N60478.AR.001611
NWS EARLE
5090.3a

CONFIRMATORY SOIL SAMPLE RESULTS FOR SITE 19 NWS EARLE NJ
2/25/1998
FOSTER WHEELER ENVIRONMENTAL CORPORATION

Prepare in quintuplicate (original and 4 copies)

CONTRACTOR DRAWINGS & INFORMATION SUBMITTAL
NORTHNAVFACENGCOM 4335/3 (Rev. 6/80)

CONTROL NO. 6

CONTRACT NO.	DELIVERY ORDER	ACTIVITY LOCATION
N62472-94-D-0398	0017 Mod. #8	Naval Weapons Station Earle, Colts Neck, NJ

PROJECT TITLE:
PAINT CHIP AND SLUDGE DISPOSAL AREA

FROM:	DATE
Foster Wheeler Environmental Corp. - Program QCM: Akram Aziz	February 27, 1998
TO:	**DATE**
COTR: P. BRIEGEL (1 COPY)	February 27, 1998

1. THE CONTRACTOR SUBMITTALS LISTED BELOW ARE FORWARDED FOR YOUR REVIEW AND RECOMMENDATIONS.
   (a) APPLY APPROPRIATE STAMP IMPRINT TO EACH SUBMITTAL AND INDICATE REVIEW COMMENTS, AS REQUIRED.
   (b) RETAIN ONE (1) COPY OF THIS TRANSMITTAL FORM AND RETURN REMAINING COPIES WITH REVIEWED SUBMITTALS TO ROICC.
2. THESE SUBMITTALS SHOULD BE RETURNED TO THIS OFFICE BY _____
3. _____

COPY TO:

[x] ROICC T. DUNN (2 COPIES) [x] ENVIR. COORD G. Goepfert (1 copies) [x] NJDEP B. Marcolina (1 copy)

2/27/98
SIGNATURE AND DATE

FROM: DESIGNER	DATE
TO: ROICC	DATE

1. THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE RETURNED, WITH ACTION TAKEN AS INDICATED.
2. _____

COPY TO:

[ ] ROICC [ ] DESIGNER

SIGNATURE AND DATE

FROM: ROICC	DATE
TO: CONTRACTOR	DATE

1. THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE APPROVED/DISAPPROVED AS SHOWN BELOW AND ON EACH STAMP IMPRINT.

COPY TO:
[ ] ROICC [ ] OTHER

FOR COMMANDING OFFICER, NORTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND — DATE

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
6	SD-10, Test Reports	M. Heffron			
	Site 19 Confirmatory Soil Sample	for A. Aziz			
	Results				

Prepare in quintuplicate (original and 4 copies)

CONTRACTOR DRAWINGS & INFORMATION SUBMITTAL
NORTHNAVFACENGCOM 4335/3 (Rev. 6/80)

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SIGNATURE AND DATE 2/27/98

FROM: DESIGNER	DATE
TO: ROICC	DATE

1. THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE RETURNED, WITH ACTION TAKEN AS INDICATED.
2. _____

COPY TO:

[ ] ROICC [ ] DESIGNER

SIGNATURE AND DATE

FROM: ROICC	DATE
TO: CONTRACTOR	DATE

1. THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE APPROVED/DISAPPROVED AS SHOWN BELOW AND ON EACH STAMP IMPRINT.

COPY TO:

[ ] ROICC [ ] OTHER

FOR COMMANDING OFFICER, NORTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND — DATE

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
6	SD-10, Test Reports	M. Heffron			
	Site 19 Confirmatory Soil Sample	for A. Aziz			
	Results				

SITE 19 CONFIRMATORY SOIL SAMPLE RESULTS
NAVAL WEAPONS STATION - EARLE
COLTS NECK, NEW JERSEY

Issued:

February 25, 1998

Prepared for:

Naval Facilities Engineering Command
10 Industrial Highway
Lester, PA 19113

Prepared by:

Foster Wheeler Environmental Corporation
2300 Lincoln Highway
One Oxford Valley - Suite 200
Langhorne, PA 19047 - 1829

REMEDIAL ACTION CONTRACT N62472-94-D-0398
DELIVERY ORDER NO. 0017
MODIFICATION NO. 8

SITE 19 CONFIRMATORY SOIL SAMPLE RESULTS
NAVAL WEAPONS STATION - EARLE
COLTS NECK, NEW JERSEY

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ATTACHMENT 2: NJDEP GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS

1.0 INTRODUCTION

This report summarizes the analytical results of the confirmatory (post-excavation) soil samples obtained from Site 19 at the Navy Weapons Station-Earle facility in Colts Neck, New Jersey. Soil was excavated from the settling pond and drainage ditch, between February 17 and February 19, 1998. The settling pond was excavated to a depth of 2 feet below the original grade and the drainage ditch was excavated to a depth of 6 inches below the original grade. Confirmatory soil samples were collected on February 19, 1998.

2.0 CONFIRMATORY SOIL SAMPLE COLLECTION

A total of 16 confirmatory soil samples were collected from the excavated areas at Site 19, to determine if all of the impacted soils and sediments were removed during the excavation activities. A total of ten soil samples, spaced approximately 30 linear feet apart, were collected from the base of excavation sidewalls in the settling pond. Four soil samples were obtained from the bottom of the excavation. Since the pond was excavated on February 17, 1998, the volatile fraction of the confirmatory soil samples were obtained from 6 to 12 inches below grade, in accordance with N.J.A.C. 7:26E-6.4. The sediment samples in the drainage ditch were obtained from 0 to 6 inches below grade, since the confirmatory soil samples were collected the same day the area was excavated. All the soil samples were collected with decontaminated stainless steel trowels. Soil samples collected for laboratory analysis of volatiles were preserved with methanol, in accordance with NJDEP Guidelines. Figure 1 depicts the excavated areas and the locations of the confirmatory soil samples. Table 1 provides a description of the soil and sediments.

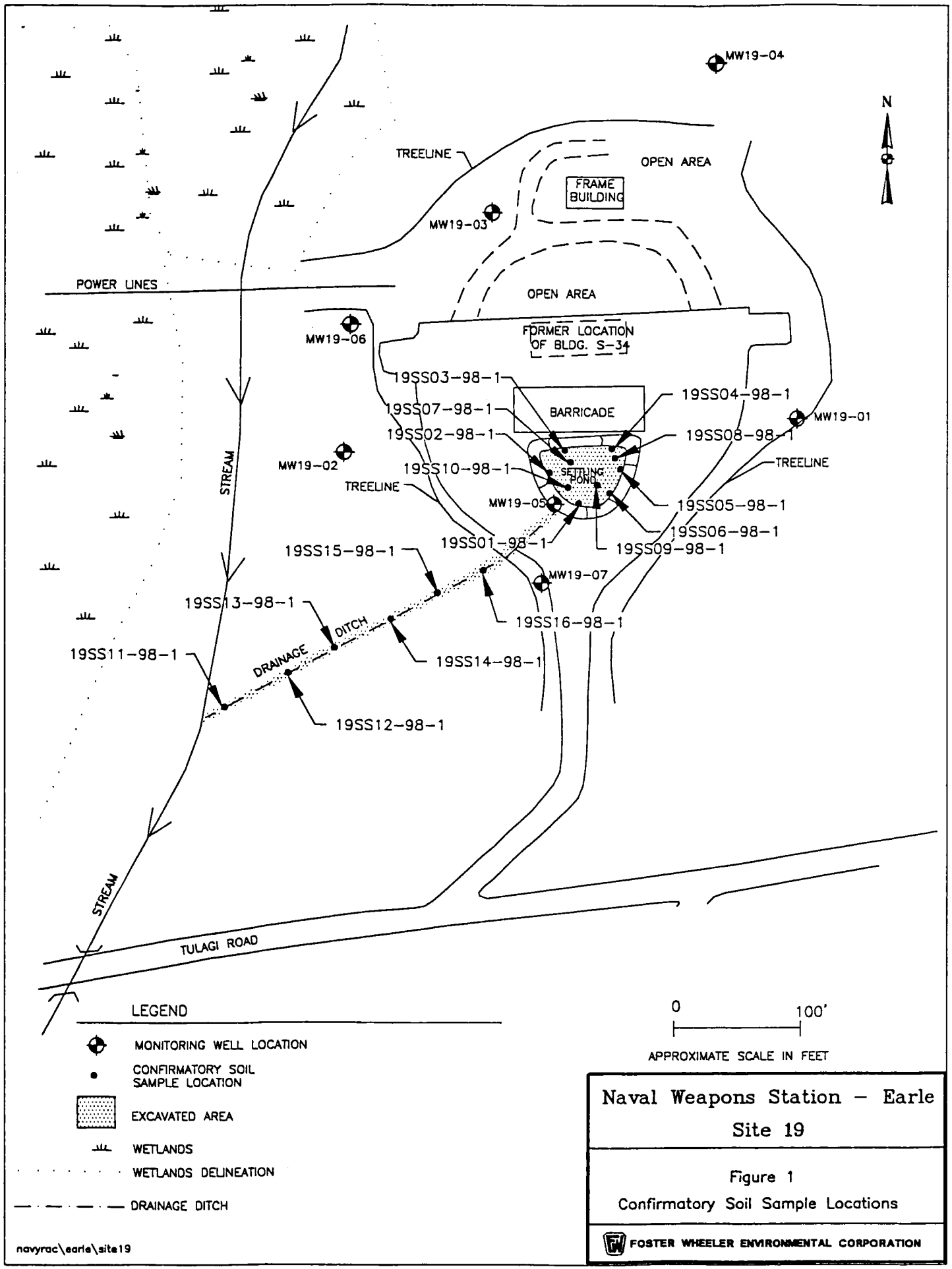
All soil samples were shipped via Federal Express to Accutest Laboratories in Dayton, New Jersey.

3.0 ANALYTICAL RESULTS

The soil and sediment samples were analyzed for Total Compound List (TCL) volatile organics, semi-volatile organics, and Total Analyte List (TAL) metals.

3.1 SETTLING POND

The soil samples from the settling pond were compared to NJDEP's Residential Direct Contact Soil Cleanup Criteria and the Impact to Groundwater Cleanup Criteria. Laboratory analyses of the confirmatory soil samples revealed that all volatile organics



Naval Weapons Station – Earle
Site 19

Figure 1
Confirmatory Soil Sample Locations

FOSTER WHEELER ENVIRONMENTAL CORPORATION

TABLE 1: DESCRIPTION OF CONFIRMATORY SOILS/SEDIMENTS

SAMPLE NO.	SAMPLE DESCRIPTION
19SS01-98-01	Light brown silty sand with trace clay and small pebbles.
19SS02-98-01	Light brown silty sand with trace clay and pebbles.
19SS03-98-01	Light brown fine sand with trace clay.
19SS04-98-01	Tan to gray silty sand with trace clay.
19SS05-98-01	Tan to gray silty sand with trace clay and pebbles.
19SS06-98-01	Tan with reddish brown silty sand and trace clay and pebbles.
19SS07-98-01	Tan to gray silty sand with trace clay and pebbles.
19SS08-98-01	Tan with reddish brown silty sand and trace clay and pebbles.
19SS09-98-01	Tan to gray silty sand with trace clay and pebbles.
19SS10-98-01	Tan to gray silty sand with trace clay and pebbles
19SS11-98-01	Gray, wet, fine sand and silt.
19SS12-98-01	Gray, wet, fine sand and silt.
19SS13-98-01	Gray, wet, fine sand and silt.
19SS14-98-01	Gray, wet, fine sand and silt.
19SS15-98-01	Gray, wet, fine sand and silt.
19SS16-98-01	Gray, wet, fine sand and silt.

were below the detection limits. Table 2 presents the semi-volatile compounds detected, the range detected in the sedimentation pond, and the NJDEP cleanup criteria. Although several semi-volatile organics were detected in the soil samples, the concentrations were below the NJDEP Impact to Groundwater criteria and the Residential Cleanup criteria. Laboratory analyses of TAL metals revealed all but one soil sample from the sedimentation pond exhibited concentrations of metals below the NJDEP cleanup criteria. One soil sample (19SS09-98-01) had concentrations of lead (650 mg/kg) and zinc (1,970 mg/kg) above the NJDEP Residential Cleanup Criteria for lead (400 mg/kg) and zinc (1,500 mg/kg). Sample 19SS09-98-01 was a bottom sample obtained on the southern corner of the sedimentation pond.

3.2 DRAINAGE DITCH

A total of six confirmatory sediment samples were obtained from the drainage ditch leading from the settling pond. As requested by the NJDEP Case Manager, the confirmatory soil samples were compared to the NJDEP Guidance for Sediment Quality Evaluations, dated March 1991 (Attachment 2). There are two sets of Sediment Quality Criteria: the Effects Range-Low (ER-L) and the Effects Range-Median (ER-M). The ER-L value is the concentration above which adverse effects were frequently observed or predicted among sensitive life stages and/or species; the ER-M value is the concentration above which effects were frequently or always observed or predicted among most species.

TABLE 2: SEMIVOLATILE COMPOUNDS DETECTED IN THE SEDIMENTATION POND

Compound	Range of Concentrations	NJDEP Residential Direct Contact Soil Cleanup Criteria	NJDEP Impact to Groundwater Soil Cleanup Criteria
Benzo(a)anthracene	ND--0.0306 mg/kg	0.9 mg/kg	500 mg/kg
Benzo(a)pyrene	ND--0.0294 mg/kg	0.66 mg/kg	100 mg/kg
Benzo(b)fluoanthrene	ND--0.036 mg/kg	0.9 mg/kg	50 mg/kg
Butylbenzyl phthalate	ND--0.0195 mg/kg	1,100 mg/kg	100 mg/kg
Chrysene	ND--0.0428 mg/kg	9 mg/kg	500 mg/kg
Bis(2-ethylhexyl) phthalate	ND--0.0195 mg/kg	49 mg/kg	100 mg/kg
Fluoranthene	ND--0.0677 mg/kg	2,300 mg/kg	100 mg/kg
Pyrene	ND--0.0676 mg/kg	1,700 mg/kg	100 mg/kg
Phenanthrene	ND--0.0395 mg/kg	N/A	N/A

ND = Non Detected
N/A = Non-applicable. No NJDEP cleanup criteria established

The drainage ditch is not classified as a stream, and there was no standing water in the drainage ditch prior to or during the excavation. Since the drainage ditch is not a stream and therefore would not contain any aquatic organisms, the ER-M Criteria were used to evaluate the need for additional excavations.

Laboratory analyses of the sediments from the drainage ditch revealed that all volatile organics were below the detection limits. Several semi-volatile organics were detected, but the concentrations were well below the NJDEP ER-M Sediment Criteria. Table 3 presents the semi-volatile compounds detected, the range detected in the drainage ditch, and the NJDEP ER-M Sediment Criteria.

