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Clean Harbors

MURPHY'S WASTE OIL SERVICE, INC.

Volume 2 of 3

Corrective Action Investigation Report

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA 01801

April 15, 1996

Prepared by:
Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-14, SS-5
Sample Type: Soil

CHES Lab #: 9510031-04M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/06/95	10/09/95	3005/6010(c)
Arsenic - Total	6	ND	10/06/95	10/10/95	3050/6010(c)
Beryllium - Total	0.032	ND	10/06/95	10/10/95	3050/6010(c)
Cadmium - Total	0.32	ND	10/06/95	10/10/95	3050/6010(c)
Chromium - Total	0.97	9.4	10/06/95	10/10/95	3050/6010(c)
Copper - Total	0.97	12	10/06/95	10/10/95	3050/6010(c)
Lead - Total	3	60	10/06/95	10/10/95	3050/6010(c)
Mercury - Total	0.0653	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	0.97	1.3	10/06/95	10/10/95	3050/6010(c)
Selenium - Total	6	ND	10/06/95	10/10/95	3050/6010(c)
Silver - Total	0.75	ND	10/06/95	10/09/95	3005/6010(c)
Thallium - Total	10	ND	10/06/95	10/10/95	3050/6010(c)
Zinc - Total	1.3	25	10/06/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-14, SS-5
Sample Type: Soil

CHES Lab #: 9510031-04M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.4	ND	mg/kg	10/05/95	9010(c)
Total Solids	--	85.7	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11,SS-3
Sample Type: Soil

CHES Lab #: 9510031-050
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	49	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 80%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11,SS-3
Sample Type: Soil

CHES Lab #: 9510031-05M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	6	10/06/95	10/09/95	3005/6010(c)
Arsenic - Total	8	ND	10/06/95	10/10/95	3050/6010(c)
Beryllium - Total	0.038	ND	10/06/95	10/10/95	3050/6010(c)
Cadmium - Total	0.38	ND	10/06/95	10/10/95	3050/6010(c)
Chromium - Total	1.1	400	10/06/95	10/11/95	3050/6010(c)
Copper - Total	1.1	13	10/06/95	10/10/95	3050/6010(c)
Lead - Total	4	20	10/06/95	10/10/95	3050/6010(c)
Mercury - Total	0.0585	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.1	ND	10/06/95	10/10/95	3050/6010(c)
Selenium - Total	8	ND	10/06/95	10/10/95	3050/6010(c)
Silver - Total	0.76	ND	10/06/95	10/09/95	3005/6010(c)
Thallium - Total	10	ND	10/06/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	41	10/06/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-11,SS-3

Sample Type: Soil

CHES Lab #: 9510031-05M

Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.5	ND	mg/kg	10/05/95	9010(c)
Total Solids	--	87.8	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11,SS-5
Sample Type: Soil

CHES Lab #: 9510031-060
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	26	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 91%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11,SS-5
Sample Type: Soil

CHES Lab #: 9510031-06M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	7	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.033	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.33	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	1.0	38	10/09/95	10/10/95	3050/6010(c)
Copper - Total	1.0	1.5	10/09/95	10/10/95	3050/6010(c)
Lead - Total	3	4	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0463	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.0	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	7	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.78	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	10	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.3	11	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11,SS-5
Sample Type: Soil

CHES Lab #: 9510031-06M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.7	ND	mg/kg	10/06/95	9010(c)
Total Solids	--	78.6	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMP.OF MW-11,SS-3,SS-5,SS-6
Sample Type: Soil

CHES Lab #: 9510031-08L
Date Received: 10/03/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/16/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	5.4
4	4.75	1.8
10	2.00	2.9
20	0.850	3.3
40	0.425	9.0
60	0.250	32.7
100	0.150	29.2
200	0.075	12.9
Bottom Tray	<0.075	2.7



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-15, SS-5
Sample Type: Soil

CHES Lab #: 9510031-090
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	11	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 89%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-15, SS-5
Sample Type: Soil

CHES Lab #: 9510031-09M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.038	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.38	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	1.1	9.6	10/09/95	10/10/95	3050/6010(c)
Copper - Total	1.1	4.2	10/09/95	10/10/95	3050/6010(c)
Lead - Total	4	ND	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0743	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.1	2.6	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.77	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	10	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	9.8	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-15, SS-5
Sample Type: Soil

CHES Lab #: 9510031-09M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.7	ND	mg/kg	10/06/95	9010(c)
Total Solids	--	85.0	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-15, SS-7
Sample Type: Soil

CHES Lab #: 9510031-100
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
No significant hydrocarbons observed.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 89%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-15, SS-7
Sample Type: Soil

CHES Lab #: 9510031-10M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.039	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.39	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	1.2	6.6	10/09/95	10/10/95	3050/6010(c)
Copper - Total	1.2	4.6	10/09/95	10/10/95	3050/6010(c)
Lead - Total	4	ND	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0676	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.2	2.2	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.85	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	10	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	11	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-15, SS-7
Sample Type: Soil

CHES Lab #: 9510031-10M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.0	ND	mg/kg	10/06/95	9010(c)
Total Solids	--	84.5	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-16, SS-6
Sample Type: Soil

CHES Lab #: 9510031-110
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	240	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-16, SS-6
Sample Type: Soil

CHES Lab #: 9510031-11M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	7	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.034	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.34	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	1.0	6.9	10/09/95	10/10/95	3050/6010(c)
Copper - Total	1.0	3.5	10/09/95	10/10/95	3050/6010(c)
Lead - Total	3	8	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0672	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.0	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	7	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.67	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	10	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.4	10	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-16, SS-6
Sample Type: Soil

CHES Lab #: 9510031-11M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/06/95	9010(c)
Total Solids	--	87.1	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: Clean Harbors

Laboratory Job Number: L9507726

Address: 325 Wood Road

Invoice Number: 77917

Braintree, MA 02184

Date Received: 10-OCT-95

Attn: Peter Conroy

Date Reported: 16-OCT-95

Project Number: 9510031-2

Delivery Method: Alpha

Site:

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9507726-01	9510031-01A	
L9507726-02	9510031-02A	
L9507726-03	9510031-03A	
L9507726-04	9510031-04A	
L9507726-05	9510031-05A	
L9507726-06	9510031-06A	
L9507726-07	9510031-09A	
L9507726-08	9510031-10A	
L9507726-09	9510031-11A	
L9507726-10	9510032-01A	
L9507726-11	9510032-02A	
L9507726-12	9510032-04A	

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-01

Date Collected: 02-OCT-95

9510031-01A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	81.	%	0.10	3	2540B	12-Oct	ST
Volatile Organics by GC/MS				1	8260	11-Oct 11-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
1-Chloroethylvinyl ether	ND	ug/kg	50.				
tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-01
9510031-01A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	11-Oct 11-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	103.	%					
4-Bromofluorobenzene	77.0	%					
Dibromofluoromethane	100.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-02

Date Collected: 02-OCT-95

9510031-02A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	87.	%	0.10	3	2540B	12-Oct	ST
Volatile Organics by GC/MS				1	8260	11-Oct 11-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
?-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-02
9510031-02A

PARAMETER	RESULT	UNITS	SDL	REF	METHOD	DATE PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	11-Oct 11-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
-Butylbenzene	ND	ug/kg	25.				
ac-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	96.0	%					
4-Bromofluorobenzene	80.0	%					
Dibromofluoromethane	89.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-03

