Lab Duplicate Analysis
- Blank Analysis
- Detection Limit
- Initial and Continuing Calibration of GC/MS System

Inorganics

- Holding Times
- Initial Calibration and Calibration Verification
- Continuing Calibration Verification
- Blank Analysis
- ICP Interference Check Sample Analysis
- Matrix Spike Analysis
- Field and Lab Duplicate Sample Analysis
- Laboratory Quality Control Sample Analysis
- Detection Limit
- Standard Additions/Furnace AA QC Analysis
- ICP Serial Dilution Analysis

A summary of the contract laboratory's Quality Assurance Program is presented in Appendix I of the "Quality Assurance Project Plan, Soil Removal Action, Cannons Engineering Corp., Plymouth Site, Plymouth, Massachusetts," dated September 8, 1988. The Data Validation Review Summaries for each sample are included in this Appendix.

The organic and inorganic data packages for the 11 soil samples and 2 aqueous blank samples were reviewed for low level HSL metals, semi-volatile organics, and pesticides and PCBs.

The data validation process used by GEI was an adaptation of EPA Region I's 1987 guidelines entitled "Statement of Work for Organic Analysis" and "Statement of Work for Inorganic Analysis."

F.2 Summary of Results

Organic Data

The organic data package supplied by Enseco contained all necessary information to ascertain an accurate assessment of the 11 soil samples and 2 aqueous blank samples submitted for organic analysis.

The following QA/QC parameters were reviewed by GEI and met CLP requirements for all organic samples:

- Holding times
- Decafluorotriphenylphosphine (DFTPP) performance
- Detection limits
- Initial and continuing semi-volatile calibration criteria for both the System Performance Calibration Compounds (SPCC) and Continuing Calibration Check (CCC) compounds

Criteria for the initial and continuing calibration for pesticides were not met. However, no pesticides were detected in the samples, and no action is warranted. Other QA/QC parameters for the organic data which were not in compliance with CLP requirements are discussed below.

The Surrogate Spike Recovery results for samples CEC/PH-EXS-05, CEC/PH-FIL-01, and CEC/PH-XBC-01 were evaluated, and the CLP requirements were not met. One out of 42 base/neutral compounds and 2 out of 14 pesticide compounds exceeded the CLP required recovery range. However, no action is recommended for the base/neutral compounds for this minor exceedance or for pesticides where no pesticides were detected.

The Matrix Spike (MS) and MS duplicate (MSD) results (CEC/PH-EBC-03MS and EBC-03MSB, respectively) were evaluated and the CLP requirements were not met. The sample was spiked with six base/neutral compounds. Of the six, pyrene could not be evaluated because of the high concentration of pyrene already in the sample. The Percent Recovery criteria were not met for two of the remaining five compounds. However, neither of these compounds were found in the unspiked sample, and therefore, no action is recommended. The Relative Percent Difference (RPD) criteria were not met for any of the five spike compounds. However, acenaphthene was the only one of the five detected in the unspiked sample. It is recommended

that acenaphthene results be approximated, i.e., receive a "J" designation for all samples. The above two criteria also were evaluated for pesticides and PCBs and did not meet CLP requirements. However, because no PCBs or pesticides were detected in any sample, no action is warranted.

For the Laboratory Precision results for sample CEC/PH-EBC-03, the compound acenaphthene did not meet contractual requirements. Values for acenaphthene should receive a J designation in all samples. The Field Precision results were evaluated for the following duplicate samples, CEC/PH-EBC-01 and -03, CEC/PH-EPC-01 and -03, and CEC/PH-IBC-01 and -02. If the RPD was greater than 32%, the compound received a J designation. Numerous compounds were found greater than 32%, as indicated on Table 3 in this report.

The HSL compounds detected in the two laboratory trip and field blanks were evaluated. Actions were determined using the highest level of contaminant found and have been applied to all samples containing the contaminants. It is recommended that Dimethyl phthalate, N-Nitrosodiphenylamine, Diethyl phthalate, Bis (2-ethyl hexyl) phthalate, and Di-N-Butylphthalate results be approximated in all samples due to blank contamination ("JB").

Inorganic Data

The inorganic data package supplied by Enseco contained all necessary data to check the laboratory performance.

All contractual criteria were met for the following QA/QC parameters for all samples:

- Holding time
- Initial and continuing calibration verification
- ICP interference
- Laboratory precision evaluation
- Detection limit results
- Serial dilution results

Other QA/QC parameters for the inorganic data which were not in compliance with CLP requirements are discussed below.

The results of the field duplicate samples were reviewed for field precision criteria and received J designations if the RPD was greater than 35%.

Antimony, copper, lead, and zinc were detected in the laboratory, trip, and/or field blanks. The action value for the elements detected were based on the highest concentration of a contaminant detected in the blanks. The sample results

which did not meet CLP requirements were designated as approximate (JB) due to blank contamination.

Matrix spike recoveries were reviewed for sample CEC/PH-EBC-03 and found to meet CLP requirements for all elements with the exception of copper, lead, and selenium. These elements should be J'd due to the possibility that samples results may be biased.

Laboratory Control Sample (LCS) analysis was performed, and selenium did not meet contractual criteria, and sample results for selenium should be J'd.

Duplicate injections were performed by Enseco and agreed within +/-20% for all samples analyzed by graphite furnace for arsenic, lead, and selenium. One point analytical spikes also were performed. Arsenic and lead did not meet the spike recovery range, therefore, a Method of Standard Addition (MSA) was performed by Enseco. The results were determined to be acceptable since a correlation coefficient greater than 0.995 was obtained with MSA.

ORGANIC DATA PACKAGE REVIEW

The ERGO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-01
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*(NA)+	*-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-02
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley

Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

DTTP	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*(NA)+	*(NA)-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-03
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Holding Time	Performance (tuning)	DFTPP	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+		*+	*-	*-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site

Project No.: 88264

Sample No.: CEC/PH-EPC-01

Matrix: Soil

Analytical Method: 8270/8080

Sampling Date: 9/13/88

Shipping Date: 9/14/88

Date Received by Laboratory: 9/16/88

Reviewed by: L. M. Pimenta

QA: M. Margret Hanley

Date: 10/31/88

Date: 11/4/88

Validation Criteria for Organic Analyses
Base/Neutral (BN) and Pesticides/PCBs

Holding Time	Performance (tuning)	DFTPP	Surrogate Spike Recovery	Matrix Spike MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+		*+	*(NA)+	*-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EPC-02
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Initial +	Detection Continuing	Blank	Field/Lab	Surrogate	Matrix	Field/Lab	Blank	Detection	Initial +
Limit	Calibration	Analyses	Precision	Recovery	Spike/MSD	Precision	Analyses	Limit	Calibration
**	**	**	*(NA)-	*(NA)+	*(NA)+	*(NA)-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERGO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EPC-03
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

DTTPP	Surrogate	Matrix	Field/Lab	Blank	Detection	Initial +
Performance	Spike	Spike/	Precision	Analyses	Limit	Continuing
(tuning)	Recovery	MSD			Calibration	
**	**	*(NA) +	*-	*(NA) +	*(NA) +	*(NA) +

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-IBC-01
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses							
Base/Neutral (BN) and Pesticides/PCBs							
Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*(NA)+	*-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-IBC-02
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
Base/Neutral (BN) and Pesticides/PCBs

DTFP	Surrogate	Matrix	Field/Lab	Blank	Detection	Initial +
Performance	Spike	Spike/	Precision	Analyses	Limit	Continuing
(tuning)	Recovery	MSD				Calibration
*+	*+	*(NA)+	*-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERGO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-XBC-01
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*(NA)+	*(NA)-	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EXS-05
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

DTTPP	Surrogate	Matrix	Blank	Detection	Initial +
Performance	Spike	Spike/	Analyses	Limit	Continuing
(tuning)	Recovery	MSD	Precision	Field/Lab	Calibration
Time	Field/Lab	Precision	Analyses	Limit	Calibration
**	**	*(NA) +	*(NA) -	*(NA) +	*(NA) +

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-FIL-01
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*(NA)+	*(NA)+	*(NA)-	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERGO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-Field B.
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
**	**	**	*(NA)+	*(NA)+	**	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-Trip B.
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*(NA)+	*(NA)+	*+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: SBLK01
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Initial +	Detection Continuing	Blank	Field/Lab	Surrogate	Matrix	Field/Lab	Blank	Detection	Initial +
Limit	Calibration	Analyses	Precision	Recovery	Spike/MSD	Precision	Analyses	Limit	Calibration
*+	*+	*+	*+(NA)+	*+	*+(NA)+	*+(NA)+	*+	*+(NA)+	*+(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: SBLK02
 Matrix: Aqueous
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*(NA)+	*(NA)+	*+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-03MS
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley

Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
 Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

ORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-03MSD
 Matrix: Soil
 Analytical Method: 8270/8080
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Organic Analyses
Base/Neutral (BN) and Pesticides/PCBs

Holding Time	DFTPP Performance (tuning)	Surrogate Spike Recovery	Matrix Spike/MSD	Field/Lab Precision	Blank Analyses	Detection Limit	Initial + Continuing Calibration
*+	*+	*+	*+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERGO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cammons Engineering Corporation - Plymouth Site

Project No.: 88264

Sample No.: CEC/PH-EBC-01

Matrix: Soil

Analytical Method: Various

Sampling Date: 9/13/88

Shipping Date: 9/14/88

Date Received by Laboratory: 9/16/88

Reviewed by: L. M. Pimenta

QA: M. Margaret Hanley

Date: 10/31/88

Date: 11/4/88

Validation Criteria for Inorganic Analyses

Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
Holding	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA	Dilution
Time	Calibration	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA
*+	*(NA)+	*(NA)-	*(NA)+	*+	*(NA)+	*(NA)+	*+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cammons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-02
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
Holding	Time	Calibration	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace
AA	Dilution								
*+	*(NA)-	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cammons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EBC-03
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
Holding	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA	Dilution
Time	Calibration	Analysis	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
*+	*(NA)+	*(NA)-	*-	*-	*(NA)+	*(NA)+	*+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cammons Engineering Corporation - Plymouth Site

Project No.: 88264

Sample No.: CEC/PH-EPC-01

Matrix: Soil

Analytical Method: Various

Sampling Date: 9/13/88

Shipping Date: 9/14/88

Date Received by Laboratory: 9/16/88

Reviewed by: L. M. Pimenta

QA: M. Margaret Hanley

Date: 10/31/88

Date: 11/4/88

Validation Criteria for Inorganic Analyses

	Initial +	Blank	ICP	Matrix Lab/Field	Control Detection	Standard Add/ Serial
	Continuing	Analyses	Interference	Spike Precision	Sample Limits	Furnace AA Dilution
*+	*(NA)+	*(NA)-	*(NA)+	*+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EPC-02
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