TABLE 3: SEMIVOLATILE COMPOUNDS DETECTED IN THE DRAINAGE DITCH

Compound	Range of Concentrations	NJDEP Effects Range Medium (ER-M) Concentration
Acenaphthylene	ND--13.6 ug/kg	650 ug/kg
Anthracene	ND--13.6 ug/kg	960 ug/kg
Benzo(a)anthracene	ND--111 ug/kg	650 ug/kg
Benzo(a)pyrene	ND--121 ug/kg	2,500 ug/kg
Benzo(g,h,i)perylene	ND--57.3 ug/kg	N/A
Benzo(b)fluoanthrene	ND--155 ug/kg	N/A
Chrysene	ND--160 ug/kg	2,800 ug/kg
Fluoranthene	ND--358 ug/kg	3,600 ug/kg
Indeno(1,2,3-cd)pyrene	ND--52.1 ug/kg	N/A
Naphthalene	ND--ND--49.2 ug/kg	2,100 ug/kg
2-Methylnaphthalene	ND--38.2 ug/kg	670 ug/kg
Pyrene	ND--0.0676 ug/kg	2,200 ug/kg
Phenanthrene	ND--0.0395 ug/kg	1,380 ug/kg

ND = Non Detected
N/A = Non-applicable. No NJDEP ER-M criteria established

The laboratory analysis of TAL metals revealed all but two soil samples from the drainage ditch contained concentrations of metals below the NJDEP ER-M Concentration. Sediment sample 19SS12-98-01 contained a concentration of lead (155 mg/kg) above the NJDEP ER-M Concentration for lead (110 mg/kg). Sediment sample 19SS16-98-01 contained concentrations of lead (288 mg/kg) and zinc (633 mg/kg) above the NJDEP ER-M Concentrations for lead (110 mg/kg) and zinc (270 mg/kg).

4.0 CONCLUSIONS

Based on the analytical results of the confirmatory (post-excavation) soil sampling conducted after the excavation activities at Site 19, additional excavation of soils may be required in the southeast corner of the settling pond and in the drainage ditch. Since no volatile or semi-volatile compounds were detected at concentrations above the established cleanup criteria, the confirmatory soil/sediment samples taken after the additional excavation activities shall be analyzed for TAL metals only.

ATTACHMENT 1

TOXIKON
15 Wiggins Ave., Bedford, MA 01730
Telephone: (781) 275-3330
Fax: (781) 275-7478

CHAIN OF CUSTODY RECORD

WORK ORDER #: ____-____-____

DUE DATE : ____-____-____

COMPANY: [illegible]
ADDRESS: [illegible]
PHONE #: (215) [illegible] FAX #: ( )
P.O. #:
PROJECT MANAGER: [illegible]
PROJECT ID/LOCATION: [illegible]

SAMPLE TYPE	CONTAINER TYPE
1. WASTEWATER	P - PLASTIC
2. SOIL	G - GLASS
3. SLUDGE	V - VOA
4. OIL	
5. DRINKING WATER	
6. WATER (GW/MW/SW)	
7. OTHER (SPECIFY	

ANALYSES

TOXIKON #	SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER SIZE	CONTAINER TYPE	CONTAINER #	SAMPLING DATE	SAMPLING TIME	PRESERVATIVE	TCL VOAs	TCL S-VOAs	TAL METALS										SPECIAL INSTRUCTIONS/ COMMENTS
	[illegible]01[illegible]-1	2	[illegible]	G	2	2.19.98	1139	[illegible] 4°C	X	X	X										
	195502-98-1						1140		X	X	X										
	195503-98-1						1215		X	X	X										
	195504-98-1						1223		X	X	X										
	195505-98-1						1235		X	X	X										
	195506-98-1						1244		X	X	X										
	195507-98-1						1200		X	X	X										
	195508-98-1						1306		X	X	X										
	195509-98-1						1313		X	X	X										
	195510-98-1						1336	MW	X	X	X										
	195511-98-1						1338		X	X	X										
	195512-98-1						1356		X	X	X										
	195513-98-1						1358		X	X	X										

SAMPLED BY: [illegible]	DATE: [illegible] - [illegible] - [illegible]	QUOTATION #:	
	TIME: [illegible] - [illegible] -		
RELINQUISHED BY: [signature]	DATE: - -	RECEIVED BY:	DATE: - -
	TIME: - -		TIME: - -
RELINQUISHED BY:	DATE: - -	RECEIVED FOR LAB BY:	DATE: - -
	TIME: - -		TIME: - -
METHOD OF SHIPMENT		COOLER TEMPERATURE	

☐ RUSH ..... BUSINESS DAY TURN AROUND
☐ ROUTINE

Sample disposal information
Are there any other known or suspected contaminants in these samples other than those listed above?
Yes No If Yes, 1st Known

TOXIKON
15 Wiggins Ave., Bedford, MA 01730
Telephone: (781) 275-3330
Fax: (781) 275-7478

CHAIN OF CUSTODY RECORD

WORK ORDER #: 10 201 C

DUE DATE : ___-___-___

COMPANY: [illegible]NC
ADDRESS:
PHONE #: (215) [illegible] FAX #: ( )
P.O. #:
PROJECT MANAGER: [illegible]
PROJECT ID/LOCATION: [illegible]

SAMPLE TYPE	CONTAINER TYPE
1. WASTEWATER	P - PLASTIC
2. SOIL	G - GLASS
3. SLUDGE	V - VOA
4. OIL	
5. DRINKING WATER	
6. WATER (GW/MW/SW)	
7. OTHER (SPECIFY	

ANALYSES

TOXIKON #	SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER SIZE	CONTAINER TYPE	CONTAINER #	SAMPLING DATE	SAMPLING TIME	PRESERVATIVE	TCL VOAS	TCL-SVOAS	TAL METALS										SPECIAL INSTRUCTIONS COMMENTS
	MSS14 98-1	2	-	G/V	2	2.5.98	1414		X	X	X										
	MSS15 98-1	↓	↓	↓	↓	↓	1401		X	X	X										
	MSS16 98-1	↓	↓	↓	↓	↓	1415		X	X	X										
	MRB01 98-1	BLK	↓	↓	6	[illegible]	1430		X	X	X										
	TRIP BLK	BLK	V	V	1	↓	—		X												

SAMPLED BY: [signature]	DATE: - -	QUOTATION #:	
	TIME: - -		
RELINQUISHED BY: [signature]	DATE: - -	RECEIVED BY:	DATE: - -
	TIME: - -		TIME: - -
RELINQUISHED BY:	DATE: - -	RECEIVED FOR LAB BY:	DATE: - -
	TIME: - -		TIME: - -
METHOD OF SHIPMENT		COOLER TEMPERATURE	

☐ RUSH ..... BUSINESS DAY TURN AROUND
☐ ROUTINE

Sample disposal information
Are there any other known or suspected contaminants in these samples other than those listed above?