Date Collected: 02-OCT-95

9510031-03A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	85.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	12-Oct 12-Oct	DB
Methylene chloride	ND	ug/kg	2500				
1,1-Dichloroethane	ND	ug/kg	750				
Chloroform	ND	ug/kg	750				
Carbon tetrachloride	ND	ug/kg	500				
1,2-Dichloropropane	ND	ug/kg	1800				
Dibromochloromethane	ND	ug/kg	500				
1,1,2-Trichloroethane	ND	ug/kg	750				
n-Chloroethylvinyl ether	ND	ug/kg	5000				
Tetrachloroethene	ND	ug/kg	750				
Chlorobenzene	ND	ug/kg	1800				
Trichlorofluoromethane	ND	ug/kg	2500				
1,2-Dichloroethane	ND	ug/kg	750				
1,1,1-Trichloroethane	ND	ug/kg	500				
Bromodichloromethane	ND	ug/kg	500				
trans-1,3-Dichloropropene	ND	ug/kg	750				
cis-1,3-Dichloropropene	ND	ug/kg	500				
Bromoform	ND	ug/kg	500				
1,1,2,2-Tetrachloroethane	ND	ug/kg	500				
Benzene	ND	ug/kg	500				
Toluene	ND	ug/kg	750				
Ethylbenzene	ND	ug/kg	500				
Chloromethane	ND	ug/kg	5000				
Bromomethane	ND	ug/kg	1000				
Vinyl chloride	ND	ug/kg	1800				
Chloroethane	ND	ug/kg	1000				
1,1-Dichloroethene	ND	ug/kg	750				
trans-1,2-Dichloroethene	ND	ug/kg	750				
Trichloroethene	ND	ug/kg	500				
1,2-Dichlorobenzene	ND	ug/kg	5000				
1,3-Dichlorobenzene	ND	ug/kg	5000				
1,4-Dichlorobenzene	ND	ug/kg	5000				
Methyl tert butyl ether	ND	ug/kg	5000				
Xylenes	1300	ug/kg	500				
cis-1,2-Dichloroethene	ND	ug/kg	500				
Dibromomethane	ND	ug/kg	5000				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-03
9510031-03A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	12-Oct 12-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	5000				
Iodomethane	ND	ug/kg	5000				
1,2,3-Trichloropropane	ND	ug/kg	5000				
Styrene	ND	ug/kg	500				
Dichlorodifluoromethane	ND	ug/kg	5000				
Acetone	ND	ug/kg	5000				
Carbon Disulfide	ND	ug/kg	5000				
2-Butanone	ND	ug/kg	2300				
Vinyl Acetate	ND	ug/kg	5000				
4-Methyl-2-pentanone	ND	ug/kg	5000				
2-Hexanone	ND	ug/kg	5000				
Ethyl methacrylate	ND	ug/kg	5000				
Acrolein	ND	ug/kg	13000				
Acrylonitrile	ND	ug/kg	5000				
Bromochloromethane	ND	ug/kg	2500				
2,2-Dichloropropane	ND	ug/kg	2500				
1,2-Dibromoethane	ND	ug/kg	2500				
1,3-Dichloropropane	ND	ug/kg	2500				
1,1,1,2-Tetrachloroethane	ND	ug/kg	2500				
Bromobenzene	ND	ug/kg	2500				
-Butylbenzene	ND	ug/kg	2500				
ec-Butylbenzene	ND	ug/kg	2500				
tert-Butylbenzene	ND	ug/kg	2500				
o-Chlorotoluene	ND	ug/kg	2500				
p-Chlorotoluene	ND	ug/kg	2500				
1,2-Dibromo-3-chloropropane	ND	ug/kg	2500				
Hexachlorobutadiene	ND	ug/kg	2500				
Isopropylbenzene	ND	ug/kg	2500				
p-Isopropyltoluene	ND	ug/kg	2500				
Naphthalene	ND	ug/kg	2500				
n-Propylbenzene	ND	ug/kg	2500				
1,2,3-Trichlorobenzene	ND	ug/kg	2500				
1,2,4-Trichlorobenzene	ND	ug/kg	2500				
1,3,5-Trimethylbenzene	ND	ug/kg	2500				
1,2,4-Trimethylbenzene	ND	ug/kg	2500				
trans-1,4-Dichloro-2-butene	ND	ug/kg	2500				
Ethyl ether	ND	ug/kg	13000				
SURROGATE RECOVERY							
Toluene-d8	104.	%					
4-Bromofluorobenzene	111.	%					
Dibromofluoromethane	93.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-04

Date Collected: 02-OCT-95

9510031-04A

Date Received : 10-OCT-95

Sample Matrix:

SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	88.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	12-Oct 12-Oct	DB
Methylene chloride	ND	ug/kg	1000				
1,1-Dichloroethane	ND	ug/kg	300				
Chloroform	ND	ug/kg	300				
Carbon tetrachloride	ND	ug/kg	200				
1,2-Dichloropropane	ND	ug/kg	700				
Dibromochloromethane	ND	ug/kg	200				
1,1,2-Trichloroethane	ND	ug/kg	300				
n-Chloroethylvinyl ether	ND	ug/kg	2000				
tetrachloroethene	ND	ug/kg	300				
Chlorobenzene	ND	ug/kg	700				
Trichlorofluoromethane	ND	ug/kg	1000				
1,2-Dichloroethane	ND	ug/kg	300				
1,1,1-Trichloroethane	ND	ug/kg	200				
Bromodichloromethane	ND	ug/kg	200				
trans-1,3-Dichloropropene	ND	ug/kg	300				
cis-1,3-Dichloropropene	ND	ug/kg	200				
Bromoform	ND	ug/kg	200				
1,1,2,2-Tetrachloroethane	ND	ug/kg	200				
Benzene	ND	ug/kg	200				
Toluene	380	ug/kg	300				
Ethylbenzene	ND	ug/kg	200				
Chloromethane	ND	ug/kg	2000				
Bromomethane	ND	ug/kg	400				
Vinyl chloride	ND	ug/kg	700				
Chloroethane	ND	ug/kg	400				
1,1-Dichloroethene	ND	ug/kg	300				
trans-1,2-Dichloroethene	ND	ug/kg	300				
Trichloroethene	ND	ug/kg	200				
1,2-Dichlorobenzene	ND	ug/kg	2000				
1,3-Dichlorobenzene	ND	ug/kg	2000				
1,4-Dichlorobenzene	ND	ug/kg	2000				
Methyl tert butyl ether	ND	ug/kg	2000				
Xylenes	580	ug/kg	200				
cis-1,2-Dichloroethene	ND	ug/kg	200				
Dibromomethane	ND	ug/kg	2000				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-04
9510031-04A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	12-Oct 12-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	2000				
Iodomethane	ND	ug/kg	2000				
1,2,3-Trichloropropane	ND	ug/kg	2000				
Styrene	ND	ug/kg	200				
Dichlorodifluoromethane	ND	ug/kg	2000				
Acetone	ND	ug/kg	2000				
Carbon Disulfide	ND	ug/kg	2000				
2-Butanone	ND	ug/kg	900				
Vinyl Acetate	ND	ug/kg	2000				
4-Methyl-2-pentanone	ND	ug/kg	2000				
2-Hexanone	ND	ug/kg	2000				
Ethyl methacrylate	ND	ug/kg	2000				
Acrolein	ND	ug/kg	5000				
Acrylonitrile	ND	ug/kg	2000				
Bromochloromethane	ND	ug/kg	1000				
2,2-Dichloropropane	ND	ug/kg	1000				
1,2-Dibromoethane	ND	ug/kg	1000				
1,3-Dichloropropane	ND	ug/kg	1000				
1,1,1,2-Tetrachloroethane	ND	ug/kg	1000				
Bromobenzene	ND	ug/kg	1000				
-Butylbenzene	ND	ug/kg	1000				
ec-Butylbenzene	ND	ug/kg	1000				
tert-Butylbenzene	ND	ug/kg	1000				
o-Chlorotoluene	ND	ug/kg	1000				
p-Chlorotoluene	ND	ug/kg	1000				
1,2-Dibromo-3-chloropropane	ND	ug/kg	1000				
Hexachlorobutadiene	ND	ug/kg	1000				
Isopropylbenzene	ND	ug/kg	1000				
p-Isopropyltoluene	ND	ug/kg	1000				
Naphthalene	ND	ug/kg	1000				
n-Propylbenzene	ND	ug/kg	1000				
1,2,3-Trichlorobenzene	ND	ug/kg	1000				
1,2,4-Trichlorobenzene	ND	ug/kg	1000				
1,3,5-Trimethylbenzene	ND	ug/kg	1000				
1,2,4-Trimethylbenzene	ND	ug/kg	1000				
trans-1,4-Dichloro-2-butene	ND	ug/kg	1000				
Ethyl ether	ND	ug/kg	5000				
SURROGATE RECOVERY							
Toluene-d8	126.	%					
4-Bromofluorobenzene	132.	%					
Dibromofluoromethane	102.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-05