Holding Time	Initial + Continuing Calibration	Blank Analyses	ICP Interference	Matrix Spike	Lab/Field Precision	Control Sample	Detection Limits	Standard Add/ Furnace	Serial AA	Dilution
*+	*(NA)+	*(NA)-	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-EPC-03
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

Holding Time	Initial + Continuing Calibration	Blank Analyses	ICP Interference	Matrix Spike	Lab/Field Precision	Control Sample	Detection Limits	Standard Furnace	Add/ AA	Serial Dilution
*+	*(NA)+	*(NA)-	*(NA)+	*(NA)-	*+	*(NA)-	*(NA)+	*+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERGO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-IBC-01
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
Holding	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA	Dilution
*+	*(NA)-	*(NA)+	*(NA)-	*+	*(NA)+	*(NA)+	*+	*(NA)+	

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-IBC-02
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margaret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

	Initial +	Blank	ICP	Matrix Lab/Field	Control	Detection	Standard	Add/ Serial
	Holding	Calibration	Analyses	Interference	Spike	Precision	Sample	Limits
	Time	Calibration	Analyses	Interference	Spike	Precision	Sample	Limits
**	*(NA)+	*(NA)+	*(NA)+	*(NA)-	**	*(NA)+	*(NA)+	**
								*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site

Project No.: 88264

Sample No.: CEC/PH-XBC-01

Matrix: Soil

Analytical Method: Various

Sampling Date: 9/13/88

Shipping Date: 9/14/88

Date Received by Laboratory: 9/16/88

Reviewed by: L. M. Pimenta

QA: M. Margret Hanley

Date: 10/31/88

Date: 11/4/88

Validation Criteria for Inorganic Analyses

	Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
	Holding	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA	Dilution
*+	*(NA)+	*(NA)-	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site

Project No.: 88264

Sample No.: CEC/PH- EXS-05

Matrix: Soil

Analytical Method: Various

Sampling Date: 9/13/88

Shipping Date: 9/14/88

Date Received by Laboratory: 9/16/88

Reviewed by: L. M. Pimenta

QA: M. Margret Hanley

Date: 10/31/88

Date: 11/4/88

Validation Criteria for Inorganic Analyses

Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/	Serial
Holding	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA	Dilution
Time	Calibration	Analysis	Analysis	Analysis	Analysis	Analysis	Analysis	Analysis	Analysis
*+	*(NA)+	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-FIL-01
 Matrix: Soil
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

Holding Time	Initial + Continuing Calibration	Blank Analyses	ICP Interference	Matrix Spike	Lab/Field Precision	Control Sample	Detection Limits	Standard Furnace	Add/ AA	Serial Dilution
*+	*(NA)+	*(NA)-	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-Field b.
 Matrix: Aqueous
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

	Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/ Serial
	Continuing	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace	AA Dilution
Time	Calibration	Time	Time	Time	Time	Time	Time	Time	Time
*+	*(NA)+	*+	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*(NA)+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

INORGANIC DATA PACKAGE REVIEW

The ERCO data package received at GEI has been reviewed and the quality assurance data summarized. The data reviewed steps included:

Project Name: Cannons Engineering Corporation - Plymouth Site
 Project No.: 88264
 Sample No.: CEC/PH-Trip b.
 Matrix: Aqueous
 Analytical Method: Various
 Sampling Date: 9/13/88
 Shipping Date: 9/14/88
 Date Received by Laboratory: 9/16/88
 Reviewed by: L. M. Pimenta
 QA: M. Margret Hanley
 Date: 10/31/88
 Date: 11/4/88

Validation Criteria for Inorganic Analyses

	Initial +	Blank	ICP	Matrix	Lab/Field	Control	Detection	Standard	Add/ Serial
	Holding	Calibration	Analyses	Interference	Spike	Precision	Sample	Limits	Furnace AA Dilution
*+	*(NA)+	*+	*(NA)+	*(NA)-	*(NA)+	*(NA)+	*(NA)+	*(NA)+	*+

Recommendations for Data Validation criteria not met are summarized in Section F.2 Data Validation Procedures

KEY TO DATA VALIDATION QUALIFIERS

- * The criteria was reviewed
- + The criteria was met for that sample.
- The criteria was not met for the sample.
- (NA) The validation criteria was not assessed using this sample.

APPENDIX G

Chemical Analysis Data Sheets
Final Soil Sampling Report
Soil Removal Action
Cannons Engineering Corporation - Plymouth Site
Plymouth, Massachusetts

February 2, 1989

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: LOW
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-08-88
 Conc/Dil Factor: 2 PERCENT MOISTURE: 11

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	720 U
95-87-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	720 U
106-46-7	1,4-Dichlorobenzene	720 U
100-81-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	720 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	720 U
106-44-6	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	720 U
67-72-1	Hexachloroethane	720 U
98-95-3	Nitrobenzene	720 U
78-59-1	Isophorone	720 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	720 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	720 U
91-20-3	Naphthalene	160 J
106-47-8	4-Chloroaniline	720 U
87-88-3	Hexachlorobutadiene	720 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	120 J
77-47-4	Hexachlorocyclopentadiene	720 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-68-7	2-Chloronaphthalene	720 U
88-74-4	2-Nitroaniline	3,600 U
131-11-3	Dimethyl Phthalate	140 JB
208-96-8	Acenaphthylene	85 J
99-09-2	3-Nitroaniline	3,600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	430 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	200 J
121-14-2	2,4-Dinitrotoluene	720 U
608-20-2	2,6-Dinitrotoluene	720 U
84-86-2	Diethylphthalate	720 U
7005-72-3	4-Chlorophenyl-phenylether	720 U
86-73-7	Fluorene	480 J
100-01-6	4-Nitroaniline	3,600 U
534-62-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	720 U
101-55-3	4-Bromophenyl-phenylether	720 U
118-74-1	Hexachlorobenzene	720 U
87-86-6	Pentachlorophenol	NA
85-01-6	Phenanthrene	6,800
120-12-7	Anthracene	1,900
84-74-2	Di-n-Butylphthalate	720 U
206-44-0	Fluoranthene	7,600
129-00-0	Pyrene	9,000
85-68-7	Butylbenzylphthalate	720 U
91-94-1	3,3'-Dichlorobenzidine	1,400 U
56-65-3	Benzo(a)Anthracene	4,000
117-81-7	bis(2-Ethylhexyl)Phthalate	720 U
218-01-9	Chrysene	4,300
117-84-0	Di-n-Octyl Phthalate	720 U
205-99-2	Benzo(b)Fluoranthene	2,700
207-08-9	Benzo(k)Fluoranthene	1,700
50-32-8	Benzo(a)Pyrene	2,900
193-39-5	Indeno(1,2,3-cd)Pyrene	1,400
53-70-3	Dibenzo(e,h)Anthracene	540 J
191-24-2	Benzo(g,h,i)Perylene	1,600

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-08-88
 Conc/DIL Factor: 2 PERCENT MOISTURE: 14

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	760 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	760 U
106-46-7	1,4-Dichlorobenzene	760 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	760 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	760 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	760 U
67-72-1	Hexachloroethane	760 U
98-95-3	Nitrobenzene	760 U
78-59-1	Isophorone	760 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	760 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	760 U
91-20-3	Naphthalene	110 J
106-47-8	4-Chloroaniline	760 U
37-58-3	Hexachlorobutadiene	760 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	76 J
77-47-4	Hexachlorocyclopentadiene	760 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	760 U
38-74-4	2-Nitroaniline	3,800 U
131-11-3	Dimethyl Phthalate	100 JB
208-96-8	Acenaphthylene	760 U
99-09-2	3-Nitroaniline	3,800 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	340 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	190 J
121-14-2	2,4-Dinitrotoluene	760 U
606-20-2	2,6-Dinitrotoluene	760 U
84-66-2	Diethylphthalate	760 U
7005-72-3	4-Chlorophenyl-phenylether	760 U
86-73-7	Fluorene	370 J
100-01-6	4-Nitroaniline	3,800 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	760 U
101-55-3	4-Bromophenyl-phenylether	760 U
118-74-1	Hexachlorobenzene	760 U
87-86-6	Pentachlorophenol	NA
85-01-8	Phenanthrene	4,700
120-12-7	Anthracene	1,200
84-74-2	Di-n-Butylphthalate	760 U
206-44-0	Fluoranthene	4,100
129-00-0	Pyrene	5,000
85-68-7	Butylbenzylphthalate	760 U
91-94-1	3,3'-Dichlorobenzidine	1,500 U
56-55-3	Benzo(a)Anthracene	2,000
117-81-7	bis(2-Ethylhexyl)Phthalate	760 U
218-01-9	Chrysene	2,000
117-84-0	Di-n-Octyl Phthalate	760 U
205-99-2	Benzo(b)Fluoranthene	2,400
207-08-9	Benzo(k)Fluoranthene	960
50-32-8	Benzo(a)Pyrene	1,500
193-39-5	Indeno(1,2,3-cd)Pyrene	860
53-70-3	Dibenz(a,h)Anthracene	290 J
191-24-2	Benzo(g,h,i)Perylene	830

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-08-88
 Conc/Dil Factor: 8 PERCENT MOISTURE: 12