Report of Analysis

Client Sample ID:	195501-98-1		
Lab Sample ID:	E31183-1	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	88.9
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	5150	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<6.7	6.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	2.3	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<22	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.56	0.56	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.56	0.56	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	14.6	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.6	5.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	2.9	2.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	4300	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	13.1	1.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.5	4.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	10.5	5.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	4.9	2.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195501-98-1		
Lab Sample ID:	E31183-1	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12278.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	370	ug/kg	
95-57-8	2-Chlorophenol	ND	75	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	56	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	64	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	370	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	30	ug/kg	
95-48-7	2-Methylphenol	ND	100	ug/kg	
	3&4-Methylphenol	ND	210	ug/kg	
88-75-5	2-Nitrophenol	ND	67	ug/kg	
100-02-7	4-Nitrophenol	ND	90	ug/kg	
87-86-5	Pentachlorophenol	ND	64	ug/kg	
108-95-2	Phenol	ND	78	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	37	ug/kg	
83-32-9	Acenaphthene	ND	26	ug/kg	
208-96-8	Acenaphthylene	ND	34	ug/kg	
120-12-7	Anthracene	ND	15	ug/kg	
56-55-3	Benzo(a)anthracene	18.0	16	ug/kg	
50-32-8	Benzo(a)pyrene	27.6	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	29.5	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	29.1	27	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	23	ug/kg	
85-68-7	Butyl benzyl phthalate	19.5	24	ug/kg	J
100-51-6	Benzyl Alcohol	ND	86	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	ug/kg	
106-47-8	4-Chloroaniline	ND	200	ug/kg	
86-74-8	Carbazole	ND	190	ug/kg	
218-01-9	Chrysene	28.1	24	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	71	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	60	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	75	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	78	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	82	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195501-98-1		
Lab Sample ID:	E31183-1	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12278.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	78	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	19	ug/kg	
132-64-9	Dibenzofuran	ND	22	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	37	ug/kg	
84-66-2	Diethyl phthalate	ND	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	19.5	37	ug/kg	J
206-44-0	Fluoranthene	28.0	19	ug/kg	
86-73-7	Fluorene	ND	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	82	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	86	ug/kg	
67-72-1	Hexachloroethane	ND	82	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	ug/kg	
78-59-1	Isophorone	ND	60	ug/kg	
91-57-6	2-Methylnaphthalene	ND	71	ug/kg	
88-74-4	2-Nitroaniline	ND	19	ug/kg	
99-09-2	3-Nitroaniline	ND	26	ug/kg	
100-01-6	4-Nitroaniline	ND	23	ug/kg	
91-20-3	Naphthalene	ND	75	ug/kg	
98-95-3	Nitrobenzene	ND	97	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	71	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	19	ug/kg	
85-01-8	Phenanthrene	ND	11	ug/kg	
129-00-0	Pyrene	34.8	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	82	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	71%		25-121%
4165-62-2	Phenol-d5	82%		24-113%
118-79-6	2,4,6-Tribromophenol	89%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195501-98-1		
Lab Sample ID:	E31183-1	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12278.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		23-120%
321-60-8	2-Fluorobiphenyl	72%		30-115%
1718-51-0	Terphenyl-d14	79%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195501-98-1		
Lab Sample ID:	E31183-1	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	88.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7344.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	680	ug/kg	
71-43-2	Benzene	ND	140	ug/kg	
75-27-4	Bromodichloromethane	ND	100	ug/kg	
75-25-2	Bromoform	ND	74	ug/kg	
74-83-9	Bromomethane	ND	160	ug/kg	
78-93-3	2-Butanone (MEK)	ND	680	ug/kg	
75-15-0	Carbon disulfide	ND	150	ug/kg	
56-23-5	Carbon tetrachloride	ND	290	ug/kg	
108-90-7	Chlorobenzene	ND	150	ug/kg	
75-00-3	Chloroethane	ND	150	ug/kg	
67-66-3	Chloroform	ND	100	ug/kg	
74-87-3	Chloromethane	ND	180	ug/kg	
124-48-1	Dibromochloromethane	ND	100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	ug/kg	
107-06-2	1,2-Dichloroethane	ND	89	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	110	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	160	ug/kg	
78-87-5	1,2-Dichloropropane	ND	160	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	150	ug/kg	
100-41-4	Ethylbenzene	ND	150	ug/kg	
591-78-6	2-Hexanone	ND	180	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	720	ug/kg	
75-09-2	Methylene chloride	ND	59	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	97	ug/kg	
127-18-4	Tetrachloroethene	ND	120	ug/kg	
108-88-3	Toluene	ND	120	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	130	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	110	ug/kg	
79-01-6	Trichloroethene	ND	190	ug/kg	
75-01-4	Vinyl chloride	ND	130	ug/kg	
1330-20-7	Xylene (total)	ND	130	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195501-98-1		
Lab Sample ID:	E31183-1	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	88.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7344.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-120%
2037-26-5	Toluene-D8	99%		81-117%
460-00-4	4-Bromofluorobenzene	88%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195502-98-1		
Lab Sample ID:	E31183-2	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	85.9
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	5270	23	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<7.0	7.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	3.4	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<23	23	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.58	0.58	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.58	0.58	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<580	580	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	17.7	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.8	5.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	8.2	2.9	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	7060	12	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<12	12	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<580	580	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	15.6	1.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.6	4.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	627	580	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<12	12	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.2	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<580	580	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.2	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	12.2	5.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	4.5	2.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195502-98-1		
Lab Sample ID:	E31183-2	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	85.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12279.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	380	ug/kg	
95-57-8	2-Chlorophenol	ND	77	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	58	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	380	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	31	ug/kg	
95-48-7	2-Methylphenol	ND	110	ug/kg	
	3&4-Methylphenol	ND	220	ug/kg	
88-75-5	2-Nitrophenol	ND	69	ug/kg	
100-02-7	4-Nitrophenol	ND	92	ug/kg	
87-86-5	Pentachlorophenol	ND	65	ug/kg	
108-95-2	Phenol	ND	81	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	46	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	38	ug/kg	
83-32-9	Acenaphthene	ND	27	ug/kg	
208-96-8	Acenaphthylene	ND	35	ug/kg	
120-12-7	Anthracene	ND	15	ug/kg	
56-55-3	Benzo(a)anthracene	30.6	16	ug/kg	
50-32-8	Benzo(a)pyrene	29.4	25	ug/kg	
205-99-2	Benzo(b)fluoranthene	25.0	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	36.0	28	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	24	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	25	ug/kg	
100-51-6	Benzyl Alcohol	ND	88	ug/kg	
91-58-7	2-Chloronaphthalene	ND	69	ug/kg	
106-47-8	4-Chloroaniline	ND	210	ug/kg	
86-74-8	Carbazole	ND	190	ug/kg	
218-01-9	Chrysene	42.8	25	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	73	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	62	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	77	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	81	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	85	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195502-98-1		
Lab Sample ID:	E31183-2	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	85.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12279.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	81	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	42	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	19	ug/kg	
132-64-9	Dibenzofuran	ND	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	38	ug/kg	
84-66-2	Diethyl phthalate	ND	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	38	ug/kg	
206-44-0	Fluoranthene	67.7	19	ug/kg	
86-73-7	Fluorene	ND	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	85	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	88	ug/kg	
67-72-1	Hexachloroethane	ND	85	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	ug/kg	
78-59-1	Isophorone	ND	62	ug/kg	
91-57-6	2-Methylnaphthalene	ND	73	ug/kg	
88-74-4	2-Nitroaniline	ND	19	ug/kg	
99-09-2	3-Nitroaniline	ND	27	ug/kg	
100-01-6	4-Nitroaniline	ND	23	ug/kg	
91-20-3	Naphthalene	ND	77	ug/kg	
98-95-3	Nitrobenzene	ND	100	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	73	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	19	ug/kg	
85-01-8	Phenanthrene	39.5	12	ug/kg	
129-00-0	Pyrene	67.6	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	85	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	68%		25-121%
4165-62-2	Phenol-d5	78%		24-113%
118-79-6	2,4,6-Tribromophenol	81%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195502-98-1		
Lab Sample ID:	E31183-2	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	85.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12279.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		23-120%
321-60-8	2-Fluorobiphenyl	66%		30-115%
1718-51-0	Terphenyl-d14	72%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195502-98-1		
Lab Sample ID:	E31183-2	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	85.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7345.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	710	ug/kg	
71-43-2	Benzene	ND	140	ug/kg	
75-27-4	Bromodichloromethane	ND	110	ug/kg	
75-25-2	Bromoform	ND	77	ug/kg	
74-83-9	Bromomethane	ND	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	710	ug/kg	
75-15-0	Carbon disulfide	ND	160	ug/kg	
56-23-5	Carbon tetrachloride	ND	300	ug/kg	
108-90-7	Chlorobenzene	ND	160	ug/kg	
75-00-3	Chloroethane	ND	160	ug/kg	
67-66-3	Chloroform	ND	100	ug/kg	
74-87-3	Chloromethane	ND	180	ug/kg	
124-48-1	Dibromochloromethane	ND	100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	ug/kg	
107-06-2	1,2-Dichloroethane	ND	93	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	120	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	170	ug/kg	
78-87-5	1,2-Dichloropropane	ND	170	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	140	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	160	ug/kg	
100-41-4	Ethylbenzene	ND	160	ug/kg	
591-78-6	2-Hexanone	ND	180	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	760	ug/kg	
75-09-2	Methylene chloride	ND	61	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	ug/kg	
127-18-4	Tetrachloroethene	ND	130	ug/kg	
108-88-3	Toluene	ND	130	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	140	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	110	ug/kg	
79-01-6	Trichloroethene	ND	200	ug/kg	
75-01-4	Vinyl chloride	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195502-98-1		
Lab Sample ID:	E31183-2	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	85.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7345.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-120%
2037-26-5	Toluene-D8	96%		81-117%
460-00-4	4-Bromofluorobenzene	83%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195503-98-1		
Lab Sample ID:	E31183-3	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	90.8
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2660	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<6.6	6.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.4	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<22	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.55	0.55	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.55	0.55	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<550	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	7.9	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.5	5.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	<2.8	2.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	1980	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<550	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	8.3	1.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.4	4.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<550	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<550	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	<5.5	5.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	<2.2	2.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195503-98-1		
Lab Sample ID:	E31183-3	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	90.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7346.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	660	ug/kg	
71-43-2	Benzene	ND	130	ug/kg	
75-27-4	Bromodichloromethane	ND	100	ug/kg	
75-25-2	Bromoform	ND	71	ug/kg	
74-83-9	Bromomethane	ND	160	ug/kg	
78-93-3	2-Butanone (MEK)	ND	660	ug/kg	
75-15-0	Carbon disulfide	ND	140	ug/kg	
56-23-5	Carbon tetrachloride	ND	280	ug/kg	
108-90-7	Chlorobenzene	ND	140	ug/kg	
75-00-3	Chloroethane	ND	140	ug/kg	
67-66-3	Chloroform	ND	97	ug/kg	
74-87-3	Chloromethane	ND	170	ug/kg	
124-48-1	Dibromochloromethane	ND	98	ug/kg	
75-34-3	1,1-Dichloroethane	ND	130	ug/kg	
107-06-2	1,2-Dichloroethane	ND	86	ug/kg	
75-35-4	1,1-Dichloroethene	ND	130	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	110	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	160	ug/kg	
78-87-5	1,2-Dichloropropane	ND	160	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	140	ug/kg	
100-41-4	Ethylbenzene	ND	140	ug/kg	
591-78-6	2-Hexanone	ND	170	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	700	ug/kg	
75-09-2	Methylene chloride	ND	57	ug/kg	
100-42-5	Styrene	ND	110	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	94	ug/kg	
127-18-4	Tetrachloroethene	ND	120	ug/kg	
108-88-3	Toluene	ND	120	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	130	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	ug/kg	
79-01-6	Trichloroethene	ND	180	ug/kg	
75-01-4	Vinyl chloride	ND	130	ug/kg	
1330-20-7	Xylene (total)	ND	130	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195503-98-1		
Lab Sample ID:	E31183-3	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	90.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7346.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		80-120%
2037-26-5	Toluene-D8	93%		81-117%
460-00-4	4-Bromofluorobenzene	83%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195504-98-1		
Lab Sample ID:	E31183-4	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	91.0
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	5490	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<6.6	6.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.5	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<22	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.55	0.55	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.55	0.55	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<550	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	16.5	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.5	5.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	<2.7	2.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	6390	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	560	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	20.9	1.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.4	4.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	637	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<550	550	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	14.4	5.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	11.7	2.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195504-98-1		
Lab Sample ID:	E31183-4	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	91.0
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12281.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	360	ug/kg	
95-57-8	2-Chlorophenol	ND	73	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	55	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	62	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	360	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	29	ug/kg	
95-48-7	2-Methylphenol	ND	100	ug/kg	
	3&4-Methylphenol	ND	210	ug/kg	
88-75-5	2-Nitrophenol	ND	66	ug/kg	
100-02-7	4-Nitrophenol	ND	88	ug/kg	
87-86-5	Pentachlorophenol	ND	62	ug/kg	
108-95-2	Phenol	ND	77	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	44	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	36	ug/kg	
83-32-9	Acenaphthene	ND	26	ug/kg	
208-96-8	Acenaphthylene	ND	34	ug/kg	
120-12-7	Anthracene	ND	15	ug/kg	
56-55-3	Benzo(a)anthracene	ND	15	ug/kg	
50-32-8	Benzo(a)pyrene	ND	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	27	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	23	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	24	ug/kg	
100-51-6	Benzyl Alcohol	ND	84	ug/kg	
91-58-7	2-Chloronaphthalene	ND	66	ug/kg	
106-47-8	4-Chloroaniline	ND	200	ug/kg	
86-74-8	Carbazole	ND	180	ug/kg	
218-01-9	Chrysene	ND	24	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	69	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	58	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	73	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	77	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	80	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195504-98-1		
Lab Sample ID:	E31183-4	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	91.0
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12281.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	77	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	40	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	18	ug/kg	
132-64-9	Dibenzofuran	ND	22	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	36	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	36	ug/kg	
84-66-2	Diethyl phthalate	ND	36	ug/kg	
131-11-3	Dimethyl phthalate	ND	36	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	36	ug/kg	
206-44-0	Fluoranthene	ND	18	ug/kg	
86-73-7	Fluorene	ND	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	80	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	84	ug/kg	
67-72-1	Hexachloroethane	ND	80	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	12	ug/kg	
78-59-1	Isophorone	ND	58	ug/kg	
91-57-6	2-Methylnaphthalene	ND	69	ug/kg	
88-74-4	2-Nitroaniline	ND	18	ug/kg	
99-09-2	3-Nitroaniline	ND	26	ug/kg	
100-01-6	4-Nitroaniline	ND	22	ug/kg	
91-20-3	Naphthalene	ND	73	ug/kg	
98-95-3	Nitrobenzene	ND	95	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	69	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	18	ug/kg	
85-01-8	Phenanthrene	ND	11	ug/kg	
129-00-0	Pyrene	ND	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	80	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	71%		25-121%
4165-62-2	Phenol-d5	80%		24-113%
118-79-6	2,4,6-Tribromophenol	84%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195504-98-1		
Lab Sample ID:	E31183-4	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	91.0
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12281.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		23-120%
321-60-8	2-Fluorobiphenyl	68%		30-115%
1718-51-0	Terphenyl-d14	74%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195504-98-1		
Lab Sample ID:	E31183-4	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	91.0
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7347.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	720	ug/kg	
71-43-2	Benzene	ND	140	ug/kg	
75-27-4	Bromodichloromethane	ND	110	ug/kg	
75-25-2	Bromoform	ND	78	ug/kg	
74-83-9	Bromomethane	ND	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	720	ug/kg	
75-15-0	Carbon disulfide	ND	160	ug/kg	
56-23-5	Carbon tetrachloride	ND	300	ug/kg	
108-90-7	Chlorobenzene	ND	160	ug/kg	
75-00-3	Chloroethane	ND	160	ug/kg	
67-66-3	Chloroform	ND	100	ug/kg	
74-87-3	Chloromethane	ND	190	ug/kg	
124-48-1	Dibromochloromethane	ND	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	ug/kg	
107-06-2	1,2-Dichloroethane	ND	94	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	120	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	170	ug/kg	
78-87-5	1,2-Dichloropropane	ND	170	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	140	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	160	ug/kg	
100-41-4	Ethylbenzene	ND	160	ug/kg	
591-78-6	2-Hexanone	ND	190	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	770	ug/kg	
75-09-2	Methylene chloride	ND	62	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	ug/kg	
127-18-4	Tetrachloroethene	ND	130	ug/kg	
108-88-3	Toluene	ND	130	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	140	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	120	ug/kg	
79-01-6	Trichloroethene	ND	200	ug/kg	
75-01-4	Vinyl chloride	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195504-98-1		
Lab Sample ID:	E31183-4	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	91.0
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7347.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
2037-26-5	Toluene-D8	97%		81-117%
460-00-4	4-Bromofluorobenzene	84%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195505-98-1		
Lab Sample ID:	E31183-5	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	89.4
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3650	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<6.7	6.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.6	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<22	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.56	0.56	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.56	0.56	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	10.4	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.6	5.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	<2.8	2.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	3080	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	8.1	1.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.5	4.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	7.0	5.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	8.2	2.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195505-98-1		
Lab Sample ID:	E31183-5	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	89.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12282.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	370	ug/kg	
95-57-8	2-Chlorophenol	ND	74	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	56	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	63	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	370	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	30	ug/kg	
95-48-7	2-Methylphenol	ND	100	ug/kg	
	3&4-Methylphenol	ND	210	ug/kg	
88-75-5	2-Nitrophenol	ND	67	ug/kg	
100-02-7	4-Nitrophenol	ND	89	ug/kg	
87-86-5	Pentachlorophenol	ND	63	ug/kg	
108-95-2	Phenol	ND	78	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	44	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	37	ug/kg	
83-32-9	Acenaphthene	ND	26	ug/kg	
208-96-8	Acenaphthylene	ND	34	ug/kg	
120-12-7	Anthracene	ND	15	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	27	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	23	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	24	ug/kg	
100-51-6	Benzyl Alcohol	ND	85	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	ug/kg	
106-47-8	4-Chloroaniline	ND	200	ug/kg	
86-74-8	Carbazole	ND	180	ug/kg	
218-01-9	Chrysene	ND	24	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	70	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	59	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	74	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	78	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	81	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195505-98-1		
Lab Sample ID:	E31183-5	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	89.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12282.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	78	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	18	ug/kg	
132-64-9	Dibenzofuran	ND	22	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	37	ug/kg	
84-66-2	Diethyl phthalate	ND	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	37	ug/kg	
206-44-0	Fluoranthene	ND	18	ug/kg	
86-73-7	Fluorene	ND	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	81	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	85	ug/kg	
67-72-1	Hexachloroethane	ND	81	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	12	ug/kg	
78-59-1	Isophorone	ND	59	ug/kg	
91-57-6	2-Methylnaphthalene	ND	70	ug/kg	
88-74-4	2-Nitroaniline	ND	18	ug/kg	
99-09-2	3-Nitroaniline	ND	26	ug/kg	
100-01-6	4-Nitroaniline	ND	22	ug/kg	
91-20-3	Naphthalene	ND	74	ug/kg	
98-95-3	Nitrobenzene	ND	96	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	70	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	18	ug/kg	
85-01-8	Phenanthrene	ND	11	ug/kg	
129-00-0	Pyrene	ND	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	81	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	64%		25-121%
4165-62-2	Phenol-d5	74%		24-113%
118-79-6	2,4,6-Tribromophenol	78%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195505-98-1		
Lab Sample ID:	E31183-5	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	89.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12282.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		23-120%
321-60-8	2-Fluorobiphenyl	64%		30-115%
1718-51-0	Terphenyl-d14	69%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195505-98-1		
Lab Sample ID:	E31183-5	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	89.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7348.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	680	ug/kg	
71-43-2	Benzene	ND	140	ug/kg	
75-27-4	Bromodichloromethane	ND	100	ug/kg	
75-25-2	Bromoform	ND	73	ug/kg	
74-83-9	Bromomethane	ND	160	ug/kg	
78-93-3	2-Butanone (MEK)	ND	680	ug/kg	
75-15-0	Carbon disulfide	ND	150	ug/kg	
56-23-5	Carbon tetrachloride	ND	280	ug/kg	
108-90-7	Chlorobenzene	ND	150	ug/kg	
75-00-3	Chloroethane	ND	150	ug/kg	
67-66-3	Chloroform	ND	99	ug/kg	
74-87-3	Chloromethane	ND	180	ug/kg	
124-48-1	Dibromochloromethane	ND	100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	ug/kg	
107-06-2	1,2-Dichloroethane	ND	88	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	110	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	160	ug/kg	
78-87-5	1,2-Dichloropropane	ND	160	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	150	ug/kg	
100-41-4	Ethylbenzene	ND	150	ug/kg	
591-78-6	2-Hexanone	ND	180	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	720	ug/kg	
75-09-2	Methylene chloride	ND	58	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	96	ug/kg	
127-18-4	Tetrachloroethene	ND	120	ug/kg	
108-88-3	Toluene	ND	120	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	130	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	110	ug/kg	
79-01-6	Trichloroethene	ND	190	ug/kg	
75-01-4	Vinyl chloride	ND	130	ug/kg	
1330-20-7	Xylene (total)	ND	130	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195505-98-1		
Lab Sample ID:	E31183-5	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	89.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7348.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-120%
2037-26-5	Toluene-D8	98%		81-117%
460-00-4	4-Bromofluorobenzene	86%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195506-98-1		
Lab Sample ID:	E31183-6	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	88.5
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3470	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<6.8	6.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.4	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<22	22	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.56	0.56	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.56	0.56	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	8.9	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.6	5.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	<2.8	2.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	3360	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	16.1	1.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.5	4.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<560	560	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	8.2	5.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	6.6	2.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195506-98-1		
Lab Sample ID:	E31183-6	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.5
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12283.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	380	ug/kg	
95-57-8	2-Chlorophenol	ND	75	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	56	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	64	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	380	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	30	ug/kg	
95-48-7	2-Methylphenol	ND	100	ug/kg	
	3&4-Methylphenol	ND	210	ug/kg	
88-75-5	2-Nitrophenol	ND	68	ug/kg	
100-02-7	4-Nitrophenol	ND	90	ug/kg	
87-86-5	Pentachlorophenol	ND	64	ug/kg	
108-95-2	Phenol	ND	79	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	38	ug/kg	
83-32-9	Acenaphthene	ND	27	ug/kg	
208-96-8	Acenaphthylene	ND	35	ug/kg	
120-12-7	Anthracene	ND	15	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	28	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	23	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	24	ug/kg	
100-51-6	Benzyl Alcohol	ND	87	ug/kg	
91-58-7	2-Chloronaphthalene	ND	68	ug/kg	
106-47-8	4-Chloroaniline	ND	200	ug/kg	
86-74-8	Carbazole	ND	190	ug/kg	
218-01-9	Chrysene	ND	24	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	72	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	60	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	75	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	79	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	83	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST.