Date Collected: 03-OCT-95

9510031-05A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	85.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	12-Oct 12-Oct	DB
Methylene chloride	ND	ug/kg	34.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
-Chloroethylvinyl ether	ND	ug/kg	50.				
etrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-05
9510031-05A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	12-Oct-12-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	85.0	%					
4-Bromofluorobenzene	80.0	%					
Dibromofluoromethane	90.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-06

Date Collected: 03-OCT-95

9510031-06A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	12-Oct 12-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
1-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-06
9510031-06A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	12-Oct 12-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
-Butylbenzene	ND	ug/kg	25.				
ec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	101.	%					
4-Bromofluorobenzene	99.0	%					
Dibromofluoromethane	99.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-07

Date Collected: 03-OCT-95

9510031-09A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	12-Oct 12-Oct	DB
Methylene chloride	ND	ug/kg	34.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
n-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-07
9510031-09A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	12-Oct 12-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				

SURROGATE RECOVERY

Toluene-d8	107.	%
4-Bromofluorobenzene	100.	%
Dibromofluoromethane	107.	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-08

Date Collected: 03-OCT-95

9510031-10A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	84.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	12-Oct 12-Oct	DB
Methylene chloride	ND	ug/kg	34.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
-Chloroethylvinyl ether	ND	ug/kg	50.				
tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-08
9510031-10A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	12-Oct 12-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
-Butylbenzene	ND	ug/kg	25.				
ec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	92.0	%					
4-Bromofluorobenzene	86.0	%					
Dibromofluoromethane	90.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-09

Date Collected: 03-OCT-95

9510031-11A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	80.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	13-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
-Chloroethylvinyl ether	ND	ug/kg	50.				
atrachloroethene	68.	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-09
9510031-11A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	13-Oct 13-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	100.	%					
4-Bromofluorobenzene	89.0	%					
Dibromofluoromethane	104.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Quanterra Incorporated
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ANALYTICAL REPORT

PROJECT NO. 9510031

CLEAN HARBOR

MICHAEL J. WEDGE

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED



Adrianna Washington
Project Manager

October 12, 1995

NARRATIVE

The following report contains the analytical results for samples submitted to Quanterra Incorporated. The samples were received into the laboratory in accordance with documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods and instrumentation in all analytical work. The methods used for the analyses presented in this study can be found on the following pages.

A Quality Control Section, containing a summary of QA/QC data for these analyses, is included at the end of the report.

The following codes are utilized in various analyses of this report:

ND	(None Detected)
DIL	(Diluted Out)
MI	(Matrix Interference)
NEG	(Negative)
J	(Detected, but below quantitation limit; estimated value)
B	(Compounds detected in method blank associated with this sample)
W	(Post digestion spike recovery fell between 40 - 85 %)
S	(Sample result determined by the Method of Standard Additions)
+	(Sample result determined by the Method of Standard Additions and the correlation coefficient was less than 0.995)

CASE NARRATIVE

Due to the matrix, several samples were diluted and analyzed. As a result of the dilutions surrogates are outside of QC limits.

ANALYTICAL METHODS SUMMARY

Parameters

Polynuclear Aromatic Hydrocarbons
Hydrocarbons
Solids, Total (TS)

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL:
Cincinnati, OH: March 1983 and subsequent revisions
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, September, 1986 and subsequent
revisions

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
A5NWD	C5J050008-001	9510031-01Q	10/02/95
A5NWF	C5J050008-002	9510031-02Q	10/02/95
A5NWG	C5J050008-003	9510031-03Q	10/02/95
A5NWH	C5J050008-004	9510031-04Q	10/02/95
A5NWJ	C5J050008-005	9510031-05Q	10/03/95
A5NWK	C5J050008-006	9510031-06Q	10/03/95
A5NWL	C5J050008-007	9510031-09Q	10/03/95
A5NWM	C5J050008-008	9510031-10Q	10/03/95
A5NWN	C5J050008-009	9510031-11Q	10/03/95



CLEAN HARBORS ANALYTICAL

9510031-01Q

WO #: A5NWD101
 LAB #: C5J050008-001
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/02/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	45	41	SW846 8310	10/06-10/08/95	5279025
Acenaphthylene	ND	41	SW846 8310	10/06-10/08/95	5279025
Acenaphthene	ND	41	SW846 8310	10/06-10/08/95	5279025
Fluorene	ND	8.4	SW846 8310	10/06-10/08/95	5279025
Phenanthrene	28	21	SW846 8310	10/06-10/08/95	5279025
Anthracene	ND	21	SW846 8310	10/06-10/08/95	5279025
Fluoranthene	41	8.4	SW846 8310	10/06-10/08/95	5279025
Pyrene	29	8.4	SW846 8310	10/06-10/08/95	5279025
Benzo(a)anthracene	16	0.84	SW846 8310	10/06-10/08/95	5279025
Chrysene	23	6.3	SW846 8310	10/06-10/08/95	5279025
Benzo(b)fluoranthene	18	0.84	SW846 8310	10/06-10/08/95	5279025
Benzo(k)fluoranthene	8.8	0.84	SW846 8310	10/06-10/08/95	5279025
Benzo(a)pyrene	18	0.84	SW846 8310	10/06-10/08/95	5279025
Indeno(1,2,3-cd)pyrene	7.0	2.1	SW846 8310	10/06-10/08/95	5279025
Dibenzo(a,h)anthracene	1.6	1.3	SW846 8310	10/06-10/08/95	5279025
Benzo(g,h,i)perylene	16	2.1	SW846 8310	10/06-10/08/95	5279025

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	61	(36 - 144)
2-Fluorobiphenyl	59	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-01Q

WO #: A5NWD
LAB #: C5J050008-001
MATRIX: SOLID

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	79.6		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-02Q

WO #: A5NWF101
 LAB #: C5J050008-002
 MATRIX: SOLID
 DILUTION FACTOR: 2.00

DATE SAMPLED: 10/02/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	78	SW846 8310	10/06-10/08/95	5279025
Acenaphthylene	ND	78	SW846 8310	10/06-10/08/95	5279025
Acenaphthene	ND	78	SW846 8310	10/06-10/08/95	5279025
Fluorene	ND	16	SW846 8310	10/06-10/08/95	5279025
Phenanthrene	65	40	SW846 8310	10/06-10/08/95	5279025
Anthracene	ND	40	SW846 8310	10/06-10/08/95	5279025
Fluoranthene	100	16	SW846 8310	10/06-10/08/95	5279025
Pyrene	100	16	SW846 8310	10/06-10/08/95	5279025
Benzo(a)anthracene	44	1.6	SW846 8310	10/06-10/08/95	5279025
Chrysene	59	12	SW846 8310	10/06-10/08/95	5279025
Benzo(b)fluoranthene	44	1.6	SW846 8310	10/06-10/08/95	5279025
Benzo(k)fluoranthene	22	1.6	SW846 8310	10/06-10/08/95	5279025
Benzo(a)pyrene	60	1.6	SW846 8310	10/06-10/08/95	5279025
Indeno(1,2,3-cd)pyrene	14	4.0	SW846 8310	10/06-10/08/95	5279025
Dibenzo(a,h)anthracene	10	2.4	SW846 8310	10/06-10/08/95	5279025
Benzo(g,h,i)perylene	64	4.0	SW846 8310	10/06-10/08/95	5279025

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	108	(36 - 144)
2-Fluorobiphenyl	181 (MI) *	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

* SURROGATES OUT OF CONTROL

Environmental
Services

CLEAN HARBORS ANALYTICAL

9510031-02Q

WO #: A5NWF
LAB #: C5J050008-002
MATRIX: SOLIDDATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	84.5		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-03Q