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	3,000 U
35-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	3,000 U
106-46-7	1,4-Dichlorobenzene	3,000 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	3,000 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	3,000 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	3,000 U
67-72-1	Hexachloroethane	3,000 U
98-95-3	Nitrobenzene	3,000 U
73-59-1	Isophorone	3,000 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	3,000 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	3,000 U
91-20-3	Naphthalene	3,500
106-47-8	4-Chloroaniline	3,000 U
87-68-3	Hexachlorobutadiene	3,000 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	1,400 J
77-47-4	Hexachlorocyclopentadiene	3,000 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	3,000 U
88-74-4	2-Nitroaniline	15,000 U
131-11-3	Dimethyl Phthalate	320 JB
208-96-8	Acenaphthylene	3,000 U
99-09-2	3-Nitroaniline	15,000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	5,300
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	4,400
121-14-2	2,4-Dinitrotoluene	3,000 U
606-20-2	2,6-Dinitrotoluene	3,000 U
84-66-2	Diethylphthalate	3,000 U
7005-72-3	4-Chlorophenyl-phenylether	3,000 U
86-73-7	Fluorene	5,400
100-01-6	4-Nitroaniline	15,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-8	N-Nitrosodiphenylamine(1)	3,000 U
101-55-3	4-Bromophenyl-phenylether	3,000 U
118-74-1	Hexachlorobenzene	3,000 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	48,000
120-12-7	Anthracene	11,000
84-74-2	Di-n-Butylphthalate	3,000 U
206-44-0	Fluoranthene	41,000
129-00-0	Pyrene	41,000
85-68-7	Butylbenzylphthalate	3,000 U
91-94-1	3,3'-Dichlorobenzidine	6,000 U
56-55-3	Benzo(a)Anthracene	16,000
117-81-7	bis(2-Ethylhexyl)Phthalate	3,000 U
218-01-9	Chrysene	16,000
117-84-0	Di-n-Octyl Phthalate	3,000 U
205-99-2	Benzo(b)Fluoranthene	20,000
207-08-9	Benzo(k)Fluoranthene	8,200
50-32-8	Benzo(a)Pyrene	14,000
193-39-5	Indeno(1,2,3-cd)Pyrene	6,200
53-70-3	Dibenz(a,h)Anthracene	2,100 J
191-24-2	Benzo(g,h,i)Perylene	5,700

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-08-88
 Conc/Dil Factor: 10 PERCENT MOISTURE: 7

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethyl)Ether	3,500 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	3,500 U
106-46-7	1,4-Dichlorobenzene	3,500 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	3,500 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	3,500 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	3,500 U
67-72-1	Hexachloroethane	3,500 U
98-95-3	Nitrobenzene	3,500 U
78-59-1	Isophorone	3,500 U
98-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
55-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	3,500 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	3,500 U
91-20-3	Naphthalene	420 J
106-47-8	4-Chloroaniline	3,500 U
87-68-3	Hexachlorobutadiene	3,500 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	3,500 U
77-47-4	Hexachlorocyclopentadiene	3,500 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	3,500 U
88-74-4	2-Nitroaniline	17,000 U
131-11-3	Dimethyl Phthalate	490 JB
208-96-8	Acenaphthylene	3,500 U
99-09-2	3-Nitroaniline	17,000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	420 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	3,500 U
121-14-2	2,4-Dinitrotoluene	3,500 U
606-20-2	2,6-Dinitrotoluene	3,500 U
84-66-2	Diethylphthalate	350 J
7005-72-3	4-Chlorophenyl-phenylether	3,500 U
86-73-7	Fluorene	520 J
100-01-6	4-Nitroaniline	17,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	3,500 U
101-55-3	4-Bromophenyl-phenylether	3,500 U
118-74-1	Hexachlorobenzene	3,500 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	7,100
120-12-7	Anthracene	2,300 J
94-74-2	Di-n-Butylphthalate	730 J
206-44-0	Fluoranthene	9,000
129-00-0	Pyrene	12,000
85-88-7	Butylbenzylphthalate	3,500 U
91-94-1	3,3'-Dichlorobenzidine	7,000 U
56-55-3	Benzo(a)Anthracene	5,600
117-81-7	bis(2-Ethylhexyl)Phthalate	3,500 U
218-01-9	Chrysene	6,100
117-84-0	Di-n-Octyl Phthalate	3,500 U
205-99-2	Benzo(b)Fluoranthene	6,300
207-08-9	Benzo(k)Fluoranthene	4,400
50-32-8	Benzo(a)Pyrene	8,300
193-39-5	Indeno(1,2,3-cd)Pyrene	4,400
53-70-3	Dibenz(a,h)Anthracene	1,400 J
191-24-2	Benzo(g,h,i)Perylene	4,200

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: LOW
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-08-88
 Conc/Dil Factor: 4 Percent Moisture = 6%

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
109-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	1,400 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	1,400 U
106-46-7	1,4-Dichlorobenzene	1,400 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	1,400 U
95-48-7	2-Methylphenol	NA
33638-32-9	bis(2-chloroisopropyl)Ether	1,400 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	1,400 U
57-72-1	Hexachloroethane	1,400 U
98-95-3	Nitrobenzene	1,400 U
78-59-1	Isophorone	1,400 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
55-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	1,400 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	1,400 U
91-20-3	Naphthalene	1,400 U
106-47-8	4-Chloroaniline	1,400 U
97-68-3	Hexachlorobutadiene	1,400 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	1,400 U
77-47-4	Hexachlorocyclopentadiene	1,400 U
88-06-2	2,4,6-Trichlorophenol	NA
35-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	1,400 U
88-74-4	2-Nitroaniline	7,000 U
131-11-3	Dimethyl Phthalate	140 J,B
208-96-8	Acenaphthylene	1,400 U
99-09-2	3-Nitroaniline	7,000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	430 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	1,400 U
121-14-2	2,4-Dinitrotoluene	1,400 U
606-20-2	2,6-Dinitrotoluene	1,400 U
84-66-2	Diethylphthalate	1,400 U
7005-72-3	4-Chlorophenyl-phenylether	1,400 U
86-73-7	Fluorene	480 J
100-01-6	4-Nitroaniline	7,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	1,400 U
101-55-3	4-Bromophenyl-phenylether	1,400 U
118-74-1	Hexachlorobenzene	1,400 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	7,200
120-12-7	Anthracene	2,000
94-74-2	Di-n-Butylphthalate	1,400 U
206-44-0	Fluoranthene	12,000
129-00-0	Pyrene	18,000
85-68-7	Butylbenzylphthalate	1,400 U
91-94-1	3,3'-Dichlorobenzidine	2,800 U
56-55-3	Benzo(a)Anthracene	7,100
117-81-7	bis(2-Ethylhexyl)Phthalate	1,100 J
218-01-9	Chrysene	7,800
117-84-0	Di-n-Octyl Phthalate	1,400 U
205-99-2	Benzo(b)Fluoranthene	4,800
207-08-9	Benzo(k)Fluoranthene	2,900
50-32-8	Benzo(a)Pyrene	5,400
193-39-5	Indeno(1,2,3-cd)Pyrene	2,300
53-70-3	Dibenz(a,h)Anthracene	850 J
191-24-2	Benzo(g,h,i)Perylene	2,300

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-07-88
 Conc/Dil Factor: 1 *Percent Moisture = 4*

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug.Kg
108-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethyl)Ether	340 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	340 U
106-46-7	1,4-Dichlorobenzene	340 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	340 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	340 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-DI-n-Propylamine	340 U
67-72-1	Hexachloroethane	340 U
98-95-3	Nitrobenzene	340 U
79-59-1	Isophorone	340 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	340 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	340 U
91-20-3	Naphthalene	89 J
106-47-8	4-Chloroaniline	340 U
87-68-3	Hexachlorobutadiene	340 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	58 J
77-47-4	Hexachlorocyclopentadiene	340 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	340 U
98-74-4	2-Nitroaniline	1,700 U
131-11-3	Dimethyl Phthalate	340 U
208-96-8	Acenaphthylene	340 U
99-09-2	3-Nitroaniline	1,700 U

CAS Number		ug.Kg
83-32-9	Acenaphthene	55 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	62 J
121-14-2	2,4-Dinitrotoluene	340 U
606-20-2	2,6-Dinitrotoluene	340 U
84-66-2	Diethylphthalate	340 U
7005-72-3	4-Chlorophenyl-phenylether	340 U
86-73-7	Fluorene	48 J
100-01-6	4-Nitroaniline	1,700 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	340 U
101-55-3	4-Bromophenyl-phenylether	340 U
118-74-1	Hexachlorobenzene	340 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	670
120-12-7	Anthracene	110 J
84-74-2	DI-n-Butylphthalate	340 U
206-44-0	Fluoranthene	980
129-00-0	Pyrene	970
85-68-7	Butylbenzylphthalate	340 U
91-94-1	3,3'-Dichlorobenzidine	680 U
56-55-3	Benzo(a)Anthracene	450
117-81-7	bis(2-Ethylhexyl)Phthalate	86 J
218-01-9	Chrysene	500
117-84-0	DI-n-Octyl Phthalate	340 U
205-99-2	Benzo(b)Fluoranthene	470
207-08-9	Benzo(k)Fluoranthene	370
50-32-8	Benzo(a)Pyrene	480
193-39-5	Indeno(1,2,3-cd)Pyrene	420
53-70-3	Dibenz(a,h)Anthracene	110 J
191-24-2	Benzo(g,h,i)Perylene	420

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: LOW
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-07-88
 Conc/Dil Factor: 6 *Percent Moisture = 15%*

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	2,300 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	2,300 U
106-46-7	1,4-Dichlorobenzene	2,300 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	2,300 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	2,300 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	2,300 U
67-72-1	Hexachloroethane	2,300 U
38-95-3	Nitrobenzene	2,300 U
78-59-1	Isophorone	2,300 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
55-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	2,300 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	2,300 U
31-20-3	Naphthalene	260 J
106-47-8	4-Chloroaniline	2,300 U
87-68-3	Hexachlorobutadiene	2,300 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	2,300 U
77-47-4	Hexachlorocyclopentadiene	2,300 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	2,300 U
88-74-4	2-Nitroaniline	12,000 U
131-11-3	Dimethyl Phthalate	2,300 U
208-96-8	Acenaphthylene	2,300 U
99-09-2	3-Nitroaniline	12,000 U

CAS Number		ug.Kg
83-32-9	Acenaphthene	460 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	280 J
121-14-2	2,4-Dinitrotoluene	2,300 U
606-20-2	2,6-Dinitrotoluene	2,300 U
84-66-2	Diethylphthalate	2,300 U
7005-72-3	4-Chlorophenyl-phenylether	2,300 U
86-73-7	Fluorene	580 J
100-01-6	4-Nitroaniline	12,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	2,300 U
101-55-3	4-Bromophenyl-phenylether	2,300 U
118-74-1	Hexachlorobenzene	2,300 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	8,000
120-12-7	Anthracene	2,200 J
84-74-2	Di-n-Butylphthalate	510 J
206-44-0	Fluoranthene	8,900
129-00-0	Pyrene	11,000
85-68-7	Butylbenzylphthalate	2,300 U
91-94-1	3,3'-Dichlorobenzidine	4,600 U
56-55-3	Benzo(a)Anthracene	5,600
117-81-7	bis(2-Ethylhexyl)Phthalate	2,300 U
218-01-9	Chrysene	5,400
117-84-0	Di-n-Octyl Phthalate	2,300 U
205-99-2	Benzo(b)Fluoranthene	4,600
207-08-9	Benzo(k)Fluoranthene	3,100
50-32-8	Benzo(a)Pyrene	4,000
193-39-5	Indeno(1,2,3-cd)Pyrene	3,100
53-70-3	Dibenz(a,h)Anthracene	790 J
191-24-2	Benzo(g,h,i)Perylene	3,000