2235 Route 130, Bldg. B Dayton, NJ 08810

FAX

Date: 2/24/98

Number of pages including cover sheet:

Cont'

To: Mike Heffron

Foster Wheeler

Phone:

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REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

NWS - Earle

Accutest cannot be held accountable for the security of data once the media containing the data has left the possession or control of Accutest.

Report of Analysis

Client Sample ID:	195506-98-1		
Lab Sample ID:	E31183-6	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.5
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12283.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	79	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	19	ug/kg	
132-64-9	Dibenzofuran	ND	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	38	ug/kg	
84-66-2	Diethyl phthalate	ND	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	38	ug/kg	
206-44-0	Fluoranthene	ND	19	ug/kg	
86-73-7	Fluorene	ND	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	83	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	87	ug/kg	
67-72-1	Hexachloroethane	ND	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	ug/kg	
78-59-1	Isophorone	ND	60	ug/kg	
91-57-6	2-Methylnaphthalene	ND	72	ug/kg	
88-74-4	2-Nitroaniline	ND	19	ug/kg	
99-09-2	3-Nitroaniline	ND	26	ug/kg	
100-01-6	4-Nitroaniline	ND	23	ug/kg	
91-20-3	Naphthalene	ND	75	ug/kg	
98-95-3	Nitrobenzene	ND	98	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	19	ug/kg	
85-01-8	Phenanthrene	ND	11	ug/kg	
129-00-0	Pyrene	ND	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	83	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	64%		25-121%
4165-62-2	Phenol-d5	75%		24-113%
118-79-6	2,4,6-Tribromophenol	79%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195506-98-1		
Lab Sample ID:	E31183-6	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.5
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12283.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		23-120%
321-60-8	2-Fluorobiphenyl	66%		30-115%
1718-51-0	Terphenyl-d14	69%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195506-98-1		
Lab Sample ID:	E31183-6	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	88.5
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7352.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	730	ug/kg	
71-43-2	Benzene	ND	140	ug/kg	
75-27-4	Bromodichloromethane	ND	110	ug/kg	
75-25-2	Bromoform	ND	79	ug/kg	
74-83-9	Bromomethane	ND	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	730	ug/kg	
75-15-0	Carbon disulfide	ND	160	ug/kg	
56-23-5	Carbon tetrachloride	ND	300	ug/kg	
108-90-7	Chlorobenzene	ND	160	ug/kg	
75-00-3	Chloroethane	ND	160	ug/kg	
67-66-3	Chloroform	ND	110	ug/kg	
74-87-3	Chloromethane	ND	190	ug/kg	
124-48-1	Dibromochloromethane	ND	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	ug/kg	
107-06-2	1,2-Dichloroethane	ND	95	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	120	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	170	ug/kg	
78-87-5	1,2-Dichloropropane	ND	170	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	140	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	160	ug/kg	
100-41-4	Ethylbenzene	ND	160	ug/kg	
591-78-6	2-Hexanone	ND	190	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	770	ug/kg	
75-09-2	Methylene chloride	ND	63	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	ug/kg	
127-18-4	Tetrachloroethene	ND	130	ug/kg	
108-88-3	Toluene	ND	130	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	140	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	120	ug/kg	
79-01-6	Trichloroethene	ND	200	ug/kg	
75-01-4	Vinyl chloride	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195506-98-1		
Lab Sample ID:	E31183-6	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	88.5
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7352.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-120%
2037-26-5	Toluene-D8	96%		81-117%
460-00-4	4-Bromofluorobenzene	86%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195507-98-1		
Lab Sample ID:	E31183-7	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	88.1
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3410	23	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<6.8	6.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.2	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<23	23	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.57	0.57	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.57	0.57	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<570	570	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	8.7	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<5.7	5.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	<2.8	2.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	2750	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<570	570	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	9.4	1.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.5	4.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<570	570	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<11	11	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<570	570	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.1	1.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	6.7	5.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	2.7	2.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195507-98-1		
Lab Sample ID:	E31183-7	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.1
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12284.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	380	ug/kg	
95-57-8	2-Chlorophenol	ND	75	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	56	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	64	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	380	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	30	ug/kg	
95-48-7	2-Methylphenol	ND	100	ug/kg	
	3&4-Methylphenol	ND	210	ug/kg	
88-75-5	2-Nitrophenol	ND	68	ug/kg	
100-02-7	4-Nitrophenol	ND	90	ug/kg	
87-86-5	Pentachlorophenol	ND	64	ug/kg	
108-95-2	Phenol	ND	79	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	38	ug/kg	
83-32-9	Acenaphthene	ND	27	ug/kg	
208-96-8	Acenaphthylene	ND	35	ug/kg	
120-12-7	Anthracene	ND	15	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	28	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	23	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	24	ug/kg	
100-51-6	Benzyl Alcohol	ND	87	ug/kg	
91-58-7	2-Chloronaphthalene	ND	68	ug/kg	
106-47-8	4-Chloroaniline	ND	200	ug/kg	
86-74-8	Carbazole	ND	190	ug/kg	
218-01-9	Chrysene	ND	24	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	72	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	60	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	75	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	79	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	83	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195507-98-1		
Lab Sample ID:	E31183-7	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.1
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12284.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	79	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	19	ug/kg	
132-64-9	Dibenzofuran	ND	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	38	ug/kg	
84-66-2	Diethyl phthalate	ND	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	38	ug/kg	
206-44-0	Fluoranthene	ND	19	ug/kg	
86-73-7	Fluorene	ND	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	83	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	87	ug/kg	
67-72-1	Hexachloroethane	ND	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	ug/kg	
78-59-1	Isophorone	ND	60	ug/kg	
91-57-6	2-Methylnaphthalene	ND	72	ug/kg	
88-74-4	2-Nitroaniline	ND	19	ug/kg	
99-09-2	3-Nitroaniline	ND	26	ug/kg	
100-01-6	4-Nitroaniline	ND	23	ug/kg	
91-20-3	Naphthalene	ND	75	ug/kg	
98-95-3	Nitrobenzene	ND	98	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	19	ug/kg	
85-01-8	Phenanthrene	ND	11	ug/kg	
129-00-0	Pyrene	ND	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	83	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	66%		25-121%
4165-62-2	Phenol-d5	77%		24-113%
118-79-6	2,4,6-Tribromophenol	80%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195507-98-1		
Lab Sample ID:	E31183-7	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	88.1
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12284.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		23-120%
321-60-8	2-Fluorobiphenyl	66%		30-115%
1718-51-0	Terphenyl-d14	69%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195507-98-1		
Lab Sample ID:	E31183-7	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	88.1
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 *	O7353.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	700	ug/kg	
71-43-2	Benzene	ND	140	ug/kg	
75-27-4	Bromodichloromethane	ND	100	ug/kg	
75-25-2	Bromoform	ND	75	ug/kg	
74-83-9	Bromomethane	ND	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	700	ug/kg	
75-15-0	Carbon disulfide	ND	150	ug/kg	
56-23-5	Carbon tetrachloride	ND	290	ug/kg	
108-90-7	Chlorobenzene	ND	150	ug/kg	
75-00-3	Chloroethane	ND	150	ug/kg	
67-66-3	Chloroform	ND	100	ug/kg	
74-87-3	Chloromethane	ND	180	ug/kg	
124-48-1	Dibromochloromethane	ND	100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	ug/kg	
107-06-2	1,2-Dichloroethane	ND	90	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	120	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	170	ug/kg	
78-87-5	1,2-Dichloropropane	ND	170	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	150	ug/kg	
100-41-4	Ethylbenzene	ND	150	ug/kg	
591-78-6	2-Hexanone	ND	180	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	740	ug/kg	
75-09-2	Methylene chloride	ND	60	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	99	ug/kg	
127-18-4	Tetrachloroethene	ND	120	ug/kg	
108-88-3	Toluene	ND	120	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	140	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	110	ug/kg	
79-01-6	Trichloroethene	ND	190	ug/kg	
75-01-4	Vinyl chloride	ND	130	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195507-98-1		
Lab Sample ID:	E31183-7	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	88.1
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7353.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
2037-26-5	Toluene-D8	96%		81-117%
460-00-4	4-Bromofluorobenzene	86%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195508-98-1		
Lab Sample ID:	E31183-8	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	76.8
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	4250	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<7.8	7.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.9	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<26	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.65	0.65	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.65	0.65	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	39.0	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.5	6.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	<3.2	3.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	2590	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	13.0	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	9.8	2.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.086	0.086	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.2	5.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<13	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	9.8	6.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	145	2.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195508-98-1		
Lab Sample ID:	E31183-8	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	76.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12285.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	430	ug/kg	
95-57-8	2-Chlorophenol	ND	86	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	22	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	65	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	73	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	430	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	34	ug/kg	
95-48-7	2-Methylphenol	ND	120	ug/kg	
	3&4-Methylphenol	ND	250	ug/kg	
88-75-5	2-Nitrophenol	ND	78	ug/kg	
100-02-7	4-Nitrophenol	ND	100	ug/kg	
87-86-5	Pentachlorophenol	ND	73	ug/kg	
108-95-2	Phenol	ND	91	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	52	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	43	ug/kg	
83-32-9	Acenaphthene	ND	31	ug/kg	
208-96-8	Acenaphthylene	ND	40	ug/kg	
120-12-7	Anthracene	ND	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	28	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	23	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	32	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	27	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	28	ug/kg	
100-51-6	Benzyl Alcohol	ND	99	ug/kg	
91-58-7	2-Chloronaphthalene	ND	78	ug/kg	
106-47-8	4-Chloroaniline	ND	230	ug/kg	
86-74-8	Carbazole	ND	220	ug/kg	
218-01-9	Chrysene	ND	28	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	82	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	69	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	86	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	19	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	91	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	95	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195508-98-1		
Lab Sample ID:	E31183-8	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	76.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12285.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	91	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	48	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	22	ug/kg	
132-64-9	Dibenzofuran	ND	26	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	43	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	43	ug/kg	
84-66-2	Diethyl phthalate	ND	43	ug/kg	
131-11-3	Dimethyl phthalate	ND	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	43	ug/kg	
206-44-0	Fluoranthene	ND	22	ug/kg	
86-73-7	Fluorene	ND	22	ug/kg	
118-74-1	Hexachlorobenzene	ND	22	ug/kg	
87-68-3	Hexachlorobutadiene	ND	95	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	99	ug/kg	
67-72-1	Hexachloroethane	ND	95	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	
78-59-1	Isophorone	ND	69	ug/kg	
91-57-6	2-Methylnaphthalene	ND	82	ug/kg	
88-74-4	2-Nitroaniline	ND	22	ug/kg	
99-09-2	3-Nitroaniline	ND	30	ug/kg	
100-01-6	4-Nitroaniline	ND	26	ug/kg	
91-20-3	Naphthalene	ND	86	ug/kg	
98-95-3	Nitrobenzene	ND	110	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	82	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	22	ug/kg	
85-01-8	Phenanthrene	ND	13	ug/kg	
129-00-0	Pyrene	ND	21	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	95	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		25-121%
4165-62-2	Phenol-d5	84%		24-113%
118-79-6	2,4,6-Tribromophenol	88%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195508-98-1		
Lab Sample ID:	E31183-8	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	76.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12285.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		23-120%
321-60-8	2-Fluorobiphenyl	71%		30-115%
1718-51-0	Terphenyl-d14	78%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195508-98-1		
Lab Sample ID:	E31183-8	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	76.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7354.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	810	ug/kg	
71-43-2	Benzene	ND	160	ug/kg	
75-27-4	Bromodichloromethane	ND	120	ug/kg	
75-25-2	Bromoform	ND	88	ug/kg	
74-83-9	Bromomethane	ND	200	ug/kg	
78-93-3	2-Butanone (MEK)	ND	810	ug/kg	
75-15-0	Carbon disulfide	ND	180	ug/kg	
56-23-5	Carbon tetrachloride	ND	340	ug/kg	
108-90-7	Chlorobenzene	ND	180	ug/kg	
75-00-3	Chloroethane	ND	180	ug/kg	
67-66-3	Chloroform	ND	120	ug/kg	
74-87-3	Chloromethane	ND	210	ug/kg	
124-48-1	Dibromochloromethane	ND	120	ug/kg	
75-34-3	1,1-Dichloroethane	ND	160	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	ug/kg	
75-35-4	1,1-Dichloroethene	ND	160	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	140	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	200	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	160	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	180	ug/kg	
100-41-4	Ethylbenzene	ND	180	ug/kg	
591-78-6	2-Hexanone	ND	210	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	860	ug/kg	
75-09-2	Methylene chloride	ND	70	ug/kg	
100-42-5	Styrene	ND	140	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	120	ug/kg	
127-18-4	Tetrachloroethene	ND	150	ug/kg	
108-88-3	Toluene	ND	140	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	160	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	130	ug/kg	
79-01-6	Trichloroethene	ND	230	ug/kg	
75-01-4	Vinyl chloride	ND	160	ug/kg	
1330-20-7	Xylene (total)	ND	160	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195508-98-1		
Lab Sample ID:	E31183-8	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	76.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7354.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
2037-26-5	Toluene-D8	94%		81-117%
460-00-4	4-Bromofluorobenzene	81%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195509-98-1		
Lab Sample ID:	E31183-9	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	83.9
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3290	24	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<7.2	7.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	1.8	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	58.0	24	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.60	0.60	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	2.8	0.60	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<600	600	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	187	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.0	6.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	15.6	3.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	4300	12	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	650	12	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<600	600	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	17.8	1.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.11	0.11	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<4.8	4.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<600	600	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<12	12	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.2	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<600	600	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.2	1.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	9.6	6.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	1970	2.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195509-98-1		
Lab Sample ID:	E31183-9	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	83.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	07355.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	780	ug/kg	
71-43-2	Benzene	ND	160	ug/kg	
75-27-4	Bromodichloromethane	ND	120	ug/kg	
75-25-2	Bromoform	ND	84	ug/kg	
74-83-9	Bromomethane	ND	190	ug/kg	
78-93-3	2-Butanone (MEK)	ND	780	ug/kg	
75-15-0	Carbon disulfide	ND	170	ug/kg	
56-23-5	Carbon tetrachloride	ND	320	ug/kg	
108-90-7	Chlorobenzene	ND	170	ug/kg	
75-00-3	Chloroethane	ND	170	ug/kg	
67-66-3	Chloroform	ND	110	ug/kg	
74-87-3	Chloromethane	ND	200	ug/kg	
124-48-1	Dibromochloromethane	ND	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	160	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	ug/kg	
75-35-4	1,1-Dichloroethene	ND	160	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	130	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	190	ug/kg	
78-87-5	1,2-Dichloropropane	ND	190	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	150	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	170	ug/kg	
100-41-4	Ethylbenzene	ND	170	ug/kg	
591-78-6	2-Hexanone	ND	200	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	820	ug/kg	
75-09-2	Methylene chloride	ND	67	ug/kg	
100-42-5	Styrene	ND	130	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	110	ug/kg	
127-18-4	Tetrachloroethene	ND	140	ug/kg	
108-88-3	Toluene	ND	140	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	150	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	120	ug/kg	
79-01-6	Trichloroethene	ND	220	ug/kg	
75-01-4	Vinyl chloride	ND	150	ug/kg	
1330-20-7	Xylene (total)	ND	150	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195509-98-1		
Lab Sample ID:	E31183-9	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	83.9
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7355.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-120%
2037-26-5	Toluene-D8	101%		81-117%
460-00-4	4-Bromofluorobenzene	85%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195510-98-1		
Lab Sample ID:	E31183-10	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	85.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12286.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	390	ug/kg	
95-57-8	2-Chlorophenol	ND	78	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	58	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	66	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	390	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	31	ug/kg	
95-48-7	2-Methylphenol	ND	110	ug/kg	
	3&4-Methylphenol	ND	220	ug/kg	
88-75-5	2-Nitrophenol	ND	70	ug/kg	
100-02-7	4-Nitrophenol	ND	94	ug/kg	
87-86-5	Pentachlorophenol	ND	66	ug/kg	
108-95-2	Phenol	ND	82	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	47	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	39	ug/kg	
83-32-9	Acenaphthene	ND	28	ug/kg	
208-96-8	Acenaphthylene	ND	36	ug/kg	
120-12-7	Anthracene	ND	16	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	25	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	28	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	24	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	25	ug/kg	
100-51-6	Benzyl Alcohol	ND	90	ug/kg	
91-58-7	2-Chloronaphthalene	ND	70	ug/kg	
106-47-8	4-Chloroaniline	ND	210	ug/kg	
86-74-8	Carbazole	ND	200	ug/kg	
218-01-9	Chrysene	ND	25	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	74	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	62	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	78	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	18	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	82	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	86	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195510-98-1		
Lab Sample ID:	E31183-10	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	85.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12286.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	82	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	43	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	20	ug/kg	
132-64-9	Dibenzofuran	ND	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	39	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	39	ug/kg	
84-66-2	Diethyl phthalate	ND	39	ug/kg	
131-11-3	Dimethyl phthalate	ND	39	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	39	ug/kg	
206-44-0	Fluoranthene	ND	20	ug/kg	
86-73-7	Fluorene	ND	20	ug/kg	
118-74-1	Hexachlorobenzene	ND	20	ug/kg	
87-68-3	Hexachlorobutadiene	ND	86	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	90	ug/kg	
67-72-1	Hexachloroethane	ND	86	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	ug/kg	
78-59-1	Isophorone	ND	62	ug/kg	
91-57-6	2-Methylnaphthalene	ND	74	ug/kg	
88-74-4	2-Nitroaniline	ND	20	ug/kg	
99-09-2	3-Nitroaniline	ND	27	ug/kg	
100-01-6	4-Nitroaniline	ND	24	ug/kg	
91-20-3	Naphthalene	ND	78	ug/kg	
98-95-3	Nitrobenzene	ND	100	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	74	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	20	ug/kg	
85-01-8	Phenanthrene	ND	12	ug/kg	
129-00-0	Pyrene	ND	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	86	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	70%		25-121%
4165-62-2	Phenol-d5	81%		24-113%
118-79-6	2,4,6-Tribromophenol	83%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195510-98-1		
Lab Sample ID:	E31183-10	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	85.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12286.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		23-120%
321-60-8	2-Fluorobiphenyl	67%		30-115%
1718-51-0	Terphenyl-d14	73%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195510-98-1		
Lab Sample ID:	E31183-10	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	85.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	07356.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	730	ug/kg	
71-43-2	Benzene	ND	150	ug/kg	
75-27-4	Bromodichloromethane	ND	110	ug/kg	
75-25-2	Bromoform	ND	79	ug/kg	
74-83-9	Bromomethane	ND	180	ug/kg	
78-93-3	2-Butanone (MEK)	ND	730	ug/kg	
75-15-0	Carbon disulfide	ND	160	ug/kg	
56-23-5	Carbon tetrachloride	ND	310	ug/kg	
108-90-7	Chlorobenzene	ND	160	ug/kg	
75-00-3	Chloroethane	ND	160	ug/kg	
67-66-3	Chloroform	ND	110	ug/kg	
74-87-3	Chloromethane	ND	190	ug/kg	
124-48-1	Dibromochloromethane	ND	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	150	ug/kg	
107-06-2	1,2-Dichloroethane	ND	95	ug/kg	
75-35-4	1,1-Dichloroethene	ND	150	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	120	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	180	ug/kg	
78-87-5	1,2-Dichloropropane	ND	180	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	140	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	160	ug/kg	
100-41-4	Ethylbenzene	ND	160	ug/kg	
591-78-6	2-Hexanone	ND	190	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	780	ug/kg	
75-09-2	Methylene chloride	ND	63	ug/kg	
100-42-5	Styrene	ND	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	ug/kg	
127-18-4	Tetrachloroethene	ND	130	ug/kg	
108-88-3	Toluene	ND	130	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	140	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	120	ug/kg	
79-01-6	Trichloroethene	ND	200	ug/kg	
75-01-4	Vinyl chloride	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195510-98-1		
Lab Sample ID:	E31183-10	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	85.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7356.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		80-120%
2037-26-5	Toluene-D8	96%		81-117%
460-00-4	4-Bromofluorobenzene	85%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195511-98-1		
Lab Sample ID:	E31183-11	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	77.4
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	6200	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<7.8	7.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	3.1	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<26	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.64	0.64	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.64	0.64	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	41.6	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.4	6.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	3.3	3.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	5320	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	<13	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	10.5	1.9	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.088	0.088	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.2	5.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<13	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	9.0	6.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	22.2	2.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195511-98-1		
Lab Sample ID:	E31183-11	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	77.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12287.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	430	ug/kg	
95-57-8	2-Chlorophenol	ND	85	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	21	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	64	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	72	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	430	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	34	ug/kg	
95-48-7	2-Methylphenol	ND	120	ug/kg	
	3&4-Methylphenol	ND	240	ug/kg	
88-75-5	2-Nitrophenol	ND	77	ug/kg	
100-02-7	4-Nitrophenol	ND	100	ug/kg	
87-86-5	Pentachlorophenol	ND	72	ug/kg	
108-95-2	Phenol	ND	89	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	51	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	43	ug/kg	
83-32-9	Acenaphthene	ND	30	ug/kg	
208-96-8	Acenaphthylene	ND	39	ug/kg	
120-12-7	Anthracene	38.4	17	ug/kg	
56-55-3	Benzo(a)anthracene	119	18	ug/kg	
50-32-8	Benzo(a)pyrene	114	28	ug/kg	
205-99-2	Benzo(b)fluoranthene	110	22	ug/kg	
191-24-2	Benzo(g,h,i)perylene	52.4	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	98.8	31	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	26	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	28	ug/kg	
100-51-6	Benzyl Alcohol	ND	98	ug/kg	
91-58-7	2-Chloronaphthalene	ND	77	ug/kg	
106-47-8	4-Chloroaniline	ND	230	ug/kg	
86-74-8	Carbazole	ND	210	ug/kg	
218-01-9	Chrysene	152	28	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	81	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	68	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	85	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	19	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	89	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	94	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195511-98-1		
Lab Sample ID:	E31183-11	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	77.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12287.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	89	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	47	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	21	ug/kg	
132-64-9	Dibenzofuran	ND	26	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	43	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	43	ug/kg	
84-66-2	Diethyl phthalate	ND	43	ug/kg	
131-11-3	Dimethyl phthalate	ND	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	43	ug/kg	
206-44-0	Fluoranthene	345	21	ug/kg	
86-73-7	Fluorene	39.8	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	21	ug/kg	
87-68-3	Hexachlorobutadiene	ND	94	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	98	ug/kg	
67-72-1	Hexachloroethane	ND	94	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	50.4	14	ug/kg	
78-59-1	Isophorone	ND	68	ug/kg	
91-57-6	2-Methylnaphthalene	ND	81	ug/kg	
88-74-4	2-Nitroaniline	ND	21	ug/kg	
99-09-2	3-Nitroaniline	ND	30	ug/kg	
100-01-6	4-Nitroaniline	ND	26	ug/kg	
91-20-3	Naphthalene	ND	85	ug/kg	
98-95-3	Nitrobenzene	ND	110	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	81	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	21	ug/kg	
85-01-8	Phenanthrene	331	13	ug/kg	
129-00-0	Pyrene	303	20	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	94	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		25-121%
4165-62-2	Phenol-d5	81%		24-113%
118-79-6	2,4,6-Tribromophenol	85%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195511-98-1		
Lab Sample ID:	E31183-11	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	77.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12287.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		23-120%
321-60-8	2-Fluorobiphenyl	67%		30-115%
1718-51-0	Terphenyl-d14	70%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST.