WO #: A5NWG101
 LAB #: C5J050008-003
 MATRIX: SOLID
 DILUTION FACTOR: 40.00

DATE SAMPLED: 10/02/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

----- REQUESTED PARAMETERS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	1,500	SW846 8310	10/06-10/09/95	5279025
Acenaphthylene	ND	1,500	SW846 8310	10/06-10/09/95	5279025
Acenaphthene	ND	1,500	SW846 8310	10/06-10/09/95	5279025
Fluorene	300	300	SW846 8310	10/06-10/09/95	5279025
Phenanthrene	890	750	SW846 8310	10/06-10/09/95	5279025
Anthracene	ND	750	SW846 8310	10/06-10/09/95	5279025
Fluoranthene	820	300	SW846 8310	10/06-10/09/95	5279025
Pyrene	410 (MI)	300	SW846 8310	10/06-10/09/95	5279025
Benzo (a) anthracene	240	30	SW846 8310	10/06-10/09/95	5279025
Chrysene	380	220	SW846 8310	10/06-10/09/95	5279025
Benzo (b) fluoranthene	300	30	SW846 8310	10/06-10/09/95	5279025
Benzo (k) fluoranthene	140	30	SW846 8310	10/06-10/09/95	5279025
Benzo (a) pyrene	240	30	SW846 8310	10/06-10/09/95	5279025
Indeno (1,2,3-cd) pyrene	ND	75	SW846 8310	10/06-10/09/95	5279025
Dibenzo (a,h) anthracene	ND	44	SW846 8310	10/06-10/09/95	5279025
Benzo (g,h,i) perylene	80	75	SW846 8310	10/06-10/09/95	5279025

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-03Q

WO #: A5NNG
LAB #: C5J050008-003
MATRIX: SOLID

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	90.5		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-04Q

WO #: A5NWH101
 LAB #: C5J050008-004
 MATRIX: SOLID
 DILUTION FACTOR: 10.00

DATE SAMPLED: 10/02/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	400	SW846 8310	10/06-10/10/95	5279025
Acenaphthylene	ND	400	SW846 8310	10/06-10/10/95	5279025
Acenaphthene	ND	400	SW846 8310	10/06-10/10/95	5279025
Fluorene	120	81	SW846 8310	10/06-10/10/95	5279025
Phenanthrene	570	210	SW846 8310	10/06-10/10/95	5279025
Anthracene	ND	210	SW846 8310	10/06-10/10/95	5279025
Fluoranthene	560	81	SW846 8310	10/06-10/10/95	5279025
Pyrene	410	81	SW846 8310	10/06-10/10/95	5279025
Benzo(a)anthracene	210	8.1	SW846 8310	10/06-10/10/95	5279025
Chrysene	700	61	SW846 8310	10/06-10/10/95	5279025
Benzo(b)fluoranthene	290	8.1	SW846 8310	10/06-10/10/95	5279025
Benzo(k)fluoranthene	120	8.1	SW846 8310	10/06-10/10/95	5279025
Benzo(a)pyrene	320	8.1	SW846 8310	10/06-10/10/95	5279025
Indeno(1,2,3-cd)pyrene	32 (MI)	21	SW846 8310	10/06-10/10/95	5279025
Dibenzo(a,h)anthracene	19	12	SW846 8310	10/06-10/10/95	5279025
Benzo(g,h,i)perylene	190	21	SW846 8310	10/06-10/10/95	5279025

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-04Q

WO #: A5NWH
LAB #: C5J050008-004
MATRIX: SOLID

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	PREPARATION - <u>ANALYSIS DATE</u>	QC <u>BATCH</u>
Solids, Total (TS)	82.4		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-05Q

WO #: A5NWJ101
 LAB #: C5J050008-005
 MATRIX: SOLID
 DILUTION FACTOR: 6.00

DATE SAMPLED: 10/03/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	230	SW846 8310	10/06-10/08/95	5279025
Acenaphthylene	ND	230	SW846 8310	10/06-10/08/95	5279025
Acenaphthene	ND	230	SW846 8310	10/06-10/08/95	5279025
Fluorene	ND	47	SW846 8310	10/06-10/08/95	5279025
Phenanthrene	200	120	SW846 8310	10/06-10/08/95	5279025
Anthracene	ND	120	SW846 8310	10/06-10/08/95	5279025
Fluoranthene	100	47	SW846 8310	10/06-10/08/95	5279025
Pyrene	90	47	SW846 8310	10/06-10/08/95	5279025
Benzo(a)anthracene	34	4.7	SW846 8310	10/06-10/08/95	5279025
Chrysene	41	35	SW846 8310	10/06-10/08/95	5279025
Benzo(b)fluoranthene	37	4.7	SW846 8310	10/06-10/08/95	5279025
Benzo(k)fluoranthene	16	4.7	SW846 8310	10/06-10/08/95	5279025
Benzo(a)pyrene	37	4.7	SW846 8310	10/06-10/08/95	5279025
Indeno(1,2,3-cd)pyrene	15	12	SW846 8310	10/06-10/08/95	5279025
Dibenzo(a,h)anthracene	ND	7.1	SW846 8310	10/06-10/08/95	5279025
Benzo(g,h,i)perylene	53	12	SW846 8310	10/06-10/08/95	5279025

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-05Q

WO #: A5NWJ
LAB #: C5J050008-005
MATRIX: SOLID

DATE SAMPLED: 10/03/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	84.9		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-06Q

WO #: A5NWK101
 LAB #: C5J050008-006
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/03/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	40	SW846 8310	10/06-10/10/95	5279025
Acenaphthylene	ND	40	SW846 8310	10/06-10/10/95	5279025
Acenaphthene	ND	40	SW846 8310	10/06-10/10/95	5279025
Fluorene	ND	8.2	SW846 8310	10/06-10/10/95	5279025
Phenanthrene	35	21	SW846 8310	10/06-10/10/95	5279025
Anthracene	ND	21	SW846 8310	10/06-10/10/95	5279025
Fluoranthene	10	8.2	SW846 8310	10/06-10/10/95	5279025
Pyrene	ND	8.2	SW846 8310	10/06-10/10/95	5279025
Benzo(a)anthracene	4.1	0.82	SW846 8310	10/06-10/10/95	5279025
Chrysene	7.1	6.1	SW846 8310	10/06-10/10/95	5279025
Benzo(b)fluoranthene	4.3	0.82	SW846 8310	10/06-10/10/95	5279025
Benzo(k)fluoranthene	2.1	0.82	SW846 8310	10/06-10/10/95	5279025
Benzo(a)pyrene	5.1	0.82	SW846 8310	10/06-10/10/95	5279025
Indeno(1,2,3-cd)pyrene	ND	2.1	SW846 8310	10/06-10/10/95	5279025
Dibenzo(a,h)anthracene	ND	1.2	SW846 8310	10/06-10/10/95	5279025
Benzo(g,h,i)perylene	4.5	2.1	SW846 8310	10/06-10/10/95	5279025

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	63	(36 - 144)
2-Fluorobiphenyl	62	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-06Q

WO #: A5NWK
LAB #: C5J050008-006
MATRIX: SOLID

DATE SAMPLED: 10/03/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	82.0		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-09Q

WO #: A5NWL101
 LAB #: C5J050008-007
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/03/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	39	SW846 8310	10/06-10/10/95	5279025
Acenaphthylene	ND	39	SW846 8310	10/06-10/10/95	5279025
Acenaphthene	70	39	SW846 8310	10/06-10/10/95	5279025
Fluorene	ND	7.8	SW846 8310	10/06-10/10/95	5279025
Phenanthrene	ND	20	SW846 8310	10/06-10/10/95	5279025
Anthracene	ND	20	SW846 8310	10/06-10/10/95	5279025
Fluoranthene	ND	7.8	SW846 8310	10/06-10/10/95	5279025
Pyrene	ND	7.8	SW846 8310	10/06-10/10/95	5279025
Benzo (a) anthracene	ND	0.78	SW846 8310	10/06-10/10/95	5279025
Chrysene	ND	5.8	SW846 8310	10/06-10/10/95	5279025
Benzo (b) fluoranthene	ND	0.78	SW846 8310	10/06-10/10/95	5279025
Benzo (k) fluoranthene	ND	0.78	SW846 8310	10/06-10/10/95	5279025
Benzo (a) pyrene	ND	0.78	SW846 8310	10/06-10/10/95	5279025
Indeno (1,2,3-cd) pyrene	ND	2.0	SW846 8310	10/06-10/10/95	5279025
Dibenzo (a,h) anthracene	ND	1.2	SW846 8310	10/06-10/10/95	5279025
Benzo (g,h,i) perylene	ND	2.0	SW846 8310	10/06-10/10/95	5279025