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-07-88
 Conc/Dil Factor: 4 PERCENT MOISTURE: 10

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
109-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethyl)Ether	1,500 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	1,500 U
106-46-7	1,4-Dichlorobenzene	1,500 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	1,500 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	1,500 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	1,500 U
57-72-1	Hexachloroethane	1,500 U
38-95-3	Nitrobenzene	1,500 U
78-59-1	sophorone	1,500 U
38-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	1,500 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	1,500 U
91-20-3	Naphthalene	770 J
106-47-8	4-Chloroaniline	1,500 U
87-68-3	Hexachlorobutadiene	1,500 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	380 J
77-47-4	Hexachlorocyclopentadiene	1,500 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	1,500 U
88-74-4	2-Nitroaniline	7,400 U
131-11-3	Dimethyl Phthalate	1,500 U
208-96-8	Acenaphthylene	1,500 U
99-09-2	3-Nitroaniline	7,400 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	1,100 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	1,000 J
121-14-2	2,4-Dinitrotoluene	1,500 U
606-20-2	2,6-Dinitrotoluene	1,500 U
84-66-2	Diethylphthalate	1,500 U
7005-72-3	4-Chlorophenyl-phenylether	1,500 U
86-73-7	Fluorene	1,300 J
100-01-6	4-Nitroaniline	7,400 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
88-30-6	N-Nitrosodiphenylamine(1)	1,500 U
101-55-3	4-Bromophenyl-phenylether	1,500 U
118-74-1	Hexachlorobenzene	1,500 U
87-86-6	Pentachlorophenol	NA
85-01-8	Phenanthrene	14,000
120-12-7	Anthracene	3,200
84-74-2	Di-n-Butylphthalate	1,500 U
206-44-0	Fluoranthene	12,000
129-00-0	Pyrene	12,000
85-68-7	Butylbenzylphthalate	1,500 U
91-94-1	3,3'-Dichlorobenzidine	3,000 U
56-55-3	Benzo(a)Anthracene	6,000
117-81-7	bis(2-Ethylhexyl)Phthalate	1,500 U
218-01-9	Chrysene	5,500
117-84-0	Di-n-Octyl Phthalate	1,500 U
205-99-2	Benzo(b)Fluoranthene	3,900
207-08-9	Benzo(k)Fluoranthene	2,900
50-32-8	Benzo(a)Pyrene	4,700
193-39-5	Indeno(1,2,3-cd)Pyrene	2,900
53-70-3	Dibenzo(a,h)Anthracene	780 J
191-24-2	Benzo(g,h,i)Perylene	2,700

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-07-88
 Conc/DIL Factor: 8 PERCENT MOISTURE: 5

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethyl)Ether	2,800 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	2,800 U
106-46-7	1,4-Dichlorobenzene	2,800 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	2,800 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	2,800 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	2,800 U
57-72-1	Hexachloroethane	2,800 U
98-95-3	Nitrobenzene	2,800 U
78-59-1	Isophorone	2,800 U
38-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	2,800 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	2,800 U
91-20-3	Naphthalene	2,800 U
106-47-8	4-Chloroaniline	2,800 U
37-68-3	Hexachlorobutadiene	2,800 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	2,800 U
77-47-4	Hexachlorocyclopentadiene	2,800 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	2,800 U
38-74-4	2-Nitroaniline	14,000 U
131-11-3	Dimethyl Phthalate	2,800 U
208-96-8	Acenaphthylene	2,800 U
99-09-2	3-Nitroaniline	14,000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	810 J
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	2,800 U
121-14-2	2,4-Dinitrotoluene	2,800 U
606-20-2	2,6-Dinitrotoluene	2,800 U
84-66-2	Diethylphthalate	2,800 U
7005-72-3	4-Chlorophenyl-phenylether	2,800 U
86-73-7	Fluorene	810 J
100-01-6	4-Nitroaniline	14,000 U
534-62-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	2,800 U
101-55-3	4-Bromophenyl-phenylether	2,800 U
118-74-1	Hexachlorobenzene	2,800 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	17,000
120-12-7	Anthracene	5,800
84-74-2	Di-n-Butylphthalate	2,800 U
206-44-0	Fluoranthene	27,000
129-00-0	Pyrene	35,000
85-68-7	Butylbenzylphthalate	2,800 U
91-94-1	3,3'-Dichlorobenzidine	5,600 U
56-55-3	Benzo(a)Anthracene	14,000
117-81-7	bis(2-Ethylhexyl)Phthalate	1,400 J
218-01-9	Chrysene	13,000
117-84-0	Di-n-Octyl Phthalate	2,800 U
205-99-2	Benzo(b)Fluoranthene	9,200
207-08-9	Benzo(k)Fluoranthene	4,900
50-32-8	Benzo(a)Pyrene	10,000
193-39-5	Indeno(1,2,3-cd)Pyrene	5,100
53-70-3	Dibenz(a,h)Anthracene	1,500 J
191-24-2	Benzo(g,h,i)Perylene	5,200

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-07-88
 Conc/DiL Factor: 3 PERCENT MOISTURE: 10

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	1,100 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	1,100 U
106-46-7	1,4-Dichlorobenzene	1,100 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	1,100 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	1,100 U
106-44-5	4-Methylphenol	NA
821-64-7	N-Nitroso-Di-n-Propylamine	1,100 U
67-72-1	Hexachloroethane	1,100 U
98-95-3	Nitrobenzene	1,100 U
78-59-1	Isophorone	1,100 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
55-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	1,100 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	1,100 U
31-20-3	Naphthalene	510 J
106-47-8	4-Chloroaniline	1,100 U
37-68-3	Hexachlorobutadiene	1,100 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	270 J
77-47-4	Hexachlorocyclopentadiene	1,100 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	1,100 U
38-74-4	2-Nitroaniline	5,400 U
131-11-3	Dimethyl Phthalate	1,100 U
208-96-8	Acenaphthylene	160 J
99-09-2	3-Nitroaniline	5,400 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	1,000 J
51-28-6	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	700 J
121-14-2	2,4-Dinitrotoluene	1,100 U
606-20-2	2,6-Dinitrotoluene	1,100 U
84-86-2	Diethylphthalate	1,100 U
7005-72-3	4-Chlorophenyl-phenylether	1,100 U
86-73-7	Fluorene	1,100
100-01-6	4-Nitroaniline	5,400 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	1,100 U
101-55-3	4-Bromophenyl-phenylether	1,100 U
118-74-1	Hexachlorobenzene	1,100 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	12,000
120-12-7	Anthracene	3,200
84-74-2	Di-n-Butylphthalate	390 J
206-44-0	Fluoranthene	12,000
129-00-0	Pyrene	13,000
85-68-7	Butylbenzylphthalate	1,100 U
91-94-1	3,3'-Dichlorobenzidine	2,200 U
56-55-3	Benzo(a)Anthracene	6,000
117-81-7	bis(2-Ethylhexyl)Phthalate	1,100 U
218-01-9	Chrysene	5,900
117-84-0	Di-n-Octyl Phthalate	1,100 U
205-99-2	Benzo(b)Fluoranthene	7,100 D
207-08-9	Benzo(k)Fluoranthene	7,100 D
50-32-8	Benzo(a)Pyrene	5,200
193-39-5	Indeno(1,2,3-cd)Pyrene	2,100
53-70-3	Dibenz(a,h)Anthracene	660 J
191-24-2	Benzo(g,h,i)Perylene	1,900

D = solution

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-07-88
 Conc/DIL Factor: 1 PERCENT MOISTURE: 2

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethyl)Ether	340 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	340 U
106-46-7	1,4-Dichlorobenzene	340 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	340 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	340 U
106-44-5	4-Methylphenol	NA
521-64-7	N-Nitroso-Di-n-Propylamine	340 U
67-72-1	Hexachloroethane	340 U
73-95-3	Nitrobenzene	340 U
73-59-1	sophorone	340 U
38-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	340 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	340 U
91-20-3	Naphthalene	340 U
106-47-8	4-Chloroaniline	340 U
37-68-3	Hexachlorobutadiene	340 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	340 U
77-47-4	Hexachlorocyclopentadiene	340 U
68-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	340 U
33-74-4	2-Nitroaniline	1,700 U
131-11-3	Dimethyl Phthalate	340 U
208-96-8	Acenaphthylene	340 U
39-09-2	3-Nitroaniline	1,700 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	340 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	340 U
121-14-2	2,4-Dinitrotoluene	340 U
606-20-2	2,6-Dinitrotoluene	340 U
84-66-2	Diethylphthalate	340 U
7005-72-3	4-Chlorophenyl-phenylether	340 U
36-73-7	Fluorene	340 U
100-01-6	4-Nitroaniline	1,700 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	340 U
101-55-3	4-Bromophenyl-phenylether	340 U
118-74-1	Hexachlorobenzene	340 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	340 U
120-12-7	Anthracene	340 U
84-74-2	Di-n-Butylphthalate	180 J
206-44-0	Fluoranthene	340 U
129-00-0	Pyrene	340 U
85-68-7	Butylbenzylphthalate	340 U
91-94-1	3,3'-Dichlorobenzidine	680 U
56-55-3	Benzo(a)Anthracene	340 U
117-81-7	bis(2-Ethylhexyl)Phthalate	44 J
218-01-9	Chrysene	340 U
117-84-0	Di-n-Octyl Phthalate	340 U
205-99-2	Benzo(b)Fluoranthene	340 U
207-08-9	Benzo(k)Fluoranthene	340 U
50-32-8	Benzo(a)Pyrene	340 U
193-39-5	Indeno(1,2,3-cd)Pyrene	340 U
53-70-3	Dibenz(a,h)Anthracene	340 U
191-24-2	Benzo(g,h,i)Perylene	340 U

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-19-88
 Date Analyzed: 10-07-88
 Conc/DiL Factor: 1

GPC Cleanup: NO
 Separatory Funnel Extraction: YES
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethy)Ether	10 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	10 U
106-46-7	1,4-Dichlorobenzene	10 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	10 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	10 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	10 U
67-72-1	Hexachloroethane	10 U
98-95-3	Nitrobenzene	10 U
78-59-1	Isophorone	10 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	10 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	10 U
91-20-3	Naphthalene	10 U
106-47-8	4-Chloroaniline	10 U
87-68-3	Hexachlorobutadiene	10 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	10 U
77-47-4	Hexachlorocyclopentadiene	10 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,6-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	10 U
88-74-4	2-Nitroaniline	50 U
131-11-3	Dimethyl Phthalate	10 U
208-96-8	Acenaphthylene	10 U
99-09-2	3-Nitroaniline	50 U