2235 Route 130, Bldg. B Dayton, NJ 08810

FAX

Date: 2/24/98

Number of pages including cover sheet:

Cont'

To: Mike Heffron

Foster Wheeler

Phone:

Fax phone: 215-702-4047

CC:

From: Marie Rutsky

Phone: (732) 329-0200 X228

Fax phone: (732) 329-3499/329-3480

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

NWS - Earle

Accutest cannot be held accountable for the security of data once the media containing the data has left the possession or control of Accutest.

Report of Analysis

Client Sample ID:	195511-98-1		
Lab Sample ID:	E31183-11	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	77.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7357.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	780	ug/kg	
71-43-2	Benzene	ND	160	ug/kg	
75-27-4	Bromodichloromethane	ND	120	ug/kg	
75-25-2	Bromoform	ND	85	ug/kg	
74-83-9	Bromomethane	ND	190	ug/kg	
78-93-3	2-Butanone (MEK)	ND	780	ug/kg	
75-15-0	Carbon disulfide	ND	170	ug/kg	
56-23-5	Carbon tetrachloride	ND	330	ug/kg	
108-90-7	Chlorobenzene	ND	170	ug/kg	
75-00-3	Chloroethane	ND	170	ug/kg	
67-66-3	Chloroform	ND	110	ug/kg	
74-87-3	Chloromethane	ND	200	ug/kg	
124-48-1	Dibromochloromethane	ND	120	ug/kg	
75-34-3	1,1-Dichloroethane	ND	160	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	ug/kg	
75-35-4	1,1-Dichloroethene	ND	160	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	130	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	190	ug/kg	
78-87-5	1,2-Dichloropropane	ND	190	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	150	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	170	ug/kg	
100-41-4	Ethylbenzene	ND	170	ug/kg	
591-78-6	2-Hexanone	ND	200	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	830	ug/kg	
75-09-2	Methylene chloride	ND	67	ug/kg	
100-42-5	Styrene	ND	130	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	110	ug/kg	
127-18-4	Tetrachloroethene	ND	140	ug/kg	
108-88-3	Toluene	ND	140	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	150	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	120	ug/kg	
79-01-6	Trichloroethene	ND	220	ug/kg	
75-01-4	Vinyl chloride	ND	150	ug/kg	
1330-20-7	Xylene (total)	ND	150	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195511-98-1		
Lab Sample ID:	E31183-11	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	77.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7357.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
2037-26-5	Toluene-D8	94%		81-117%
460-00-4	4-Bromofluorobenzene	87%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195512-98-1		
Lab Sample ID:	E31183-12	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	77.2
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	4600	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<7.8	7.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	2.6	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<26	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.65	0.65	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.65	0.65	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	77.2	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.5	6.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	5.0	3.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	3240	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	155	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	19.0	1.9	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.084	0.084	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.2	5.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<13	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<650	650	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	10.1	6.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	108	2.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195512-98-1		
Lab Sample ID:	E31183-12	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	77.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12288.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	430	ug/kg	
95-57-8	2-Chlorophenol	ND	86	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	22	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	64	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	73	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	430	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	34	ug/kg	
95-48-7	2-Methylphenol	ND	120	ug/kg	
	3&4-Methylphenol	ND	240	ug/kg	
88-75-5	2-Nitrophenol	ND	77	ug/kg	
100-02-7	4-Nitrophenol	ND	100	ug/kg	
87-86-5	Pentachlorophenol	ND	73	ug/kg	
108-95-2	Phenol	ND	90	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	52	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	43	ug/kg	
83-32-9	Acenaphthene	ND	30	ug/kg	
208-96-8	Acenaphthylene	ND	40	ug/kg	
120-12-7	Anthracene	30.4	17	ug/kg	
56-55-3	Benzo(a)anthracene	111	18	ug/kg	
50-32-8	Benzo(a)pyrene	121	28	ug/kg	
205-99-2	Benzo(b)fluoranthene	116	23	ug/kg	
191-24-2	Benzo(g,h,i)perylene	57.3	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	109	31	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	27	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	28	ug/kg	
100-51-6	Benzyl Alcohol	ND	99	ug/kg	
91-58-7	2-Chloronaphthalene	ND	77	ug/kg	
106-47-8	4-Chloroaniline	ND	230	ug/kg	
86-74-8	Carbazole	ND	220	ug/kg	
218-01-9	Chrysene	160	28	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	82	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	69	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	86	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	19	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	90	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	95	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195512-98-1		
Lab Sample ID:	E31183-12	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	77.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12288.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	90	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	47	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	22	ug/kg	
132-64-9	Dibenzofuran	ND	26	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	43	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	43	ug/kg	
84-66-2	Diethyl phthalate	ND	43	ug/kg	
131-11-3	Dimethyl phthalate	ND	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	43	ug/kg	
206-44-0	Fluoranthene	358	22	ug/kg	
86-73-7	Fluorene	28.8	22	ug/kg	
118-74-1	Hexachlorobenzene	ND	22	ug/kg	
87-68-3	Hexachlorobutadiene	ND	95	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	99	ug/kg	
67-72-1	Hexachloroethane	ND	95	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	52.1	15	ug/kg	
78-59-1	Isophorone	ND	69	ug/kg	
91-57-6	2-Methylnaphthalene	ND	82	ug/kg	
88-74-4	2-Nitroaniline	ND	22	ug/kg	
99-09-2	3-Nitroaniline	ND	30	ug/kg	
100-01-6	4-Nitroaniline	ND	26	ug/kg	
91-20-3	Naphthalene	ND	86	ug/kg	
98-95-3	Nitrobenzene	ND	110	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	82	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	22	ug/kg	
85-01-8	Phenanthrene	296	13	ug/kg	
129-00-0	Pyrene	310	21	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	95	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		25-121%
4165-62-2	Phenol-d5	84%		24-113%
118-79-6	2,4,6-Tribromophenol	90%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195512-98-1		
Lab Sample ID:	E31183-12	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	77.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12288.D	1	02/23/98	THC	02/20/98	OP3334	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		23-120%
321-60-8	2-Fluorobiphenyl	70%		30-115%
1718-51-0	Terphenyl-d14	74%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195512-98-1		
Lab Sample ID:	E31183-12	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	77.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7358.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	820	ug/kg	
71-43-2	Benzene	ND	160	ug/kg	
75-27-4	Bromodichloromethane	ND	120	ug/kg	
75-25-2	Bromoform	ND	88	ug/kg	
74-83-9	Bromomethane	ND	200	ug/kg	
78-93-3	2-Butanone (MEK)	ND	820	ug/kg	
75-15-0	Carbon disulfide	ND	180	ug/kg	
56-23-5	Carbon tetrachloride	ND	340	ug/kg	
108-90-7	Chlorobenzene	ND	180	ug/kg	
75-00-3	Chloroethane	ND	180	ug/kg	
67-66-3	Chloroform	ND	120	ug/kg	
74-87-3	Chloromethane	ND	210	ug/kg	
124-48-1	Dibromochloromethane	ND	120	ug/kg	
75-34-3	1,1-Dichloroethane	ND	160	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	ug/kg	
75-35-4	1,1-Dichloroethene	ND	160	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	140	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	200	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	160	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	180	ug/kg	
100-41-4	Ethylbenzene	ND	180	ug/kg	
591-78-6	2-Hexanone	ND	210	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	870	ug/kg	
75-09-2	Methylene chloride	ND	70	ug/kg	
100-42-5	Styrene	ND	140	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	120	ug/kg	
127-18-4	Tetrachloroethene	ND	150	ug/kg	
108-88-3	Toluene	ND	140	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	160	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	130	ug/kg	
79-01-6	Trichloroethene	ND	230	ug/kg	
75-01-4	Vinyl chloride	ND	160	ug/kg	
1330-20-7	Xylene (total)	ND	160	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195512-98-1		
Lab Sample ID:	E31183-12	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	77.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7358.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-120%
2037-26-5	Toluene-D8	98%		81-117%
460-00-4	4-Bromofluorobenzene	86%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195513-98-1		
Lab Sample ID:	E31183-13	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	78.4
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	6110	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<7.6	7.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	2.9	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<26	26	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.64	0.64	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.64	0.64	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	73.2	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.4	6.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	5.7	3.2	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	3840	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	43.9	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	17.4	1.9	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.080	0.080	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.1	5.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	728	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<13	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<640	640	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	10.5	6.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	61.2	2.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195513-98-1		
Lab Sample ID:	E31183-13	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	78.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16797.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	420	ug/kg	
95-57-8	2-Chlorophenol	ND	85	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	21	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	64	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	72	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	420	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	34	ug/kg	
95-48-7	2-Methylphenol	ND	120	ug/kg	
	3&4-Methylphenol	ND	240	ug/kg	
88-75-5	2-Nitrophenol	ND	76	ug/kg	
100-02-7	4-Nitrophenol	ND	100	ug/kg	
87-86-5	Pentachlorophenol	ND	72	ug/kg	
108-95-2	Phenol	ND	89	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	51	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	42	ug/kg	
83-32-9	Acenaphthene	ND	30	ug/kg	
208-96-8	Acenaphthylene	ND	39	ug/kg	
120-12-7	Anthracene	ND	17	ug/kg	
56-55-3	Benzo(a)anthracene	28.2	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	28	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	22	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	31	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	26	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	28	ug/kg	
100-51-6	Benzyl Alcohol	ND	98	ug/kg	
91-58-7	2-Chloronaphthalene	ND	76	ug/kg	
106-47-8	4-Chloroaniline	ND	230	ug/kg	
86-74-8	Carbazole	ND	210	ug/kg	
218-01-9	Chrysene	28.3	28	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	80	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	68	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	85	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	19	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	89	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	93	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195513-98-1		
Lab Sample ID:	E31183-13	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	78.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16797.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	89	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	47	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	21	ug/kg	
132-64-9	Dibenzofuran	ND	25	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	42	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	42	ug/kg	
84-66-2	Diethyl phthalate	ND	42	ug/kg	
131-11-3	Dimethyl phthalate	ND	42	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	42	ug/kg	
206-44-0	Fluoranthene	89.1	21	ug/kg	
86-73-7	Fluorene	ND	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	21	ug/kg	
87-68-3	Hexachlorobutadiene	ND	93	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	98	ug/kg	
67-72-1	Hexachloroethane	ND	93	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	14	ug/kg	
78-59-1	Isophorone	ND	68	ug/kg	
91-57-6	2-Methylnaphthalene	ND	80	ug/kg	
88-74-4	2-Nitroaniline	ND	21	ug/kg	
99-09-2	3-Nitroaniline	ND	30	ug/kg	
100-01-6	4-Nitroaniline	ND	26	ug/kg	
91-20-3	Naphthalene	ND	85	ug/kg	
98-95-3	Nitrobenzene	ND	110	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	80	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	21	ug/kg	
85-01-8	Phenanthrene	65.2	13	ug/kg	
129-00-0	Pyrene	91.9	20	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	93	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		25-121%
4165-62-2	Phenol-d5	84%		24-113%
118-79-6	2,4,6-Tribromophenol	84%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195513-98-1		
Lab Sample ID:	E31183-13	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	78.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16797.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		23-120%
321-60-8	2-Fluorobiphenyl	58%		30-115%
1718-51-0	Terphenyl-d14	84%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195513-98-1		
Lab Sample ID:	E31183-13	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	78.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7359.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	820	ug/kg	
71-43-2	Benzene	ND	160	ug/kg	
75-27-4	Bromodichloromethane	ND	120	ug/kg	
75-25-2	Bromoform	ND	89	ug/kg	
74-83-9	Bromomethane	ND	200	ug/kg	
78-93-3	2-Butanone (MEK)	ND	820	ug/kg	
75-15-0	Carbon disulfide	ND	180	ug/kg	
56-23-5	Carbon tetrachloride	ND	340	ug/kg	
108-90-7	Chlorobenzene	ND	180	ug/kg	
75-00-3	Chloroethane	ND	180	ug/kg	
67-66-3	Chloroform	ND	120	ug/kg	
74-87-3	Chloromethane	ND	210	ug/kg	
124-48-1	Dibromochloromethane	ND	120	ug/kg	
75-34-3	1,1-Dichloroethane	ND	160	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	ug/kg	
75-35-4	1,1-Dichloroethene	ND	160	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	140	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	200	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	160	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	180	ug/kg	
100-41-4	Ethylbenzene	ND	180	ug/kg	
591-78-6	2-Hexanone	ND	210	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	870	ug/kg	
75-09-2	Methylene chloride	ND	71	ug/kg	
100-42-5	Styrene	ND	140	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	120	ug/kg	
127-18-4	Tetrachloroethene	ND	150	ug/kg	
108-88-3	Toluene	ND	150	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	160	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	130	ug/kg	
79-01-6	Trichloroethene	ND	230	ug/kg	
75-01-4	Vinyl chloride	ND	160	ug/kg	
1330-20-7	Xylene (total)	ND	160	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195513-98-1		
Lab Sample ID:	E31183-13	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	78.4
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7359.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
2037-26-5	Toluene-D8	96%		81-117%
460-00-4	4-Bromofluorobenzene	89%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195514-98-1		