<u>SURROGATE RECOVERY</u>	<u>1</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	58	(36 - 144)
2-Fluorobiphenyl	64	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-09Q

WO #: A5NWL
LAB #: C5J050008-007
MATRIX: SOLID

DATE SAMPLED: 10/03/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	85.7		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-10Q

WO #: A5NWM101
 LAB #: C5J050008-008
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/03/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	38	SW846 8310	10/06/95	5279025
Acenaphthylene	ND	38	SW846 8310	10/06/95	5279025
Acenaphthene	42	38	SW846 8310	10/06/95	5279025
Fluorene	ND	7.8	SW846 8310	10/06/95	5279025
Phenanthrene	ND	20	SW846 8310	10/06/95	5279025
Anthracene	ND	20	SW846 8310	10/06/95	5279025
Fluoranthene	ND	7.8	SW846 8310	10/06/95	5279025
Pyrene	ND	7.8	SW846 8310	10/06/95	5279025
Benzo(a)anthracene	ND	0.78	SW846 8310	10/06/95	5279025
Chrysene	ND	5.8	SW846 8310	10/06/95	5279025
Benzo(b)fluoranthene	ND	0.78	SW846 8310	10/06/95	5279025
Benzo(k)fluoranthene	ND	0.78	SW846 8310	10/06/95	5279025
Benzo(a)pyrene	0.93	0.78	SW846 8310	10/06/95	5279025
Indeno(1,2,3-cd)pyrene	ND	2.0	SW846 8310	10/06/95	5279025
Dibenzo(a,h)anthracene	ND	1.2	SW846 8310	10/06/95	5279025
Benzo(g,h,i)perylene	2.7	2.0	SW846 8310	10/06/95	5279025

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	99	(36 - 144)
2-Fluorobiphenyl	67	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-10Q

WO #: A5NWM
LAB #: C5J050008-008
MATRIX: SOLID

DATE SAMPLED: 10/03/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	86.2		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510031-11Q

WO #: A5NWN101
 LAB #: C5J050008-009
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/03/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	39	SW846 8310	10/06-10/08/95	5279025
Acenaphthylene	52	39	SW846 8310	10/06-10/08/95	5279025
Acenaphthene	ND	39	SW846 8310	10/06-10/08/95	5279025
Fluorene	ND	7.8	SW846 8310	10/06-10/08/95	5279025
Phenanthrene	59	20	SW846 8310	10/06-10/08/95	5279025
Anthracene	ND	20	SW846 8310	10/06-10/08/95	5279025
Fluoranthene	41	7.8	SW846 8310	10/06-10/08/95	5279025
Pyrene	11	7.8	SW846 8310	10/06-10/08/95	5279025
Benzo (a) anthracene	9.5	0.78	SW846 8310	10/06-10/08/95	5279025
Chrysene	14	5.9	SW846 8310	10/06-10/08/95	5279025
Benzo (b) fluoranthene	20	0.78	SW846 8310	10/06-10/08/95	5279025
Benzo (k) fluoranthene	6.8	0.78	SW846 8310	10/06-10/08/95	5279025
Benzo (a) pyrene	9.7	0.78	SW846 8310	10/06-10/08/95	5279025
Indeno (1,2,3-cd) pyrene	ND	2.0	SW846 8310	10/06-10/08/95	5279025
Dibenzo (a,h) anthracene	ND	1.2	SW846 8310	10/06-10/08/95	5279025
Benzo (g,h,i) perylene	22	2.0	SW846 8310	10/06-10/08/95	5279025

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	76	(36 - 144)
2-Fluorobiphenyl	62	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510031-11Q

WO #: A5NWN
LAB #: C5J050008-009
MATRIX: SOLID

DATE SAMPLED: 10/03/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	85.4		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT

QUALITY CONTROL SECTION

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY

Quanterra Incorporated considers continuous analytical performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

SURROGATE SPIKE RECOVERY EVALUATIONS

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compounds analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recoveries calculated from the subsequent spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten percent (10%) each. For Pesticides, one (1) of two (2) surrogates meeting performance criteria is acceptable.

LABORATORY ANALYTICAL METHOD BLANK EVALUATIONS

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.) substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule, provided they are not present at a greater than five times the detection limit.

Volatiles

Methylene chloride
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY (CONT)

LABORATORY ANALYTICAL METHOD CHECK SAMPLE EVALUATIONS

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved. All compounds must meet laboratory recovery criteria. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) RECOVERY EVALUATION

Known concentration of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Actual percent recovery data is displayed alongside the acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

EXAMPLE

COMPOUND	SAMPLE CONCENTRATION	MS % RECOVERY	MSD % RECOVERY	QC LIMITS' RECOVERY
4-4'-DDT	0	95	112	(66-119)
Benzene	10	86	93	(39-150)
compound name	sample result	1st % recovery	2nd % recovery	acceptable method limits

¹QC limits are statistically derived from historical laboratory data. Where insufficient data exists to statistically derive these limits, they will be labelled "advisory". In this case, they are based on the best available technical information.

For metals analyses, the recoveries of the MS/MSD must be within the range of 80-120%. If they do not meet this criteria, but the RPD of the two results is <20% OR the absolute difference is less than 10% when the recoveries are below 50%, no corrective action is required. If these criteria are not met, the sample with its MS/MSD is reprepared and reanalyzed once more.

INTRA-LAB BLANK REPORT

LAB #: C5J060000-025

----- POLYNUCLEAR AROMATIC HYDROCARBONS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	33	10/06/95	5279025
Acenaphthylene	ND	33	10/06/95	5279025
Anthracene	ND	17	10/06/95	5279025
Benzo (a) anthracene	ND	0.67	10/06/95	5279025
Benzo (b) fluoranthene	ND	0.67	10/06/95	5279025
Benzo (k) fluoranthene	ND	0.67	10/06/95	5279025
Benzo (g, h, i) perylene	ND	1.7	10/06/95	5279025
Benzo (a) pyrene	ND	0.67	10/06/95	5279025
Chrysene	ND	5.0	10/06/95	5279025
Fluoranthene	ND	6.7	10/06/95	5279025
Fluorene	ND	6.7	10/06/95	5279025
Indeno (1, 2, 3-cd) pyrene	ND	1.7	10/06/95	5279025
Naphthalene	ND	33	10/06/95	5279025
Phenanthrene	ND	17	10/06/95	5279025
Pyrene	ND	6.7	10/06/95	5279025
Dibenzo (a, h) anthracene	ND	1.0	10/06/95	5279025

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	82	(36 - 144)
2-Fluorobiphenyl	72	(47 - 143)

NOTE:

ND (NONE DETECTED)

CHECK SAMPLE REPORT

QC BATCH: 5279025
LAB #: C5J060000-025 C
DILUTION FACTOR: 1.00

PREPARATION DATE: 10/06/95
DATE ANALYZED: 10/06/95

- - - - - Polynuclear Aromatic Hydrocarbons - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Naphthalene	103	(52-163)
Phenanthrene	76	(67-123)
Fluoranthene	93	(65-125)
Chrysene	85	(74-124)
Benzo (a) pyrene	97	(48-129)
Indeno (1,2,3-cd) pyrene	97	(63-133)

MATRIX SPIKE REPORT

QC BATCH: 5279025
LAB #: C5J050008-008 S
MATRIX: SOLID
DILUTION FACTOR: 1.00

WO #: ASNWM
PREPARATION DATE: 10/06/95
DATE ANALYZED: 10/06/95

----- **HPLC** -----

COMPOUND	SPIKE PERCENT RECOVERY	SPIKE/DUP PERCENT RECOVERY	Q/C LIMITS	RPD	RPD LIMIT
Naphthalene	113	100	(8.0-200)	13	(0-66)
Phenanthrene	78	69	(38-137)	12	(0-34)
Fluoranthene	93	85	(47-132)	8.9	(0-23)
Chrysene	84	79	(41-148)	7.0	(0-29)
Benzo (a) pyrene	87	80	(48-120)	9.2	(0-19)
Indeno (1,2,3-cd) pyrene	96	89	(53-132)	7.4	(0-24)

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



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAE. NO. 9510031

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



BLANK ANALYSIS

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/06/95	10/11/95	**

Notes:

ND = Below practical quantitation limit (PQL)

* = mg/kg

Soil/solid samples based on sample dry weight

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Evaluation:

Hydrocarbon quantitative range:

C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbons observed.