CAS Number		ug/L
83-32-9	Acenaphthene	10 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	10 U
121-14-2	2,4-Dinitrotoluene	10 U
606-20-2	2,6-Dinitrotoluene	10 U
84-86-2	Diethylphthalate	10 U
7005-72-3	4-Chlorophenyl-phenylether	10 U
86-73-7	Fluorene	10 U
100-01-6	4-Nitroaniline	50 U
534-62-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	3 J,B
101-55-3	4-Bromophenyl-phenylether	10 U
118-74-1	Hexachlorobenzene	10 U
87-86-5	Pentachlorophenol	NA
85-01-6	Phenanthrene	10 U
120-12-7	Anthracene	10 U
84-74-2	Di-n-Butylphthalate	1 J
206-44-0	Fluoranthene	10 U
129-00-0	Pyrene	10 U
85-68-7	Butylbenzylphthalate	10 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	10 U
117-81-7	bis(2-Ethylhexyl)Phthalate	10 U
218-01-9	Chrysene	10 U
117-84-0	Di-n-Octyl Phthalate	10 U
205-99-2	Benzo(b)Fluoranthene	10 U
207-08-9	Benzo(k)Fluoranthene	10 U
50-32-8	Benzo(a)Pyrene	10 U
193-39-5	Indeno(1,2,3-cd)Pyrene	10 U
53-70-3	Dibenz(a,h)Anthracene	10 U
191-24-2	Benzo(g,h,i)Perylene	10 U

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-19-88
 Date Analyzed: 10-11-88
 Conc/Dil Factor: 1

GPC Cleanup: NO
 Separatory Funnel Extraction: YES
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	NA
111-44-4	bis(-2-Chloroethyl)Ether	10 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	10 U
106-46-7	1,4-Dichlorobenzene	10 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	10 U
95-48-7	2-Methylphenol	NA
33638-32-9	bis(2-chloroisopropyl)Ether	10 U
105-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	10 U
67-72-1	Hexachloroethane	10 U
73-95-3	Nitrobenzene	10 U
78-59-1	Isophorone	10 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
55-85-0	Benzoic Acid	NA
111-91-1	bis(-2-Chloroethoxy)Methane	10 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	10 U
91-20-3	Naphthalene	10 U
106-47-8	4-Chloroaniline	10 U
17-68-3	Hexachlorobutadiene	10 U
53-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	10 U
77-47-4	Hexachlorocyclopentadiene	10 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
31-58-7	2-Chloronaphthalene	10 U
68-74-4	2-Nitroaniline	50 U
131-11-3	Dimethyl Phthalate	1 J
103-96-8	Acenaphthylene	10 U
99-09-2	3-Nitroaniline	50 U

CAS Number		ug/L
83-32-9	Acenaphthene	10 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	10 U
121-14-2	2,4-Dinitrotoluene	10 U
606-20-2	2,6-Dinitrotoluene	10 U
84-66-2	Diethylphthalate	1 J
7005-72-3	4-Chlorophenyl-phenylether	10 U
86-73-7	Fluorene	10 U
100-01-6	4-Nitroaniline	50 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	3 J
101-55-3	4-Bromophenyl-phenylether	10 U
118-74-1	Hexachlorobenzene	10 U
87-86-6	Pentachlorophenol	NA
85-01-8	Phenanthrene	10 U
120-12-7	Anthracene	10 U
84-74-2	Di-n-Butylphthalate	10 U
206-44-0	Fluoranthene	10 U
129-00-0	Pyrene	10 U
85-68-7	Butylbenzylphthalate	10 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	10 U
117-81-7	bis(2-Ethylhexyl)Phthalate	2 J
218-01-9	Chrysene	10 U
117-84-0	Di-n-Octyl Phthalate	10 U
205-99-2	Benzo(b)Fluoranthene	10 U
207-08-9	Benzo(k)Fluoranthene	10 U
50-32-8	Benzo(a)Pyrene	10 U
193-39-5	Indeno(1,2,3-cd)Pyrene	10 U
53-70-3	Dibenz(a,h)Anthracene	10 U
191-24-2	Benzo(g,h,i)Perylene	10 U

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: LOW
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-11-88
 Conc/DIL Factor: 5 PERCENT MOISTURE: 15

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	2,000 U
35-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	2,000 U
106-46-7	1,4-Dichlorobenzene	2,000 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	2,000 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	2,000 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	2,000 U
67-72-1	Hexachloroethane	2,000 U
3-95-3	Nitrobenzene	2,000 U
78-59-1	Isophorone	2,000 U
33-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
35-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	2,000 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	2,000 U
31-20-3	Naphthalene	2,000 U
106-47-8	4-Chloroaniline	2,000 U
37-58-3	Hexachlorobutadiene	2,000 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	2,000 U
77-47-4	Hexachlorocyclopentadiene	2,000 U
38-06-2	2,4,6-Trichlorophenol	NA
35-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	2,000 U
88-74-4	2-Nitroaniline	9,800 U
101-11-3	Dimethyl Phthalate	2,000 U
208-96-8	Acenaphthylene	2,000 U
99-09-2	3-Nitroaniline	9,800 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	2,000 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	2,000 U
121-14-2	2,4-Dinitrotoluene	2,000 U
606-20-2	2,6-Dinitrotoluene	2,000 U
84-66-2	Diethylphthalate	2,000 U
7005-72-3	4-Chlorophenyl-phenylether	2,000 U
86-73-7	Fluorene	2,000 U
100-01-6	4-Nitroaniline	9,800 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	2,000 U
101-55-3	4-Bromophenyl-phenylether	2,000 U
118-74-1	Hexachlorobenzene	2,000 U
87-86-5	Pentachlorophenol	NA
85-01-8	Phenanthrene	1,900 J
120-12-7	Anthracene	450 J
84-74-2	Di-n-Butylphthalate	2,000 U
206-44-0	Fluoranthene	2,000
129-00-0	Pyrene	2,000 U
85-68-7	Butylbenzylphthalate	2,000 U
91-94-1	3,3'-Dichlorobenzidine	3,900 U
56-55-3	Benzo(a)Anthracene	1,100 J
117-81-7	bis(2-Ethylhexyl)Phthalate	2,000 U
218-01-9	Chrysene	1,300 J
117-84-0	Di-n-Octyl Phthalate	2,000 U
205-99-2	Benzo(b)Fluoranthene	1,400 J
207-08-9	Benzo(k)Fluoranthene	740 J
50-32-8	Benzo(a)Pyrene	1,000 J
193-39-5	Indeno(1,2,3-cd)Pyrene	410 J
53-70-3	Dibenzo(a,h)Anthracene	2,000 U
191-24-2	Benzo(g,h,i)Perylene	310 J

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-05-88
 Conc:DIL Factor: 1

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	330 U
75-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
33-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	330 U
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	330 U
77-47-4	Hexachlorocyclopentadiene	330 U
38-06-2	2,4,6-Trichlorophenol	NA
35-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1,700 U
131-11-3	Dimethyl Phthalate	63 J
238-96-8	Acenaphthylene	330 U
99-09-2	3-Nitroaniline	1,700 U

CAS Number		ug/Kg
33-32-9	Acenaphthene	330 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	330 U
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	330 U
100-01-6	4-Nitroaniline	1,700 U
534-52-1	4,6-Dinitro-2-Methylphenol	NA
86-30-8	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
37-86-5	Pentachlorophenol	NA
35-01-8	Phenanthrene	330 U
120-12-7	Anthracene	330 U
84-74-2	Di-n-Butylphthalate	330 U
206-44-0	Fluoranthene	330 U
129-00-0	Pyrene	330 U
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	330 U
117-81-7	bis(2-Ethylhexyl)Phthalate	330 U
218-01-9	Chrysene	330 U
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	330 U
207-08-9	Benzo(k)Fluoranthene	330 U
50-32-8	Benzo(a)Pyrene	330 U
193-39-5	Indeno(1,2,3-cd)Pyrene	330 U
53-70-3	Dibenz(a,h)Anthracene	330 U
191-24-2	Benzo(g,h,i)Perylene	330 U

(1) - Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: LOW
 Date Extracted/Prepared: 09-23-88
 Date Analyzed: 10-12-88
 Conc/DIL Factor: 5 PERCENT MOISTURE: 15

GPC Cleanup: NO
 Separatory Funnel Extraction: NO
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	2,500 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	2,500 U
106-46-7	1,4-Dichlorobenzene	2,500 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	2,500 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	2,500 U
106-44-6	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	2,500 U
67-72-1	Hexachloroethane	2,500 U
98-95-3	Nitrobenzene	2,500 U
78-59-1	Isophorone	2,500 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	2,500 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	2,500 U
91-20-3	Naphthalene	2,500 U
106-47-8	4-Chloroaniline	2,500 U
87-68-3	Hexachlorobutadiene	2,500 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	2,500 U
77-47-4	Hexachlorocyclopentadiene	2,500 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,8-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	2,500 U
88-74-4	2-Nitroaniline	12,000 U
131-11-3	Dimethyl Phthalate	2,500 U
208-96-8	Acenaphthylene	2,500 U
99-09-2	3-Nitroaniline	12,000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	2,500 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	2,500 U
121-14-2	2,4-Dinitrotoluene	2,500 U
606-20-2	2,6-Dinitrotoluene	2,500 U
84-66-2	Diethylphthalate	2,500 U
7005-72-3	4-Chlorophenyl-phenylether	2,500 U
86-73-7	Fluorene	250 J
100-01-6	4-Nitroaniline	12,000 U
534-62-1	4,6-Dinitro-2-Methylphenol	NA
86-30-6	N-Nitrosodiphenylamine(1)	2,500 U
101-65-3	4-Bromophenyl-phenylether	2,500 U
118-74-1	Hexachlorobenzene	2,500 U
87-86-5	Pentachlorophenol	NA
85-01-6	Phenanthrene	3,500
120-12-7	Anthracene	1,000 J
84-74-2	Di-n-Butylphthalate	2,500 U
206-44-0	Fluoranthene	3,700
129-00-0	Pyrene	2,500 U
85-66-7	Butylbenzylphthalate	2,500 U
91-84-1	3,3'-Dichlorobenzidine	5,000 U
56-55-3	Benzo(a)Anthracene	2,100 J
117-81-7	bis(2-Ethylhexyl)Phthalate	2,500 U
218-01-9	Chrysene	4,400
117-84-0	Di-n-Octyl Phthalate	2,500 U
205-99-2	Benzo(b)Fluoranthene	2,500
207-08-9	Benzo(k)Fluoranthene	1,100 J
50-32-6	Benzo(a)Pyrene	310 J
193-39-5	Indeno(1,2,3-cd)Pyrene	1,100 J
53-70-3	Dibenz(a,h)Anthracene	350 J
191-24-2	Benzo(g,h,i)Perylene	1,300 J