Lab Sample ID:	E31183-14	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	73.8
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	4100	27	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<8.1	8.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	2.6	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<27	27	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.68	0.68	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.68	0.68	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<680	680	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	77.9	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.8	6.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	5.6	3.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	3210	14	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	45.8	14	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<680	680	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	16.9	2.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.085	0.085	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.4	5.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<680	680	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<14	14	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.4	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<680	680	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.4	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	9.1	6.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	77.5	2.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195514-98-1		
Lab Sample ID:	E31183-14	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	73.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16798.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	450	ug/kg	
95-57-8	2-Chlorophenol	ND	90	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	22	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	68	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	76	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	450	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	36	ug/kg	
95-48-7	2-Methylphenol	ND	130	ug/kg	
	3&4-Methylphenol	ND	260	ug/kg	
88-75-5	2-Nitrophenol	ND	81	ug/kg	
100-02-7	4-Nitrophenol	ND	110	ug/kg	
87-86-5	Pentachlorophenol	ND	76	ug/kg	
108-95-2	Phenol	ND	94	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	54	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	45	ug/kg	
83-32-9	Acenaphthene	ND	32	ug/kg	
208-96-8	Acenaphthylene	ND	41	ug/kg	
120-12-7	Anthracene	ND	18	ug/kg	
56-55-3	Benzo(a)anthracene	46.1	19	ug/kg	
50-32-8	Benzo(a)pyrene	46.7	29	ug/kg	
205-99-2	Benzo(b)fluoranthene	38.9	24	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	41.9	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	28	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	29	ug/kg	
100-51-6	Benzyl Alcohol	ND	100	ug/kg	
91-58-7	2-Chloronaphthalene	ND	81	ug/kg	
106-47-8	4-Chloroaniline	ND	240	ug/kg	
86-74-8	Carbazole	ND	220	ug/kg	
218-01-9	Chrysene	48.6	29	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	86	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	72	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	90	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	20	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	94	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	99	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195514-98-1		
Lab Sample ID:	E31183-14	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	73.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16798.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	94	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	23	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	50	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	22	ug/kg	
132-64-9	Dibenzofuran	ND	27	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	45	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	45	ug/kg	
84-66-2	Diethyl phthalate	ND	45	ug/kg	
131-11-3	Dimethyl phthalate	ND	45	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	45	ug/kg	
206-44-0	Fluoranthene	112	22	ug/kg	
86-73-7	Fluorene	ND	22	ug/kg	
118-74-1	Hexachlorobenzene	ND	22	ug/kg	
87-68-3	Hexachlorobutadiene	ND	99	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	100	ug/kg	
67-72-1	Hexachloroethane	ND	99	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	15	ug/kg	
78-59-1	Isophorone	ND	72	ug/kg	
91-57-6	2-Methylnaphthalene	ND	86	ug/kg	
88-74-4	2-Nitroaniline	ND	22	ug/kg	
99-09-2	3-Nitroaniline	ND	32	ug/kg	
100-01-6	4-Nitroaniline	ND	27	ug/kg	
91-20-3	Naphthalene	ND	90	ug/kg	
98-95-3	Nitrobenzene	ND	120	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	86	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	22	ug/kg	
85-01-8	Phenanthrene	74.6	14	ug/kg	
129-00-0	Pyrene	136	22	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	99	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		25-121%
4165-62-2	Phenol-d5	83%		24-113%
118-79-6	2,4,6-Tribromophenol	85%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195514-98-1		
Lab Sample ID:	E31183-14	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	73.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16798.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		23-120%
321-60-8	2-Fluorobiphenyl	59%		30-115%
1718-51-0	Terphenyl-d14	86%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195514-98-1		
Lab Sample ID:	E31183-14	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	73.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7363.D	1	02/24/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	960	ug/kg	
71-43-2	Benzene	ND	190	ug/kg	
75-27-4	Bromodichloromethane	ND	150	ug/kg	
75-25-2	Bromoform	ND	100	ug/kg	
74-83-9	Bromomethane	ND	230	ug/kg	
78-93-3	2-Butanone (MEK)	ND	960	ug/kg	
75-15-0	Carbon disulfide	ND	210	ug/kg	
56-23-5	Carbon tetrachloride	ND	400	ug/kg	
108-90-7	Chlorobenzene	ND	210	ug/kg	
75-00-3	Chloroethane	ND	210	ug/kg	
67-66-3	Chloroform	ND	140	ug/kg	
74-87-3	Chloromethane	ND	250	ug/kg	
124-48-1	Dibromochloromethane	ND	140	ug/kg	
75-34-3	1,1-Dichloroethane	ND	190	ug/kg	
107-06-2	1,2-Dichloroethane	ND	120	ug/kg	
75-35-4	1,1-Dichloroethene	ND	190	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	160	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	230	ug/kg	
78-87-5	1,2-Dichloropropane	ND	230	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	190	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	210	ug/kg	
100-41-4	Ethylbenzene	ND	210	ug/kg	
591-78-6	2-Hexanone	ND	250	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	1000	ug/kg	
75-09-2	Methylene chloride	ND	83	ug/kg	
100-42-5	Styrene	ND	160	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	140	ug/kg	
127-18-4	Tetrachloroethene	ND	170	ug/kg	
108-88-3	Toluene	ND	170	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	190	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	150	ug/kg	
79-01-6	Trichloroethene	ND	270	ug/kg	
75-01-4	Vinyl chloride	ND	190	ug/kg	
1330-20-7	Xylene (total)	ND	190	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195514-98-1		
Lab Sample ID:	E31183-14	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	73.8
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7363.D	1	02/24/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		80-120%
2037-26-5	Toluene-D8	94%		81-117%
460-00-4	4-Bromofluorobenzene	84%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195515-98-1		
Lab Sample ID:	E31183-15	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	70.2
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3900	28	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<8.5	8.5	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	2.2	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	<28	28	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.71	0.71	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.71	0.71	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<710	710	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	104	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<7.1	7.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	7.6	3.6	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	3090	14	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	89.5	14	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<710	710	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	17.6	2.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.092	0.092	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.7	5.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<710	710	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<14	14	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.4	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<710	710	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.4	1.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	8.9	7.1	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	84.2	2.8	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195515-98-1		
Lab Sample ID:	E31183-15	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	70.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16799.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic acid	ND	470	ug/kg	
95-57-8	2-Chlorophenol	ND	94	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	24	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	71	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	80	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	470	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	38	ug/kg	
95-48-7	2-Methylphenol	ND	130	ug/kg	
	3&4-Methylphenol	ND	270	ug/kg	
88-75-5	2-Nitrophenol	ND	85	ug/kg	
100-02-7	4-Nitrophenol	ND	110	ug/kg	
87-86-5	Pentachlorophenol	ND	80	ug/kg	
108-95-2	Phenol	ND	99	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	57	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	47	ug/kg	
83-32-9	Acenaphthene	ND	34	ug/kg	
208-96-8	Acenaphthylene	13.6	43	ug/kg	J
120-12-7	Anthracene	29.2	19	ug/kg	
56-55-3	Benzo(a)anthracene	101	20	ug/kg	
50-32-8	Benzo(a)pyrene	77.8	31	ug/kg	
205-99-2	Benzo(b)fluoranthene	155	25	ug/kg	
191-24-2	Benzo(g,h,i)perylene	44.5	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	64.1	34	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	29	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	31	ug/kg	
100-51-6	Benzyl Alcohol	ND	110	ug/kg	
91-58-7	2-Chloronaphthalene	ND	85	ug/kg	
106-47-8	4-Chloroaniline	ND	250	ug/kg	
86-74-8	Carbazole	ND	240	ug/kg	
218-01-9	Chrysene	124	31	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	90	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	76	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	94	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	21	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	99	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	100	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195515-98-1		
Lab Sample ID:	E31183-15	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	70.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16799.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	99	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	24	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	52	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	24	ug/kg	
132-64-9	Dibenzofuran	42.3	28	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	47	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	47	ug/kg	
84-66-2	Diethyl phthalate	ND	47	ug/kg	
131-11-3	Dimethyl phthalate	ND	47	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	47	ug/kg	
206-44-0	Fluoranthene	334	24	ug/kg	
86-73-7	Fluorene	42.0	24	ug/kg	
118-74-1	Hexachlorobenzene	ND	24	ug/kg	
87-68-3	Hexachlorobutadiene	ND	100	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	110	ug/kg	
67-72-1	Hexachloroethane	ND	100	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	33.1	16	ug/kg	
78-59-1	Isophorone	ND	76	ug/kg	
91-57-6	2-Methylnaphthalene	38.2	90	ug/kg	J
88-74-4	2-Nitroaniline	ND	24	ug/kg	
99-09-2	3-Nitroaniline	ND	33	ug/kg	
100-01-6	4-Nitroaniline	ND	29	ug/kg	
91-20-3	Naphthalene	49.2	94	ug/kg	J
98-95-3	Nitrobenzene	ND	120	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	90	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	24	ug/kg	
85-01-8	Phenanthrene	431	14	ug/kg	
129-00-0	Pyrene	399	23	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		25-121%
4165-62-2	Phenol-d5	93%		24-113%
118-79-6	2,4,6-Tribromophenol	94%		19-122%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195515-98-1		
Lab Sample ID:	E31183-15	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	70.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H16799.D	1	02/23/98	THC	02/20/98	OP3334	EH582
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		23-120%
321-60-8	2-Fluorobiphenyl	58%		30-115%
1718-51-0	Terphenyl-d14	92%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195515-98-1		
Lab Sample ID:	E31183-15	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	70.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	07364.D	1	02/24/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	920	ug/kg	
71-43-2	Benzene	ND	180	ug/kg	
75-27-4	Bromodichloromethane	ND	140	ug/kg	
75-25-2	Bromoform	ND	99	ug/kg	
74-83-9	Bromomethane	ND	220	ug/kg	
78-93-3	2-Butanone (MEK)	ND	920	ug/kg	
75-15-0	Carbon disulfide	ND	200	ug/kg	
56-23-5	Carbon tetrachloride	ND	380	ug/kg	
108-90-7	Chlorobenzene	ND	200	ug/kg	
75-00-3	Chloroethane	ND	200	ug/kg	
67-66-3	Chloroform	ND	130	ug/kg	
74-87-3	Chloromethane	ND	240	ug/kg	
124-48-1	Dibromochloromethane	ND	140	ug/kg	
75-34-3	1,1-Dichloroethane	ND	180	ug/kg	
107-06-2	1,2-Dichloroethane	ND	120	ug/kg	
75-35-4	1,1-Dichloroethene	ND	180	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	150	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	220	ug/kg	
78-87-5	1,2-Dichloropropane	ND	220	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	180	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	200	ug/kg	
100-41-4	Ethylbenzene	ND	200	ug/kg	
591-78-6	2-Hexanone	ND	240	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	970	ug/kg	
75-09-2	Methylene chloride	ND	79	ug/kg	
100-42-5	Styrene	ND	160	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	130	ug/kg	
127-18-4	Tetrachloroethene	ND	160	ug/kg	
108-88-3	Toluene	ND	160	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	180	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	150	ug/kg	
79-01-6	Trichloroethene	ND	260	ug/kg	
75-01-4	Vinyl chloride	ND	180	ug/kg	
1330-20-7	Xylene (total)	ND	180	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195515-98-1		
Lab Sample ID:	E31183-15	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	70.2
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7364.D	1	02/24/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoverics	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		80-120%
2037-26-5	Toluene-D8	94%		81-117%
460-00-4	4-Bromofluorobenzene	81%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195516-98-1		
Lab Sample ID:	E31183-16	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
		Percent Solids:	74.6
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	5260	27	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Antimony	<8.0	8.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Arsenic	2.6	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Barium	61.8	27	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Beryllium	<0.67	0.67	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cadmium	<0.67	0.67	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Calcium	<670	670	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Chromium	98.7	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Cobalt	<6.7	6.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Copper	11.5	3.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Iron	4810	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Lead	288	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Magnesium	<670	670	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Manganese	22.4	2.0	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Mercury	<0.087	0.087	mg/kg	1	02/23/98	02/23/98	PGC	SW846 7471A
Nickel	<5.4	5.4	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Potassium	<670	670	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Selenium	<13	13	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Silver	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Sodium	<670	670	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Thallium	<1.3	1.3	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Vanadium	12.4	6.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B
Zinc	663	2.7	mg/kg	1	02/23/98	02/24/98	XH	SW846 6010B