QA/QC Surrogate Recoveries:

Acceptance Criteria

Ortho-terphenyl 76 %

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510031

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/06/95	10/09/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/06/95	10/10/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/06/95	10/10/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/06/95	10/10/95	3050/6010(c)
Chromium - Total	0.03	ND	10/06/95	10/10/95	3050/6010(c)
Copper - Total	0.03	ND	10/06/95	10/10/95	3050/6010(c)
Lead - Total	0.1	ND	10/06/95	10/10/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	0.03	ND	10/06/95	10/10/95	3050/6010(c)
Selenium - Total	0.2	ND	10/06/95	10/10/95	3050/6010(c)
Silver - Total	0.02	ND	10/06/95	10/09/95	3005/6010(c)
Thallium - Total	0.3	ND	10/06/95	10/10/95	3050/6010(c)
Zinc - Total	0.04	ND	10/06/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510031

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.001	0.001	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Copper - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Lead - Total	0.1	ND	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	0.2	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.02	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	0.3	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	0.04	ND	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510031

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	MIA	mg/l	10/05/95	9010(c)
Cyanide, Total	0.02	ND	mg/l	10/06/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



✓ 10/14

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184				CHAIN OF CUSTODY RECORD				Sample Custodian — (617) 849-1800				Page of		
Client: <u>CITES</u>		Project Name: <u>MURPHY'S WASTE OIL SERVICE</u>		Work Order/P.O. #: <u>EN-170</u>		Date: <u>10/3/95</u>								
Report To: <u>Jay McCreary</u>		Address: <u>12 MENCER ROAD, NATICK, MA</u>		Phone #: <u>X6399</u>										
Date Samples Collected: <u>10/3/95</u>		by: <u>NICEWONACR</u>		Date Samples Received: _____										
Airbill/Bill of Lading? Y N				NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.				Samples were: Preserved Unpreserved						
Sample I.D.	Sampling Information				Analysis							# of con.	CHAS Sample #	
	Date	Time	Station Location	Sample Matrix	VOA 8240	TPH	GCFID	PARTS BY HPLC	13 P.P.	TOT. METALS	TOT. CYANIDE			STEV ANALYSIS
B-1	10/2		SS-3	SOIL	1	1	1	1	1				2	9510031
B-1	10/2		SS-5		1	1	1	1	1				2	01A, M, O, Q
B-14	10/2		SS-2		1	1	1	1	1				2	02A, M, O, Q
B-14	10/2		SS-5		1	1	1	1	1				2	03A, M, O, Q
MW-11	10/3		SS-3		1	1	1	1	1			1	2	04A, M, O, Q
MW-11	10/3		SS-5		1	1	1	1	1			1	2	combine equal parts from 05A, M, O, Q
MW-11	10/3		SS-6	↓								1	2	each sample and run for 06A, M, O, Q
B-15	10/3		SS-5		1	1	1	1	1			1	1	sieve test. 07X
B-15	10/3		SS-7		1	1	1	1	1				2	09A, M, O, Q
Relinquished by: <u>[Signature]</u> Date: <u>10/3/95</u> Time: <u>5:45 PM</u>				VOA Vial										REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions) Total of 17 sample containers Run VOAs first then other parameters using small jar if additional sample volume needed.
Received by: <u>[Signature]</u> Date: <u>10/3/95</u> Time: <u>5:41</u>				Glass Bottle										
Relinquished by: _____ Date: _____ Time: _____				Plastic Bottle										
Received by: _____ Date: _____ Time: _____				Pres.										
				Volume										
				Preservation Key: A — Acidified with _____ B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other										
Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.					Location of samples: <u>BH, AGR, Quaternary</u>									
Accelerated turnaround requested: _____					Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other _____									
Confirmed by: _____					Surcharge: _____									

[illegible]



Method References

- (a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 18th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1992.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., November 1986, updated July 1992 and September 1994.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, September 1982.
- (e) "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions; Final Rule," Federal Register, Vol. 55, No. 126, Friday, June 29, 1990, and revision in Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992.
- (f) "Guidelines Establishing Test Procedures for Analysis of Pollutants," Code of Federal Regulations, Part 136 Appendix A and Appendix B, July 1, 1993.
- (g) "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency, Office of Research and Development, Washington, D.C., December 1988, revised July 1991.
- (h) "The Determination of Inorganic Anions in Water by Ion Chromatography - Method 300.0," Publication EPA-600/4-84-017, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, March 1984.
- (i) "Hach Water Analysis Handbook," Hach Chemical Company, Loveland, CO, 1992.
- (j) "USEPA-CLP Statement of Work for Organic Analysis," Publication OLM01.0 (including revisions, U.S. Environmental Protection Agency, Contract Laboratory Program, August 1991.
- (k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing Materials, Philadelphia, 1989 & 1991.
- (l) "Annual Book of Standards," Section 5: Petroleum Products and Lubricants, Vols. 5.01, American Society for Testing Materials, Philadelphia, 1993.
- (m) "Annual Book of Standards," Section 4: Construction, Vol. 4.08, American Society for Testing Materials, Philadelphia, 1993.
- (n) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982, updated April 1984.
- (o) "Annual Book of Standards," Section 15: Engine Coolants; Halogenated Organic Solvents, Vol. 15.05, American Society for Testing Materials, Philadelphia, 1995.

[REF-09/21/95]



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/03/95
CHES Lab #: 9510032

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 10/20/95

Michael J. Murray
Laboratory Manager

US EPA ARCHIVE DOCUMENT



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-2, SS-3
Sample Type: Soil

CHES Lab #: 9510032-010
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	94	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-2, SS-3
Sample Type: Soil

CHES Lab #: 9510032-01M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.039	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.39	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	1.2	18	10/09/95	10/10/95	3050/6010(c)
Copper - Total	1.2	22	10/09/95	10/10/95	3050/6010(c)
Lead - Total	4	40	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0696	ND	10/10/95	10/12/95	7471(c)
Nickel - Total	1.2	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.68	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	10	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	49	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

Soil/solid samples based on sample dry weight.

Sample result is "ND" thus positive blank result should not adversely affect reported results.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-2, SS-3
Sample Type: Soil

CHES Lab #: 9510032-01M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.0	ND	mg/kg	10/06/95	9010(c)
Total Solids	--	85.1	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-3, SS-2 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-020
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	230	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-3, SS-2 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-02M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.038	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.38	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	1.1	13	10/09/95	10/10/95	3050/6010(c)
Copper - Total	1.1	20	10/09/95	10/10/95	3050/6010(c)
Lead - Total	4	120	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0754	ND	10/10/95	10/12/95	7471(c)
Nickel - Total	1.1	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	8	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.78	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	10	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	61	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-3, SS-2 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-02M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.1	ND	mg/kg	10/10/95	9010(c)
Total Solids	--	33.7	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-3, SS-4 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-040
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	44	4,000	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-3, SS-4 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-04M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	6	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.032	ND	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.32	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	0.95	32	10/09/95	10/10/95	3050/6010(c)
Copper - Total	0.95	19	10/09/95	10/10/95	3050/6010(c)
Lead - Total	3	240	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0670	0.0792	10/10/95	10/12/95	7471(c)
Nickel - Total	0.95	9.3	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	6	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.82	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	9	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	1.3	88	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-3, SS-4 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-04M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/10/95	9010(c)
Total Solids	--	89.0	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMP.OF B-3, SS-2,3,4,5,6 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-07L
Date Received: 10/03/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/18/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	18.5
4	4.75	10.3
10	2.00	9.6
20	0.850	9.4
40	0.425	10.5
60	0.250	9.7
100	0.150	8.8
200	0.075	10.8
Bottom Tray	<0.075	11.9