(1) - Cannot be separated from diphenylamine

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Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low
 Date Extracted/Prepared: 09-19-88
 Date Analyzed: 10-07-88
 Conc/Dil Factor: 1

GPC Cleanup: NO
 Separatory Funnel Extraction: YES
 Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	NA
111-44-4	bis(2-Chloroethyl)Ether	10 U
95-57-8	2-Chlorophenol	NA
541-73-1	1,3-Dichlorobenzene	10 U
106-46-7	1,4-Dichlorobenzene	10 U
100-51-6	Benzyl Alcohol	NA
95-50-1	1,2-Dichlorobenzene	10 U
95-48-7	2-Methylphenol	NA
39638-32-9	bis(2-chloroisopropyl)Ether	10 U
106-44-5	4-Methylphenol	NA
621-64-7	N-Nitroso-Di-n-Propylamine	10 U
67-72-1	Hexachloroethane	10 U
98-95-3	Nitrobenzene	10 U
78-59-1	Isophorone	10 U
88-75-5	2-Nitrophenol	NA
105-67-9	2,4-Dimethylphenol	NA
65-85-0	Benzoic Acid	NA
111-91-1	bis(2-Chloroethoxy)Methane	10 U
120-83-2	2,4-Dichlorophenol	NA
120-82-1	1,2,4-Trichlorobenzene	10 U
91-20-3	Naphthalene	10 U
106-47-8	4-Chloroaniline	10 U
87-68-3	Hexachlorobutadiene	10 U
59-50-7	4-Chloro-3-Methylphenol	NA
91-57-6	2-Methylnaphthalene	10 U
77-47-4	Hexachlorocyclopentadiene	10 U
88-06-2	2,4,6-Trichlorophenol	NA
95-95-4	2,4,5-Trichlorophenol	NA
91-58-7	2-Chloronaphthalene	10 U
88-74-4	2-Nitroaniline	50 U
131-11-3	Dimethyl Phthalate	10 U
208-96-8	Acenaphthylene	10 U
99-09-2	3-Nitroaniline	50 U

CAS Number		ug/L
83-32-6	Acenaphthene	10 U
51-28-5	2,4-Dinitrophenol	NA
100-02-7	4-Nitrophenol	NA
132-64-9	Dibenzofuran	10 U
121-14-2	2,4-Dinitrotoluene	10 U
606-20-2	2,6-Dinitrotoluene	10 U
84-86-2	Diethylphthalate	10 U
7005-72-3	4-Chlorophenyl-phenylether	10 U
86-73-7	Fluorene	10 U
100-01-6	4-Nitroaniline	50 U
534-62-1	4,6-Dinitro-2-Methylphenol	NA
88-96-6	N-Nitrosodiphenylamine(1)	2 J.B
101-65-3	4-Bromophenyl-phenylether	10 U
118-74-1	Hexachlorobenzene	10 U
87-86-6	Pentachlorophenol	NA
85-01-8	Phenanthrene	10 U
120-12-7	Anthracene	10 U
84-74-2	Di-n-Butylphthalate	10 U
206-44-0	Fluoranthene	10 U
129-00-0	Pyrene	10 U
85-88-7	Butylbenzylphthalate	10 U
91-94-1	3,3'-Dichlorobenzidine	20 U
86-65-3	Benzo(a)Anthracene	10 U
117-81-7	bis(2-Ethylhexyl)Phthalate	10 U
218-01-9	Chrysene	10 U
117-84-0	Di-n-Octyl Phthalate	10 U
206-89-2	Benzo(b)Fluoranthene	10 U
207-08-9	Benzo(k)Fluoranthene	10 U
80-32-8	Benzo(a)Pyrene	10 U
193-39-5	Indeno(1,2,3-cd)Pyrene	10 U
53-70-3	Dibenz(a,h)Anthracene	10 U
191-24-2	Benzo(g,h,i)Perylene	10 U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-EBC-01

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-1

Sample wt/vol: 31.1 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 11 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

EPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 5.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	43	U
319-85-7	beta-BHC	43	U
319-86-8	delta-BHC	43	U
58-89-9	gamma-BHC (Lindane)	43	U
76-44-8	Heptachlor	43	U
309-00-2	Aldrin	43	U
1024-57-3	Heptachlor epoxide	43	U
959-98-8	Endosulfan I	43	U
60-57-1	Dieldrin	87	U
72-55-9	4,4'-DDE	87	U
72-20-8	Endrin	87	U
33213-65-9	Endosulfan II	87	U
72-54-8	4,4'-DDD	87	U
1031-07-8	Endosulfan sulfate	87	U
50-29-3	4,4'-DDT	87	U
72-43-5	Methoxychlor	430	U
53494-70-5	Endrin ketone	87	U
5103-71-9	alpha-Chlordane	430	U
5103-74-2	gamma-Chlordane	430	U
8001-35-2	Toxaphene	870	U
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	430	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	870	U
11096-82-5	Aroclor-1260	870	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-EBC-02

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-2

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

Moisture: not dec. 14 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

EPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 4.5

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	41	U
319-85-7	beta-BHC	41	U
319-86-8	delta-BHC	41	U
58-89-9	gamma-BHC (Lindane)	41	U
76-44-8	Heptachlor	41	U
309-00-2	Aldrin	41	U
1024-57-3	Heptachlor epoxide	41	U
959-98-8	Endosulfan I	41	U
60-57-1	Dieldrin	81	U
72-55-9	4,4'-DDE	81	U
72-20-8	Endrin	81	U
33213-65-9	Endosulfan II	81	U
72-54-8	4,4'-DDD	81	U
1031-07-8	Endosulfan sulfate	81	U
50-29-3	4,4'-DDT	81	U
72-43-5	Methoxychlor	410	U
53494-70-5	Endrin ketone	81	U
5103-71-9	alpha-Chlordane	410	U
5103-74-2	gamma-Chlordane	410	U
8001-35-2	Toxaphene	810	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	410	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	810	U
11096-82-5	Aroclor-1260	810	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-ERC-01

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-3

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 12 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	180	U
319-85-7	beta-BHC	180	U
319-86-8	delta-BHC	180	U
58-89-9	gamma-BHC (Lindane)	180	U
76-44-8	Heptachlor	180	U
309-00-2	Aldrin	180	U
1024-57-3	Heptachlor epoxide	180	U
959-98-8	Endosulfan I	180	U
60-57-1	Dieldrin	360	U
72-55-9	4,4'-DDE	360	U
72-20-8	Endrin	360	U
33213-65-9	Endosulfan II	360	U
72-54-8	4,4'-DDD	360	U
1031-07-8	Endosulfan sulfate	360	U
50-29-3	4,4'-DDT	360	U
72-43-5	Methoxychlor	1800	U
53494-70-5	Endrin ketone	360	U
5103-71-9	alpha-Chlordane	1800	U
5103-74-2	gamma-Chlordane	1800	U
8001-35-2	Toxaphene	3600	U
12674-11-2	Aroclor-1016	1800	U
11104-28-2	Aroclor-1221	1800	U
11141-16-5	Aroclor-1232	1800	U
53469-21-9	Aroclor-1242	1800	U
12672-29-6	Aroclor-1248	1800	U
11097-69-1	Aroclor-1254	3600	U
11096-82-5	Aroclor-1260	3600	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-EPC-02

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-4

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 7 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	84	U
319-85-7	beta-BHC	84	U
319-86-8	delta-BHC	84	U
58-89-9	gamma-BHC (Lindane)	84	U
76-44-8	Heptachlor	84	U
309-00-2	Aldrin	84	U
1024-57-3	Heptachlor epoxide	84	U
959-98-8	Endosulfan I	84	U
60-57-1	Dieldrin	170	U
72-55-9	4,4'-DDE	170	U
72-20-8	Endrin	170	U
33213-65-9	Endosulfan II	170	U
72-54-8	4,4'-DDD	170	U
1031-07-8	Endosulfan sulfate	170	U
50-29-3	4,4'-DDT	170	U
72-43-5	Methoxychlor	840	U
53494-70-5	Endrin ketone	170	U
5103-71-9	alpha-Chlordane	840	U
5103-74-2	gamma-Chlordane	840	U
8001-35-2	Toxaphene	1700	U
12674-11-2	Aroclor-1016	840	U
11104-28-2	Aroclor-1221	840	U
11141-16-5	Aroclor-1232	840	U
53469-21-9	Aroclor-1242	840	U
12672-29-6	Aroclor-1248	840	U
11097-69-1	Aroclor-1254	1700	U
11096-82-5	Aroclor-1260	1700	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-IBC-01

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-5

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 6 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

EPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 5.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	42	U
319-85-7-----	beta-BHC	42	U
319-86-8-----	delta-BHC	42	U
58-89-9-----	gamma-BHC (Lindane)	42	U
76-44-8-----	Heptachlor	42	U
309-00-2-----	Aldrin	42	U
1024-57-3-----	Heptachlor epoxide	42	U
959-98-8-----	Endosulfan I	42	U
60-57-1-----	Dieldrin	84	U
72-55-9-----	4,4'-DDE	84	U
72-20-8-----	Endrin	84	U
33213-65-9-----	Endosulfan II	84	U
72-54-8-----	4,4'-DDD	84	U
1031-07-8-----	Endosulfan sulfate	84	U
50-29-3-----	4,4'-DDT	84	U
72-43-5-----	Methoxychlor	420	U
53494-70-5-----	Endrin ketone	84	U
5103-71-9-----	alpha-Chlordane	420	U
5103-74-2-----	gamma-Chlordane	420	U
8001-35-2-----	Toxaphene	840	U
12674-11-2-----	Aroclor-1016	420	U
11104-28-2-----	Aroclor-1221	420	U
11141-16-5-----	Aroclor-1232	420	U
53469-21-9-----	Aroclor-1242	420	U
12672-29-6-----	Aroclor-1248	420	U
11097-69-1-----	Aroclor-1254	840	U
11096-82-5-----	Aroclor-1260	840	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-^{X, 62}~~EBC~~-01

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-6

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 4 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 2.7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q.