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	195516-98-1		
Lab Sample ID:	E31183-16	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	74.6
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	07365.D	1	02/24/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	840	ug/kg	
71-43-2	Benzene	ND	170	ug/kg	
75-27-4	Bromodichloromethane	ND	130	ug/kg	
75-25-2	Bromoform	ND	90	ug/kg	
74-83-9	Bromomethane	ND	200	ug/kg	
78-93-3	2-Butanone (MEK)	ND	840	ug/kg	
75-15-0	Carbon disulfide	ND	180	ug/kg	
56-23-5	Carbon tetrachloride	ND	350	ug/kg	
108-90-7	Chlorobenzene	ND	180	ug/kg	
75-00-3	Chloroethane	ND	180	ug/kg	
67-66-3	Chloroform	ND	120	ug/kg	
74-87-3	Chloromethane	ND	220	ug/kg	
124-48-1	Dibromochloromethane	ND	120	ug/kg	
75-34-3	1,1-Dichloroethane	ND	170	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	ug/kg	
75-35-4	1,1-Dichloroethene	ND	170	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	140	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	200	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	160	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	180	ug/kg	
100-41-4	Ethylbenzene	ND	180	ug/kg	
591-78-6	2-Hexanone	ND	220	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	890	ug/kg	
75-09-2	Methylene chloride	ND	72	ug/kg	
100-42-5	Styrene	ND	140	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	120	ug/kg	
127-18-4	Tetrachloroethene	ND	150	ug/kg	
108-88-3	Toluene	ND	150	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	160	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	130	ug/kg	
79-01-6	Trichloroethene	ND	230	ug/kg	
75-01-4	Vinyl chloride	ND	160	ug/kg	
1330-20-7	Xylene (total)	ND	160	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	195516-98-1		
Lab Sample ID:	E31183-16	**Date Sampled:**	02/19/98
Matrix:	SO - Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	74.6
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7365.D	1	02/24/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		80-120%
2037-26-5	Toluene-D8	95%		81-117%
460-00-4	4-Bromofluorobenzene	83%		74-121%

(a) Methanol preservation/extraction.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	19RB01-98-1		
Lab Sample ID:	E31183-17	**Date Sampled:**	02/19/98
Matrix:	AQ - Field Blank Soil	**Date Received:**	02/20/98
		Percent Solids:	n/a
Project:	NWS - Earle, Colts Neck, NJ		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	<200	200	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Antimony	<5.0	5.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Arsenic	<5.0	5.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Barium	<200	200	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Beryllium	<5.0	5.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Cadmium	<4.0	4.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Calcium	<5000	5000	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Chromium	<10	10	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Cobalt	<50	50	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Copper	<25	25	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Iron	<100	100	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Lead	<3.0	3.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Magnesium	<5000	5000	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Manganese	<15	15	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Mercury	<0.20	0.20	ug/l	1	02/23/98	02/24/98	PGC	EPA 245.1
Nickel	<40	40	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Potassium	<5000	5000	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Selenium	<5.0	5.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Silver	<10	10	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Sodium	<5000	5000	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Thallium	<5.0	5.0	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Vanadium	<50	50	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7
Zinc	<20	20	ug/l	1	02/23/98	02/23/98	XH	EPA 200.7

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	19RB01-98-1		
Lab Sample ID:	E31183-17	**Date Sampled:**	02/19/98
Matrix:	AQ - Field Blank Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	n/a
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12277.D	1	02/23/98	THC	02/20/98	OP3282	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-68-0	Benzoic Acid	ND	5.0	ug/l	
95-57-8	2-Chlorophenol	ND	0.98	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	0.74	ug/l	
120-83-2	2,4-Dichlorophenol	ND	0.95	ug/l	
105-67-9	2,4-Dimethylphenol	ND	1.4	ug/l	
51-28-5	2,4-Dinitrophenol	ND	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.67	ug/l	
95-48-7	2-Methylphenol	ND	0.91	ug/l	
	3&4-Methylphenol	ND	1.2	ug/l	
88-75-5	2-Nitrophenol	ND	0.81	ug/l	
100-02-7	4-Nitrophenol	ND	0.99	ug/l	
87-86-5	Pentachlorophenol	ND	0.69	ug/l	
108-95-2	Phenol	ND	1.2	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.45	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.62	ug/l	
83-32-9	Acenaphthene	ND	1.2	ug/l	
208-96-8	Acenaphthylene	ND	1.2	ug/l	
120-12-7	Anthracene	ND	1.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.4	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.3	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.4	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.4	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	1.2	ug/l	
85-68-7	Butyl benzyl phthalate	ND	1.5	ug/l	
100-51-6	Benzyl Alcohol	ND	0.93	ug/l	
91-58-7	2-Chloronaphthalene	ND	1.3	ug/l	
106-47-8	4-Chloroaniline	ND	1.3	ug/l	
86-74-8	Carbazole	ND	1.4	ug/l	
218-01-9	Chrysene	ND	1.5	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	1.4	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.3	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1.3	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.4	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.2	ug/l	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	19RB01-98-1		
Lab Sample ID:	E31183-17	**Date Sampled:**	02/19/98
Matrix:	AQ - Field Blank Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	n/a
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12277.D	1	02/23/98	THC	02/20/98	OP3282	EF1211
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	1.2	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.4	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.3	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	1.7	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.6	ug/l	
132-64-9	Dibenzofuran	ND	1.3	ug/l	
84-74-2	Di-n-butyl phthalate	ND	1.4	ug/l	
117-84-0	Di-n-octyl phthalate	ND	1.6	ug/l	
84-66-2	Diethyl phthalate	ND	1.5	ug/l	
131-11-3	Dimethyl phthalate	ND	1.5	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1.5	ug/l	
206-44-0	Fluoranthene	ND	1.2	ug/l	
86-73-7	Fluorene	ND	1.4	ug/l	
118-74-1	Hexachlorobenzene	ND	1.4	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.2	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.74	ug/l	
67-72-1	Hexachloroethane	ND	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.4	ug/l	
78-59-1	Isophorone	ND	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.2	ug/l	
88-74-4	2-Nitroaniline	ND	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	1.7	ug/l	
100-01-6	4-Nitroaniline	ND	1.6	ug/l	
91-20-3	Naphthalene	ND	1.3	ug/l	
98-95-3	Nitrobenzene	ND	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	1.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	1.5	ug/l	
85-01-8	Phenanthrene	ND	1.3	ug/l	
129-00-0	Pyrene	ND	1.4	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		21-100%
4165-62-2	Phenol-d5	37%		10-94%
118-79-6	2,4,6-Tribromophenol	88%		10-123%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	19RB01-98-1		
Lab Sample ID:	E31183-17	**Date Sampled:**	02/19/98
Matrix:	AQ - Field Blank Soil	**Date Received:**	02/20/98
Method:	SW846 8270	**Percent Solids:**	n/a
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F12277.D	1	02/23/98	THC	02/20/98	OP3282	EF1211
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		35-114%
321-60-8	2-Fluorobiphenyl	77%		43-116%
1718-51-0	Terphenyl-d14	84%		33-141%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	19RB01-98-1		
Lab Sample ID:	E31183-17	**Date Sampled:**	02/19/98
Matrix:	AQ - Field Blank Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	n/a
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	O7384.D	1	02/24/98	GTT	n/a	n/a	VO1258
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.80	ug/l	
75-27-4	Bromodichloromethane	ND	0.83	ug/l	
75-25-2	Bromoform	ND	0.85	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	0.73	ug/l	
75-15-0	Carbon disulfide	ND	0.49	ug/l	
56-23-5	Carbon tetrachloride	ND	0.57	ug/l	
108-90-7	Chlorobenzene	ND	0.93	ug/l	
75-00-3	Chloroethane	ND	1.2	ug/l	
67-66-3	Chloroform	ND	0.88	ug/l	
74-87-3	Chloromethane	ND	1.9	ug/l	
124-48-1	Dibromochloromethane	ND	0.69	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.67	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.95	ug/l	
75-35-4	1,1-Dichloroethene	ND	0.79	ug/l	
156-69-4	cis-1,2-Dichloroethene	ND	0.80	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.67	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.67	ug/l	
100-41-4	Ethylbenzene	ND	0.47	ug/l	
591-78-6	2-Hexanone	ND	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	0.63	ug/l	
100-42-5	Styrene	ND	0.78	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ug/l	
127-18-4	Tetrachloroethene	ND	0.87	ug/l	
108-88-3	Toluene	ND	0.85	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.6	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.6	ug/l	
1330-20-7	Xylene (total)	ND	1.2	ug/l	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	19RB01-98-1		
Lab Sample ID:	E31183-17	**Date Sampled:**	02/19/98
Matrix:	AQ - Field Blank Soil	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	n/a
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	O7384.D	1	02/24/98	GTT	n/a	n/a	VO1258
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		86-118%
2037-26-5	Toluene-D8	99%		88-110%
460-00-4	4-Bromofluorobenzene	103%		86-115%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLK		
Lab Sample ID:	E31183-18	**Date Sampled:**	02/19/98
Matrix:	SO - Trip Blank Methanol	**Date Received:**	02/20/98
Method:	SW846 8260	**Percent Solids:**	n/a
Project:	NWS - Earle, Colts Neck, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O7343.D	1	02/23/98	GTT	n/a	n/a	VO1259
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	250	ug/kg	
71-43-2	Benzene	ND	50	ug/kg	
75-27-4	Bromodichloromethane	ND	38	ug/kg	
75-25-2	Bromoform	ND	27	ug/kg	
74-83-9	Bromomethane	ND	60	ug/kg	
78-93-3	2-Butanone (MEK)	ND	250	ug/kg	
75-15-0	Carbon disulfide	ND	55	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	ug/kg	
108-90-7	Chlorobenzene	ND	55	ug/kg	
75-00-3	Chloroethane	ND	55	ug/kg	
67-66-3	Chloroform	ND	36	ug/kg	
74-87-3	Chloromethane	ND	65	ug/kg	
124-48-1	Dibromochloromethane	ND	37	ug/kg	
75-34-3	1,1-Dichloroethane	ND	50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	32	ug/kg	
75-35-4	1,1-Dichloroethene	ND	50	ug/kg	
156-69-4	cis-1,2-Dichloroethene	ND	42	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	60	ug/kg	
78-87-5	1,2-Dichloropropane	ND	60	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	48	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	55	ug/kg	
100-41-4	Ethylbenzene	ND	55	ug/kg	
591-78-6	2-Hexanone	ND	65	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	260	ug/kg	
75-09-2	Methylene chloride	ND	22	ug/kg	
100-42-5	Styrene	ND	42	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	36	ug/kg	
127-18-4	Tetrachloroethene	ND	45	ug/kg	
108-88-3	Toluene	ND	44	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	49	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	40	ug/kg	
79-01-6	Trichloroethene	ND	70	ug/kg	
75-01-4	Vinyl chloride	ND	48	ug/kg	
1330-20-7	Xylene (total)	ND	49	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

ATTACHMENT 2

DRAFT

GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS

Final Draft for Internal Use Only

March, 1991

New Jersey Department of Environmental Protection
Division of Hazardous Site Mitigation

GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS

INTRODUCTION

The purpose of this guidance is to establish a conceptual framework for evaluating contaminated sediments associated with uncontrolled hazardous waste sites. The Environmental Toxicology and Risk Assessment (ETRA) Section of NJ DEP has developed this document to promote a consistent methodology for determining contaminants of concern, current and potential ecological impacts, and appropriate remedial activities. Successful evaluation and risk management of contaminated sediments requires knowledge of both contaminant concentrations and site specific variables which affect the expression of environmental impacts.