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA 086 NE 138958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: Clean Harbors

Laboratory Job Number: L9507726

Address: 325 Wood Road

Invoice Number: 77917

Braintree, MA 02184

Date Received: 10-OCT-95

Attn: Peter Conroy

Date Reported: 16-OCT-95

Project Number: 9510031-2

Delivery Method: Alpha

Site:

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9507726-01	9510031-01A	
L9507726-02	9510031-02A	
L9507726-03	9510031-03A	
L9507726-04	9510031-04A	
L9507726-05	9510031-05A	
L9507726-06	9510031-06A	
L9507726-07	9510031-09A	
L9507726-08	9510031-10A	
L9507726-09	9510031-11A	
L9507726-10	9510032-01A	
L9507726-11	9510032-02A	
L9507726-12	9510032-04A	

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-10

Date Collected: 02-OCT-95

9510032-01A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	80.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	13-Oct 13-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
?-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507726-10
9510032-01A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	13-Oct 13-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	96.0	%					
4-Bromofluorobenzene	107.	%					
Dibromofluoromethane	98.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-11

Date Collected: 02-OCT-95

9510032-02A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	13-Oct 13-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
n-Chloroethylvinyl ether	ND	ug/kg	50.				
tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSISLaboratory Sample Number: L9507726-11
9510032-02A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	13-Oct 13-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				

SURROGATE RECOVERY

Toluene-d8	105.	%
4-Bromofluorobenzene	91.0	%
Dibromofluoromethane	96.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507726-12

Date Collected: 02-OCT-95

9510032-04A

Date Received : 10-OCT-95

Sample Matrix: SOLID

Date Reported : 16-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	67.	%	0.10	3	2540B	16-Oct	ST
Volatile Organics by GC/MS				1	8260	13-Oct 13-Oct	DB
Methylene chloride	ND	ug/kg	3700				
1,1-Dichloroethane	ND	ug/kg	1100				
Chloroform	ND	ug/kg	1100				
Carbon tetrachloride	ND	ug/kg	750				
1,2-Dichloropropane	ND	ug/kg	2600				
Dibromochloromethane	ND	ug/kg	750				
1,1,2-Trichloroethane	ND	ug/kg	1100				
?-Chloroethylvinyl ether	ND	ug/kg	7500				
etrachloroethene	ND	ug/kg	1100				
Chlorobenzene	ND	ug/kg	2600				
Trichlorofluoromethane	ND	ug/kg	3700				
1,2-Dichloroethane	ND	ug/kg	1100				
1,1,1-Trichloroethane	ND	ug/kg	750				
Bromodichloromethane	ND	ug/kg	750				
trans-1,3-Dichloropropene	ND	ug/kg	1100				
cis-1,3-Dichloropropene	ND	ug/kg	750				
Bromoform	ND	ug/kg	750				
1,1,2,2-Tetrachloroethane	ND	ug/kg	750				
Benzene	ND	ug/kg	750				
Toluene	12000	ug/kg	1100				
Ethylbenzene	7600	ug/kg	750				
Chloromethane	ND	ug/kg	7500				
Bromomethane	ND	ug/kg	1500				
Vinyl chloride	ND	ug/kg	2600				
Chloroethane	ND	ug/kg	1500				
1,1-Dichloroethene	ND	ug/kg	1100				
trans-1,2-Dichloroethene	ND	ug/kg	1100				
Trichloroethene	1200	ug/kg	750				
1,2-Dichlorobenzene	12000	ug/kg	7500				
1,3-Dichlorobenzene	ND	ug/kg	7500				
1,4-Dichlorobenzene	ND	ug/kg	7500				
Methyl tert butyl ether	ND	ug/kg	7500				
Xylenes	48000	ug/kg	750				
cis-1,2-Dichloroethene	10000	ug/kg	750				
Dibromomethane	ND	ug/kg	7500				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSISLaboratory Sample Number: L9507726-12
9510032-04A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	13-Oct 13-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	7500				
Iodomethane	ND	ug/kg	7500				
1,2,3-Trichloropropane	ND	ug/kg	7500				
Styrene	ND	ug/kg	750				
Dichlorodifluoromethane	ND	ug/kg	7500				
Acetone	ND	ug/kg	7500				
Carbon Disulfide	ND	ug/kg	7500				
2-Butanone	ND	ug/kg	3400				
Vinyl Acetate	ND	ug/kg	7500				
4-Methyl-2-pentanone	ND	ug/kg	7500				
2-Hexanone	ND	ug/kg	7500				
Ethyl methacrylate	ND	ug/kg	7500				
Acrolein	ND	ug/kg	19000				
Acrylonitrile	ND	ug/kg	7500				
Bromochloromethane	ND	ug/kg	3700				
2,2-Dichloropropane	ND	ug/kg	3700				
1,2-Dibromoethane	ND	ug/kg	3700				
1,3-Dichloropropane	ND	ug/kg	3700				
1,1,1,2-Tetrachloroethane	ND	ug/kg	3700				
Bromobenzene	ND	ug/kg	3700				
n-Butylbenzene	ND	ug/kg	3700				
sec-Butylbenzene	ND	ug/kg	3700				
tert-Butylbenzene	ND	ug/kg	3700				
o-Chlorotoluene	ND	ug/kg	3700				
p-Chlorotoluene	ND	ug/kg	3700				
1,2-Dibromo-3-chloropropane	ND	ug/kg	3700				
Hexachlorobutadiene	ND	ug/kg	3700				
Isopropylbenzene	ND	ug/kg	3700				
p-Isopropyltoluene	ND	ug/kg	3700				
Naphthalene	27000	ug/kg	3700				
n-Propylbenzene	ND	ug/kg	3700				
1,2,3-Trichlorobenzene	ND	ug/kg	3700				
1,2,4-Trichlorobenzene	ND	ug/kg	3700				
1,3,5-Trimethylbenzene	19000	ug/kg	3700				
1,2,4-Trimethylbenzene	45000	ug/kg	3700				
trans-1,4-Dichloro-2-butene	ND	ug/kg	3700				
Ethyl ether	ND	ug/kg	19000				

SURROGATE RECOVERY

Toluene-d8	119.	%
4-Bromofluorobenzene	118.	%
Dibromofluoromethane	82.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9507726

Parameter	MS %	MSD %	RPD

Volatile Organics by GC/MS Spike Recovery MS/MSD for sample(s) 01-12

1,1-Dichloroethene	83	85	2
Trichloroethene	107	105	2
Benzene	96	108	12
Toluene	110	117	6
Chlorobenzene	103	105	2

US EPA ARCHIVE DOCUMENT

ALPHA ANALYTICAL LABS
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.
3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

D Initials of the analyst.

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238

412 826-5477 Telephone
412 826-5571 Fax

ANALYTICAL REPORT

PROJECT NO. 9510032

CLEAN HARBOR

MICHAEL J. WEDGE

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED



Adrinna Washington
Project Manager

October 12, 1995

NARRATIVE

The following report contains the analytical results for samples submitted to Quanterra Incorporated. The samples were received into the laboratory in accordance with documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods and instrumentation in all analytical work. The methods used for the analyses presented in this study can be found on the following pages.

A Quality Control Section, containing a summary of QA/QC data for these analyses, is included at the end of the report.

The following codes are utilized in various analyses of this report:

ND	(None Detected)
DIL	(Diluted Out)
MI	(Matrix Interference)
NEG	(Negative)
J	(Detected, but below quantitation limit; estimated value)
B	(Compounds detected in method blank associated with this sample)
W	(Post digestion spike recovery fell between 40 - 85 %)
S	(Sample result determined by the Method of Standard Additions)
+	(Sample result determined by the Method of Standard Additions and the correlation coefficient was less than 0.995)

CASE NARRATIVE

Due to the samples matrix, dilutions were performed. As a result of the dilutions surrogates are outside of QC limits.