319-84-6-----	alpha-BHC	22	U
319-85-7-----	beta-BHC	22	U
319-86-8-----	delta-BHC	22	U
58-89-9-----	gamma-BHC (Lindane)	22	U
76-44-8-----	Heptachlor	22	U
309-00-2-----	Aldrin	22	U
1024-57-3-----	Heptachlor epoxide	22	U
959-98-8-----	Endosulfan I	22	U
60-57-1-----	Dieldrin	45	U
72-55-9-----	4,4'-DDE	45	U
72-20-8-----	Endrin	45	U
33213-65-9-----	Endosulfan II	45	U
72-54-8-----	4,4'-DDD	45	U
1031-07-8-----	Endosulfan sulfate	45	U
50-29-3-----	4,4'-DDT	45	U
72-43-5-----	Methoxychlor	220	U
53494-70-5-----	Endrin ketone	45	U
5103-71-9-----	alpha-Chlordane	220	U
5103-74-2-----	gamma-Chlordane	220	U
8001-35-2-----	Toxaphene	450	U
12674-11-2-----	Aroclor-1016	220	U
11104-28-2-----	Aroclor-1221	220	U
11141-16-5-----	Aroclor-1232	220	U
53469-21-9-----	Aroclor-1242	220	U
12672-29-6-----	Aroclor-1248	220	U
11097-69-1-----	Aroclor-1254	450	U
11096-82-5-----	Aroclor-1260	450	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-EBG-03

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-7

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

Moisture: not dec. 15 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 50

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	460	U
319-85-7	beta-BHC	460	U
319-86-8	delta-BHC	460	U
58-89-9	gamma-BHC (Lindane)	460	U
76-44-8	Heptachlor	460	U
309-00-2	Aldrin	460	U
1024-57-3	Heptachlor epoxide	460	U
959-98-8	Endosulfan I	460	U
60-57-1	Dieldrin	910	U
72-55-9	4,4'-DDE	910	U
72-20-8	Endrin	910	U
33213-65-9	Endosulfan II	910	U
72-54-8	4,4'-DDD	910	U
1031-07-8	Endosulfan sulfate	910	U
50-29-3	4,4'-DDT	910	U
72-43-5	Methoxychlor	4600	U
53494-70-5	Endrin ketone	910	U
5103-71-9	alpha-Chlordane	4600	U
5103-74-2	gamma-Chlordane	4600	U
8001-35-2	Toxaphene	9100	U
12674-11-2	Aroclor-1016	4600	U
11104-28-2	Aroclor-1221	4600	U
11141-16-5	Aroclor-1232	4600	U
53469-21-9	Aroclor-1242	4600	U
12672-29-6	Aroclor-1248	4600	U
11097-69-1	Aroclor-1254	9100	U
11096-82-5	Aroclor-1260	9100	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-EPC-03

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-8

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 10 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	120	U
319-85-7	beta-BHC	120	U
319-86-8	delta-BHC	120	U
58-89-9	gamma-BHC (Lindane)	120	U
76-44-8	Heptachlor	120	U
309-00-2	Aldrin	120	U
1024-57-3	Heptachlor epoxide	120	U
959-98-8	Endosulfan I	120	U
60-57-1	Dieldrin	240	U
72-55-9	4,4'-DDE	240	U
72-20-8	Endrin	240	U
33213-65-9	Endosulfan II	240	U
72-54-8	4,4'-DDD	240	U
1031-07-8	Endosulfan sulfate	240	U
50-29-3	4,4'-DDT	240	U
72-43-5	Methoxychlor	1200	U
53494-70-5	Endrin ketone	240	U
5103-71-9	alpha-Chlordane	1200	U
5103-74-2	gamma-Chlordane	1200	U
8001-35-2	Toxaphene	2400	U
12674-11-2	Aroclor-1016	1200	U
11104-28-2	Aroclor-1221	1200	U
11141-16-5	Aroclor-1232	1200	U
53469-21-9	Aroclor-1242	1200	U
12672-29-6	Aroclor-1248	1200	U
11097-69-1	Aroclor-1254	2400	U
11096-82-5	Aroclor-1260	2400	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-IBC-02

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-9

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

Moisture: not dec. 5 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

EPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 5.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	<u>Q</u>
319-84-6	alpha-BHC	41	U
319-85-7	beta-BHC	41	U
319-86-8	delta-BHC	41	U
58-89-9	gamma-BHC (Lindane)	41	U
76-44-8	Heptachlor	41	U
309-00-2	Aldrin	41	U
1024-57-3	Heptachlor epoxide	41	U
959-98-8	Endosulfan I	41	U
60-57-1	Dieldrin	82	U
72-55-9	4,4'-DDE	82	U
72-20-8	Endrin	82	U
33213-65-9	Endosulfan II	82	U
72-54-8	4,4'-DDD	82	U
1031-07-8	Endosulfan sulfate	82	U
50-29-3	4,4'-DDT	82	U
72-43-5	Methoxychlor	410	U
53494-70-5	Endrin ketone	82	U
5103-71-9	alpha-Chlordane	410	U
5103-74-2	gamma-Chlordane	410	U
8001-35-2	Toxaphene	820	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	410	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	820	U
11096-82-5	Aroclor-1260	820	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-EXS-05

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-10

Sample wt/vol: 31.1 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 10 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 10

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	86	U
319-85-7-----	beta-BHC	86	U
319-86-8-----	delta-BHC	86	U
58-89-9-----	gamma-BHC (Lindane)	86	U
76-44-8-----	Heptachlor	86	U
309-00-2-----	Aldrin	86	U
1024-57-3-----	Heptachlor epoxide	86	U
959-98-8-----	Endosulfan I	86	U
60-57-1-----	Dieldrin	170	U
72-55-9-----	4,4'-DDE	170	U
72-20-8-----	Endrin	170	U
33213-65-9-----	Endosulfan II	170	U
72-54-8-----	4,4'-DDD	170	U
1031-07-8-----	Endosulfan sulfate	170	U
50-29-3-----	4,4'-DDT	170	U
72-43-5-----	Methoxychlor	860	U
53494-70-5-----	Endrin ketone	170	U
5103-71-9-----	alpha-Chlordane	860	U
5103-74-2-----	gamma-Chlordane	860	U
8001-35-2-----	Toxaphene	1700	U
12674-11-2-----	Aroclor-1016	860	U
11104-28-2-----	Aroclor-1221	860	U
11141-16-5-----	Aroclor-1232	860	U
53469-21-9-----	Aroclor-1242	860	U
12672-29-6-----	Aroclor-1248	860	U
11097-69-1-----	Aroclor-1254	1700	U
11096-82-5-----	Aroclor-1260	1700	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-FIL-01

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-11

Sample wt/vol: 31.1 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 2 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 5.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	7.9	U
319-85-7	beta-BHC	7.9	U
319-86-8	delta-BHC	7.9	U
58-89-9	gamma-BHC (Lindane)	7.9	U
76-44-8	Heptachlor	7.9	U
309-00-2	Aldrin	7.9	U
1024-57-3	Heptachlor epoxide	7.9	U
959-98-8	Endosulfan I	7.9	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	79	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	79	U
5103-74-2	gamma-Chlordane	79	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	79	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	79	U
53469-21-9	Aroclor-1242	79	U
12672-29-6	Aroclor-1248	79	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-TRIP
BLANK

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 908-12

Sample wt/vol: 500 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. _____ dec. _____ Date Extracted: 09/16/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/04/88

EPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 0.50

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-Field
Blank

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 908-13

Sample wt/vol: 500 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. _____ dec. _____ Date Extracted: 09/16/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 0.50

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
5103-71-9-----	alpha-Chlordane	0.50	U
5103-74-2-----	gamma-Chlordane	0.50	U
8001-35-2-----	Toxaphene	1.0	U
12674-11-2-----	Aroclor-1016	0.50	U
11104-28-2-----	Aroclor-1221	0.50	U
11141-16-5-----	Aroclor-1232	0.50	U
53469-21-9-----	Aroclor-1242	0.50	U
12672-29-6-----	Aroclor-1248	0.50	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-~~EBC~~-03MS

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-14MS

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

% Moisture: not dec. 15 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	130	U
319-85-7	beta-BHC	130	U
319-86-8	delta-BHC	130	U
58-89-9	gamma-BHC (Lindane)	130	U
76-44-8	Heptachlor	130	U
309-00-2	Aldrin	130	U
1024-57-3	Heptachlor epoxide	130	U
959-98-8	Endosulfan I	130	U
60-57-1	Dieldrin	250	U
72-55-9	4,4'-DDE	250	U
72-20-8	Endrin	250	U
33213-65-9	Endosulfan II	250	U
72-54-8	4,4'-DDD	250	U
1031-07-8	Endosulfan sulfate	250	U
50-29-3	4,4'-DDT	250	U
72-43-5	Methoxychlor	1300	U
53494-70-5	Endrin ketone	250	U
5103-71-9	alpha-Chlordane	1300	U
5103-74-2	gamma-Chlordane	1300	U
8001-35-2	Toxaphene	2500	U
12674-11-2	Aroclor-1016	1300	U
11104-28-2	Aroclor-1221	1300	U
11141-16-5	Aroclor-1232	1300	U
53469-21-9	Aroclor-1242	1300	U
12672-29-6	Aroclor-1248	1300	U
11097-69-1	Aroclor-1254	2500	U
11096-82-5	Aroclor-1260	2500	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEC-PH-~~EBC~~-03MSD

Lab Name: ENSECO - ERCO Contract: _____

Lab Code: ENSECO Case No.: 908 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 908-15MSD

Sample wt/vol: 29.8 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/14/88

Moisture: not dec. 15 dec. _____ Date Extracted: 09/22/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/04/88

EPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 14

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	130	U
319-85-7-----	beta-BHC	130	U
319-86-8-----	delta-BHC	130	U
58-89-9-----	gamma-BHC (Lindane)	130	U
76-44-8-----	Heptachlor	130	U
309-00-2-----	Aldrin	130	U
1024-57-3-----	Heptachlor epoxide	130	U
959-98-8-----	Endosulfan I	130	U
60-57-1-----	Dieldrin	260	U
72-55-9-----	4,4'-DDE	260	U
72-20-8-----	Endrin	260	U
33213-65-9-----	Endosulfan II	260	U
72-54-8-----	4,4'-DDD	260	U
1031-07-8-----	Endosulfan sulfate	260	U
50-29-3-----	4,4'-DDT	260	U
72-43-5-----	Methoxychlor	1300	U
53494-70-5-----	Endrin ketone	260	U
5103-71-9-----	alpha-Chlordane	1300	U
5103-74-2-----	gamma-Chlordane	1300	U
8001-35-2-----	Toxaphene	2600	U
12674-11-2-----	Aroclor-1016	1300	U
11104-28-2-----	Aroclor-1221	1300	U
11141-16-5-----	Aroclor-1232	1300	U
53469-21-9-----	Aroclor-1242	1300	U
12672-29-6-----	Aroclor-1248	1300	U
11097-69-1-----	Aroclor-1254	2600	U
11096-82-5-----	Aroclor-1260	2600	U

00002

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966801

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908

Matrix (soil/water): SOIL

Client Sample ID: CECPHEBA01

Level (low/med): LOW

Date Received: 09/16/88

% Solids: 85.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.8	U		P
7440-38-2	Arsenic	14.7		S	F
7440-39-3	Barium				
7440-41-7	Beryllium	0.31	B		P
7440-43-9	Cadmium	1.2			P
7440-70-2	Calcium				
7440-47-3	Chromium	8.3			P
7440-48-4	Cobalt				
7440-50-8	Copper	34.0		*N	P
7439-89-6	Iron				
7439-92-1	Lead	106		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	3.6	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.23	U	N	F
7440-22-4	Silver	0.94	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.47	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	234			P
	Cyanide				

Color Before: BROWN
Color After: BROWN

Clarity Before: _____
Clarity After: _____

Texture: COARSE
Artifacts: _____

Comments:

00003

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966802

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHEBC02Level (low/med): LOWDate Received: 09/16/88% Solids: 88.6Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum		-		
7440-36-0	Antimony	6.5	U		P
7440-38-2	Arsenic	9.5	-		F
7440-39-3	Barium		-		
7440-41-7	Beryllium	0.30	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium		-		
7440-47-3	Chromium	7.0	-		P
7440-48-4	Cobalt		-		
7440-50-8	Copper	26.6	-	*N	P
7439-89-6	Iron		-		
7439-92-1	Lead	142	-	N	P
7439-95-4	Magnesium		-		
7439-96-5	Manganese		-		
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	7.0	B		P
7440-09-7	Potassium		-		
7482-49-2	Selenium	0.23	U	N	F
7440-22-4	Silver	0.90	U		P
7440-23-5	Sodium		-		
7440-28-0	Thallium	0.45	U		F
7440-62-2	Vanadium		-		
7440-66-6	Zinc	128	-		P
	Cyanide		-		

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00004

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966803

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHEPC01Level (low/med): LOWDate Received: 09/16/88Solids: 90.5Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.4	U		P
7440-38-2	Arsenic	7.7			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	6.9			P
7440-48-4	Cobalt				
7440-50-8	Copper	25.8		*N	P
7439-89-6	Iron				
7439-92-1	Lead	79.2		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	6.8	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.22	B	N	F
7440-22-4	Silver	0.88	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.44	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	62.2			P
	Cyanide				

Color Before: BROWN
Color After: BROWN

Clarity Before: _____
Clarity After: _____

Texture: COARSE
Artifacts: _____

Comments:

00005

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966804

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHEPC02Level (low/med): LOWDate Received: 09/16/88% Solids: 93.1Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum		-		
7440-36-0	Antimony	8.7	B		P
7440-38-2	Arsenic	6.2	-		F
7440-39-3	Barium		-		
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	1.2	-		P
7440-70-2	Calcium		-		
7440-47-3	Chromium	6.2	-		P
7440-48-4	Cobalt		-		
7440-50-8	Copper	27.3	-	*N	P
7439-89-6	Iron		-		
7439-92-1	Lead	145	-	N	P
7439-95-4	Magnesium		-		
7439-96-5	Manganese		-		
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	4.8	B		P
7440-09-7	Potassium		-		
7482-49-2	Selenium	0.21	U	N	F
7440-22-4	Silver	0.86	U		P
7440-23-5	Sodium		-		
7440-28-0	Thallium	0.43	U		F
7440-62-2	Vanadium		-		
7440-66-6	Zinc	64.2	-		P
	Cyanide		-		

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00006

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966805

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHIBC01Level (low/med): LOWDate Received: 09/16/88% Solids: 93.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.2	U		P
7440-38-2	Arsenic	3.3			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	11.1			P
7440-48-4	Cobalt				
7440-50-8	Copper	37.2		*N	P
7439-89-6	Iron				
7439-92-1	Lead	219		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	9.3			P
7440-09-7	Potassium				
7482-49-2	Selenium	0.22	U	N	F
7440-22-4	Silver	0.86	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.43	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	114			P
	Cyanide				

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00007

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966806

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHXBC01Level (low/med): LOWDate Received: 09/16/88% Solids: 93.4Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.2	U		P
7440-38-2	Arsenic	5.5			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	4.8			P
7440-48-4	Cobalt				
7440-50-8	Copper	17.1		*N	P
7439-89-6	Iron				
7439-92-1	Lead	78.2		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	5.1	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.21	U	N	F
7440-22-4	Silver	0.86	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.43	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	43.7			P
	Cyanide				

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00008

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966807

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHEBC03Level (low/med): LOWDate Received: 09/16/88Solids: 84.4Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.9	U		P
7440-38-2	Arsenic	23.7		S	F
7440-39-3	Barium				
7440-41-7	Beryllium	0.31	B		P
7440-43-9	Cadmium	1.5			P
7440-70-2	Calcium				
7440-47-3	Chromium	8.9			P
7440-48-4	Cobalt				
7440-50-8	Copper	27.4		*N	P
7439-89-6	Iron				
7439-92-1	Lead	166		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	5.5	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.24	U	N	F
7440-22-4	Silver	0.95	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.47	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	548			P
	Cyanide				

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00009

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966808

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHEPC03Level (low/med): LOWDate Received: 09/16/88% Solids: 87.8Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	10.1	B		P
7440-38-2	Arsenic	9.7			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.45	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	8.5			P
7440-48-4	Cobalt				
7440-50-8	Copper	40.2		*N	P
7439-89-6	Iron				
7439-92-1	Lead	104		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	8.0	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.46	B	N	F
7440-22-4	Silver	0.91	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.46	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	70.5			P
	Cyanide				

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____

Comments:

00010

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966809

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHIBC02Level (low/med): LOWDate Received: 09/16/88% Solids: 92.5Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.3	U		P
7440-38-2	Arsenic	3.1			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	9.6			P
7440-48-4	Cobalt				
7440-50-8	Copper	56.2		*N	P
7439-89-6	Iron				
7439-92-1	Lead	165		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	12.4			P
7440-09-7	Potassium				
7482-49-2	Selenium	0.22	U	N	F
7440-22-4	Silver	0.86	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.43	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	137			P
	Cyanide				

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00011

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966810

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHEXS05Level (low/med): LOWDate Received: 09/16/88% Solids: 89.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	6.5	U		P
7440-38-2	Arsenic	9.0			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	7.5			P
7440-48-4	Cobalt				
7440-50-8	Copper	26.9		*N	P
7439-89-6	Iron				
7439-92-1	Lead	142		N	P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	6.5	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.22	U	N	F
7440-22-4	Silver	0.89	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.44	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	89.7			P
	Cyanide				

Color Before: BROWN
Color After: BROWN

Clarity Before: _____
Clarity After: _____

Texture: COARSE
Artifacts: _____

Comments:

00012

LAB SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

5966811

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHFIL01Level (low/med): LOWDate Received: 09/16/88% Solids: 97.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony	5.9	U		P
7440-38-2	Arsenic	2.5			F
7440-39-3	Barium				
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	2.7			P
7440-48-4	Cobalt				
7440-50-8	Copper	6.5		*N	P
7439-89-6	Iron				
7439-92-1	Lead	2.7		S*	F
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	3.1	B		P
7440-09-7	Potassium				
7482-49-2	Selenium	0.20	U	N	F
7440-22-4	Silver	0.82	U		P
7440-23-5	Sodium				
7440-28-0	Thallium	0.41	U		F
7440-62-2	Vanadium				
7440-66-6	Zinc	15.3			P
	Cyanide				

Color Before: BROWN
Color After: BROWNClarity Before: _____
Clarity After: _____Texture: COARSE
Artifacts: _____Comments:

00013

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966812

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHTRIPBLevel (low/med): LOWDate Received: 09/16/88Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum		-		
7440-36-0	Antimony	5.8	U		P
7440-38-2	Arsenic	0.40	U		F
7440-39-3	Barium		-		
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium		-		
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt		-		
7440-50-8	Copper	2.6	B	*N	P
7439-89-6	Iron		-		
7439-92-1	Lead	0.50	B	W*	F
7439-95-4	Magnesium		-		
7439-96-5	Manganese		-		
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	1.8	U		P
7440-09-7	Potassium		-		
7482-49-2	Selenium	0.20	U	N	F
7440-22-4	Silver	0.80	U		P
7440-23-5	Sodium		-		
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium		-		
7440-66-6	Zinc	3.7	B		P
	Cyanide		-		

Color Before: COLORLESS
Color After: COLORLESSClarity Before: _____
Clarity After: _____Texture: CLEAR
Artifacts: _____

Comments:

SAMPLE IS A BLANK

00014

1
INORGANIC ANALYSIS DATA SHEET

LAB SAMPLE NO.

5966813

Lab Name: ROCKY MOUNTAIN ANALYTICAL Project No.: 908Matrix (soil/water): SOILClient Sample ID: CECPHFIELDLevel (low/med): LOWDate Received: 09/16/88% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum		—		
7440-36-0	Antimony	5.8	U		P
7440-38-2	Arsenic	0.40	U		F
7440-39-3	Barium		—		
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium		—		
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt		—		
7440-50-8	Copper	2.2	B	*N	P
7439-89-6	Iron		—		
7439-92-1	Lead	0.40	B	W*	F
7439-95-4	Magnesium		—		
7439-96-5	Manganese		—		
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	1.8	U		P
7440-09-7	Potassium		—		
7482-49-2	Selenium	0.20	U	N	F
7440-22-4	Silver	0.80	U		P
7440-23-5	Sodium		—		
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium		—		
7440-66-6	Zinc	3.2	B		P
	Cyanide		—		

Color Before: COLORLESS
Color After: COLORLESS

Clarity Before: _____
Clarity After: _____

Texture: CLEAR
Artifacts: _____

Comments:

SAMPLE IS A BLANK