This report presents the tools that are available to qualitatively and/or quantitatively appraise the actual or potential effects of polluted sediments on the aquatic environment. The level of effort required to adequately evaluate contaminated sediments must be made on a case-by-case basis. The information presented in this document is based upon current scientific and governmental literature and is consistent with USEPA's Risk Assessment Guidelines for Superfund, Volume 2: Environmental Evaluation Manual (EEM: March 1989, EPA/540/1-89/001).

An adequate assessment of sediment quality involves three components:

1. The concentration of contaminants (Bulk chemistry)
2. A measure of bioavailability and toxicity of environment samples (Tissue analysis and bioassays)
3. Assessment of resident biota (Community bioassessment) (International Joint Commission 1988, Chapman 1989, USEPA 1989a, USEPA 1990).

These three components provide complementary data and no single component can be used to predict the measurements of the other components. For instance, sediment chemistry provides information on the extent of contamination but not on biological effects. Sediment bioassays provide direct evidence of sediment toxicity but cannot discriminate among contaminants nor predict actual in-situ responses. In-situ responses of resident biota, measured by infauna community analysis, provides direct evidence of contaminant-related effects, but only if confounding effects not related to pollution can be excluded. A sediment evaluation program must be based on several techniques to provide strong evidence for the identification, delineation, and ranking of pollution induced degradation.

the plan must be thoroughly reviewed prior to its acceptance.

It is imperative that in the sediment sampling program, all data be collected considering the overall needs of the assessment. As it has been noted earlier, bulk chemistry data by itself is of limited usefulness and it is required that all sediment samples be analyzed for total organic carbon and particle grain size in addition to site specific analytical parameters. This information is not only necessary to fully characterize each sediment sample but will also assist in any subsequent modeling and assessment efforts.

One final note on sediment sampling; all sampling methods disturb the sediment integrity to a degree. Choosing the most appropriate sediment sampler for a study will depend on the sediment's characteristics, the efficiency required, and the study objectives. Sediment samplers can be divided into two categories; dredges and corers. Dredges are generally easier to use and can collect adequate quantities of sediment for most studies. The disadvantages of dredge sampling are shallow penetration depth and the potential loss of fine sediments and water soluble compounds during collection. Many of the problems associated with dredge samplers can be overcome by the use of corers. The best corers for most sediment studies are hand corers, percussion (gravity) corers, or large box-corers. These corers maintain the integrity of the sediments and the depth profile. This is important for situations where there is a need to determine the vertical distribution of contaminants; for example at sites that the discharge of groundwater may be the primary route of migration of contaminants into an aquatic system. The type of sampling device utilized will be determined by site specific characteristics and study objectives.

1.2 SEDIMENT SCREENING CRITERIA

This guidance presents two established screening level criteria. These levels should be viewed and utilized as screening levels only and exceedances of these values can merely suggest the potential for adverse biological effects. If more site specific, chemical specific, or biota specific toxicity data are available, these can be substituted for screening levels subsequent to concurrence by ETRA. There are several efforts presently underway to develop additional sediment screening levels and criteria. This document will be routinely revised and updated to represent current scientific and regulatory consensus.

ETRA's policy requires subsequent ecological evaluation of sediments if screening levels are exceeded. Exceptions can be made if there is a consensus among the project team that further work is not necessary. However, adequate justification must be presented to support the recommendation

3. Determine contaminant concentration in sediment by standard sampling, with the study design similar to that employed for TOC. If TOC or other variables suggest that significant stratification is present, sufficient measurements should be available for each stratum. The contaminant concentration must be presented on a <u>dry</u> <u>weight</u> basis.

4. Determine appropriate sediment quality criteria value from Table 1. These criteria were derived from equations relating organic carbon adsorption to octanol:water partitioning. Table 1 presents the lower of two types of criteria developed by USEPA as Ambient Water Quality Criteria: one criterion (Final Chronic Value) developed to protect aquatic life from chronic toxicity, and one (Final Residual Value) to protect the human use of aquatic biota. In general, it is NJDEP policy, in keeping with the State's "nondegradation" standards and CERCLA mandate to protect the environment, that criteria be selected which are maximally protective of aquatic life.

5. Multiply the appropriate sediment criterion by the TOC of the sediment. Use of the mean, lower, or upper confidence limit in this calculation is a decision to be made by the site risk management team. The upper confidence limit represents a concentration above which adverse impacts to biota are expected with 95% certainty. The lower confidence limit represents a concentration below which no adverse impacts are expected (from a particular substance) with 95% certainty (EPA 1988). Thus, while the mean might be an acceptable "compromise" number to employ, the lower confidence limit might be used when the environment is pristine or particularly valuable and the upper when the environment is subject to substantial unrelated impacts (i.e. urban waterways). The NJDEP surface water classification for a particular waterbody can be used to assist in the decision as to what criterion to employ.

The value resulting from multiplication of the criterion by the TOC is the sediment-specific criterion value. Comparison of this value with measured sediment concentrations yields information on the relative risk of contaminant residues in that particular sediment. It is possible that the calculated sediment criteria value may be below laboratory detection limits. In these situations, any detected quantity of the contaminant should be considered as an exceedance of criteria.

Table 1. Sediment Quality Criteria for selected organic compounds (FW=fresh water, SW=salt water, NA=not available).

Compound	Sediment Criterion (ug/g Carbon) (top # is FW criterion, bottom # SW critierion).		
		95% Confidence Interval	
	Mean	Lower	Upper
Acenaphthene	730 NA	180 NA	3030 NA
Anilene	0.0662 0.248	0.0169 0.0635	0.262 0.984
Chlorpyrifos	3.22 0.44	0.831 0.114	12.7 1.73
DDT	0.828 0.828	0.183 0.183	3.80 3.80
Dieldrin	0.130 0.130	0.00976 0.00976	1.79 1.79
Endrin	0.0532 0.0532	0.00654 0.00654	0.443 0.443
Ethyl Parathion	0.0810 NA	0.0160 NA	0.416 NA
Heptachlor	0.110 0.104	0.0148 0.014	0.840 0.796
Lindane	0.157 NA	0.0394 NA	0.636 NA
Phenanthrene	139 102	32.6 23.8	605 442
PCB (1245)*	19.5 41.8	3.87 8.29	99.9 214

* should be used as a surrogate for PCBs in general

The sediment quality criteria are reference numbers used to identify the presence of contamination exceeding levels potentially harmful to aquatic life. Specific cleanup objectives are to be developed on a case-by-case basis.

Table 2. Summary of ER-L and ER-M, concentrations for selected chemicals in sediment (dry weight).

Chemical Analyte	ER-L Concentration	ER-M Concentration	Subjective Degree of Confidence In ER-L/ER-M Values
Trace Elements (ppm)			
Antimony	2	25	Moderate/moderate
Arsenic	33	85	Low/moderate
Cadmium	5	9	High/high
Chromium	80	145	Moderate/moderate
Copper	70	390	High/high
Lead	35	110	Moderate/high
Mercury	0.15	1.3	Moderate/high
Nickel	30	50	Moderate/moderate
Silver	1	2.2	Moderate/moderate
Zinc	120	270	High/high
Pesticides (ppb)			
Chlordane	0.5	6	Low/low
Polynuclear Aromatic Hydrocarbons (ppb)			
Acenapthene	150	650	Low/low
Anthracene	85	960	Low/moderate
Benzo(a) anthracene	230	1600	Low/moderate
Benzo(a) pyrene	400	2500	Moderate/moderate
Chrysene	400	2800	Moderate/moderate
Dibenz(a,h) anthracene	60	260	Moderate/moderate
Fluoranthene	600	3600	High/high
2-methylnaphthalene	65	670	Low/moderate
Napthalene	340	2100	Moderate/high
Phenanthrene	225	1380	Moderate/moderate
Pyrene	350	2200	Moderate/moderate
Total PAH	4000	35000	Low/low

Source: NOAA 1990

The ER-L and ER-M are reference numbers used to identify the presence of contamination exceeding levels potentially harmful to aquatic life. Specific cleanup objectives are to be developed on a case-by-case basis.

There are many factors that can affect the bioavailability of a contaminant associated with sediments and the biouptake of the contaminant by aquatic species. Among these are specific properties of the sediment such as organic carbon content, redox potential (Eh), and pH. Additionally there are specific properties of the contaminants that are important in evaluating its potential to bioaccumulate. The most important of these are its octanol-water partition coefficient (Kow), a measure of a compound's lipophilic potential. The higher the Kow, the more likely the contaminant is to accumulate. Additionally, for some chemicals, a Bioconcentration Factor (BCF) can be found in the literature. Again, compounds with high BCFs are more likely to accumulate in biological tissue.

To measure actual/potential impacts to ecological resources and risks to human health from substances accumulated in aquatic organisms, biological sampling is the preferred method for obtaining quantitative data. The species of aquatic organisms that are to be sampled will be determined by site specific data requirements and ecologic characteristics.

Fish are a useful tool in monitoring biological uptake and have been proven to be good indicators of both organic and inorganic contamination problems. Various fish species are used in contamination monitoring programs creating an extensive database for background levels of many compounds.

Care must be taken in choosing among fish species to be sampled as many fish species are mobile and may not be entirely indicative of local conditions. When appropriate, fish species should be selected that are resident year round. If a measurement of maximum accumulation is desired the species should be high in lipid content and be long-lived. Two species that meet these criteria and are being used in sediment monitoring programs in the Great Lakes are the Common Carp (Cyprinus carpio) and the catfish species, Brown Bullhead (Ictalurus nebulosus) (International Joint Commission 1988).

Other species can be chosen as part of a sampling program depending on the site specific data needs. At sites where commercial/recreational fish species are known to be present and fishing activity observed, these species should be included in the program to address public health risks and community concerns. Furthermore, forage fish species can be sampled, usually whole fish composites of several individuals, to evaluate risks to predatory fish species and wildlife.

It should be noted that biological sampling programs are not limited to fish species. Mollusc and crustacean species have been successfully utilized to monitor biological uptake of sediment contaminants (Ellis 1980). The behavior of these species, which places them in direct contact with sediment, make them particularly useful in measuring the potential for biological uptake of sediment contaminants. Species that have

water are being adapted for use in sediment/pore water bioassays.

The specific type and technique of bioassay appropriate in a particular situation will be determined by a variety of site specific factors. These include but are not limited to: (1) type of water body present, (2) nature and extent of contamination, (3) local biota, and (4) site specific information needs. Numerous studies have shown that different testing regimes with the same sediment and organism, can result in different bioassay responses. Additionally, bioassays with different organisms conducted on the same sediment do not always give similar results.

It is imperative that a sediment bioassay program designed for a particular site not rely on a single species, technique, or endpoint. No single test is adequate to allow a detection of an impact or distinguish among the various toxicants or stresses present at a hazardous waste site.

Chapman (1988) has identified four different levels of response measurable by sediment bioassays. These are:

(1) acute lethal,
(2) sublethal/chronic,
(3) microbial, and
(4) genotoxic/cytotoxic.

Extensive testing and methods development have occurred for three of these levels (acute lethal, sublethal, and microbial) and it is recommended that any sediment bioassay program utilize a battery of tests incorporating at least these three levels. For the evaluation of contaminated sediments, the results of a wide spectrum of toxicity bioassays provide the most valuable and biologically relevant information.

This next section provides details on several of the more widely used bioassays. As mentioned previously, the particular tests that are performed will be determined by site specific characteristics and needs. This list can serve as a starting point in the selection of appropriate tests but should not be considered as all inclusive.

1) Marine Amphipod 10-day Bioassay (*Rhepoxynius abronius*).
   - Utilizes whole sediments in test.
   - Has extensive methodological development including QA/QC procedures.
   - Is simple and relatively inexpensive.
   - *Rhepoxynius abronius* has demonstrated sensitivity and usefulness in determining toxicity data applicable to hazardous waste situations.
   - Provides information on multiple-endpoints.

There are numerous other techniques reported in the literature and it is expected that a multitude of new techniques will be developed in the future. It may be advantageous within the context of the Superfund program to utilize tests for which historical information exists. The results of the bioassay can then be compared to previous studies to appraise the relative toxicity of the sediment in question. Furthermore, the literature can provide insight to unexpected bioassay results and also assist in characterizing bioassay data resulting from exposure to sediments contaminated with multiple pollutants.

Standardized methodologies and Quality Control/Quality Assurance procedures are available for some sediment bioassays (Chapman 1988, Swartz et al 1985). These references can be consulted for guidance in developing a workplan suitable for the selected battery of tests.

4. COMMUNITY LEVEL BIOASSESSMENTS

The assessment of community structure and function of benthic macroinvertebrates are used extensively to provide direct evidence of contaminant-related effects in the environment. Benthic macroinvertebrates are relatively sedentary organisms that inhabit or depend upon the sediment environment for their various life functions. They are sensitive to both long term and short-term changes in sediment and water quality. Furthermore, they can be easily collected in large numbers in even the smallest of streams and can be sampled at relatively low cost per sample.

Historically, benthic macroinvertebrate community analyses have been performed by the EPA and state regulatory agencies to evaluate the ecological or biological integrity of aquatic systems as mandated by specific sections of the Clean Water Act (USEPA 1989a). Recently, such evaluations have been recommended for use in Superfund to appraise onsite and offsite biological impacts (USEPA 1989b).

A wide variety of procedures have been developed to evaluate how changes in environmental quality affect benthic communities (Krueger, et al. 1988). A complete description of these methods are beyond the scope of this document. However, these procedures can be divided into those that measure community structure and those that measure community function. Structural community measures are those related to the taxonomic distribution of the community and include measures such as species abundance, richness, dominance, and pollution tolerance. Functional community measures are those involving trophic level (feeding group) and morphological assessments and include measures based on feeding groups such as shredder, collector, scraper, and predator. Sediment quality assessments based on the benthic macroinvertebrate community

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