ANALYTICAL METHODS SUMMARY

Parameters

Polynuclear Aromatic Hydrocarbons
Hydrocarbons
Solids, Total (TS)

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL:
Cincinnati, OH: March 1983 and subsequent revisions
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, September, 1986 and subsequent
revisions

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
A5NWP	C5J050010-001	9510032-01Q	10/02/95
A5NWQ	C5J050010-002	9510032-02Q	10/02/95
A5NWT	C5J050010-003	9510032-04Q	10/02/95



CLEAN HARBORS ANALYTICAL

9510032-01Q

WO #: A5NWP101
 LAB #: C5J050010-001
 MATRIX: SOLID
 DILUTION FACTOR: 7.00

DATE SAMPLED: 10/02/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	290	SW846 8310	10/06-10/08/95	5279025
Acenaphthylene	ND	290	SW846 8310	10/06-10/08/95	5279025
Acenaphthene	ND	290	SW846 8310	10/06-10/08/95	5279025
Fluorene	ND	59	SW846 8310	10/06-10/08/95	5279025
Phenanthrene	350	150	SW846 8310	10/06-10/08/95	5279025
Anthracene	ND	150	SW846 8310	10/06-10/08/95	5279025
Fluoranthene	920	59	SW846 8310	10/06-10/08/95	5279025
Pyrene	540	59	SW846 8310	10/06-10/08/95	5279025
Benzo(a)anthracene	440	5.9	SW846 8310	10/06-10/08/95	5279025
Chrysene	420	44	SW846 8310	10/06-10/08/95	5279025
Benzo(b)fluoranthene	380	5.9	SW846 8310	10/06-10/08/95	5279025
Benzo(k)fluoranthene	200	5.9	SW846 8310	10/06-10/08/95	5279025
Benzo(a)pyrene	540	5.9	SW846 8310	10/06-10/08/95	5279025
Indeno(1,2,3-cd)pyrene	77	15	SW846 8310	10/06-10/08/95	5279025
Dibenzo(a,h)anthracene	44	8.8	SW846 8310	10/06-10/08/95	5279025
Benzo(g,h,i)perylene	370	15	SW846 8310	10/06-10/08/95	5279025

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510032-01Q

WO #: A5NWP
LAB #: C5J050010-001
MATRIX: SOLID

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	79.3		%	MCAWW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT

CLEAN HARBORS ANALYTICAL

9510032-02Q

WO #: A5NWQ101
LAB #: C5J050010-002
MATRIX: SOLID
DILUTION FACTOR: 18.00

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	740	690	SW846 8310	10/06-10/09/95	5279025
Acenaphthylene	ND	690	SW846 8310	10/06-10/09/95	5279025
Acenaphthene	ND	690	SW846 8310	10/06-10/09/95	5279025
Fluorene	ND	140	SW846 8310	10/06-10/09/95	5279025
Phenanthrene	380	350	SW846 8310	10/06-10/09/95	5279025
Anthracene	ND	350	SW846 8310	10/06-10/09/95	5279025
Fluoranthene	740	140	SW846 8310	10/06-10/09/95	5279025
Pyrene	230	140	SW846 8310	10/06-10/09/95	5279025
Benzo (a) anthracene	300	14	SW846 8310	10/06-10/09/95	5279025
Chrysene	220	100	SW846 8310	10/06-10/09/95	5279025
Benzo (b) fluoranthene	320	14	SW846 8310	10/06-10/09/95	5279025
Benzo (k) fluoranthene	170	14	SW846 8310	10/06-10/09/95	5279025
Benzo (a) pyrene	400	14	SW846 8310	10/06-10/09/95	5279025
Indeno (1,2,3-cd) pyrene	140	35	SW846 8310	10/06-10/09/95	5279025
Dibenzo (a,h) anthracene	34	21	SW846 8310	10/06-10/09/95	5279025
Benzo (g,h,i) perylene	350	35	SW846 8310	10/06-10/09/95	5279025

<u>SURROGATE RECOVERY</u>	<u>1</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510032-02Q

WO #: ASNWQ
LAB #: C5J050010-002
MATRIX: SOLID

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	86.5		%	MCANW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT

CLEAN HARBORS ANALYTICAL

9510032-04Q

WO #: A5NWT101
 LAB #: C5J050010-003
 MATRIX: SOLID
 DILUTION FACTOR: 40.00

DATE SAMPLED: 10/02/95
 TIME SAMPLED:
 DATE RECEIVED: 10/05/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	1,500	SW846 8310	10/06-10/10/95	5279025
Acenaphthylene	ND	1,500	SW846 8310	10/06-10/10/95	5279025
Acenaphthene	ND	1,500	SW846 8310	10/06-10/10/95	5279025
Fluorene	310	290	SW846 8310	10/06-10/10/95	5279025
Phenanthrene	1,900	750	SW846 8310	10/06-10/10/95	5279025
Anthracene	ND	750	SW846 8310	10/06-10/10/95	5279025
Fluoranthene	3,700	290	SW846 8310	10/06-10/10/95	5279025
Pyrene	3,100	290	SW846 8310	10/06-10/10/95	5279025
Benzo(a)anthracene	1,500	29	SW846 8310	10/06-10/10/95	5279025
Chrysene	1,600	220	SW846 8310	10/06-10/10/95	5279025
Benzo(b)fluoranthene	1,600	29	SW846 8310	10/06-10/10/95	5279025
Benzo(k)fluoranthene	890	29	SW846 8310	10/06-10/10/95	5279025
Benzo(a)pyrene	2,000	29	SW846 8310	10/06-10/10/95	5279025
Indeno(1,2,3-cd)pyrene	450	75	SW846 8310	10/06-10/10/95	5279025
Dibenzo(a,h)anthracene	220	44	SW846 8310	10/06-10/10/95	5279025
Benzo(g,h,i)perylene	1,200	75	SW846 8310	10/06-10/10/95	5279025

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

CLEAN HARBORS ANALYTICAL

9510032-04Q

WO #: A5NWT
LAB #: C5J050010-003
MATRIX: SOLID

DATE SAMPLED: 10/02/95
TIME SAMPLED:
DATE RECEIVED: 10/05/95

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	90.9		%	MCANW 160.3 M	10/05/95	5279015

NOTE: DRY WEIGHT

QUALITY CONTROL SECTION

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY

Quanterra Incorporated considers continuous analytical performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

SURROGATE SPIKE RECOVERY EVALUATIONS

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compounds analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recoveries calculated from the subsequent spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten percent (10%) each. For Pesticides, one (1) of two (2) surrogates meeting performance criteria is acceptable.

LABORATORY ANALYTICAL METHOD BLANK EVALUATIONS

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.) substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule, provided they are not present at a greater than five times the detection limit.

Volatiles

Methylene chloride
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY (CONT)

LABORATORY ANALYTICAL METHOD CHECK SAMPLE EVALUATIONS

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved. All compounds must meet laboratory recovery criteria. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) RECOVERY EVALUATION

Known concentration of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Actual percent recovery data is displayed alongside the acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

EXAMPLE

COMPOUND	SAMPLE CONCENTRATION	MS % RECOVERY	MSD % RECOVERY	QC LIMITS' RECOVERY
4-4'-DDT	0	95	112	(66-119)
Benzene	10	86	93	(39-150)
compound name	sample result	1st % recovery	2nd % recovery	acceptable method limits

¹QC limits are statistically derived from historical laboratory data. Where insufficient data exists to statistically derive these limits, they will be labelled "advisory". In this case, they are based on the best available technical information.

For metals analyses, the recoveries of the MS/MSD must be within the range of 80-120%. If they do not meet this criteria, but the RPD of the two results is <20% OR the absolute difference is less than 10% when the recoveries are below 50%, no corrective action is required. If these criteria are not met, the sample with its MS/MSD is reprepared and reanalyzed once more.

INTRA-LAB BLANK REPORT

LAB #: C5J060000-025

----- POLYNUCLEAR AROMATIC HYDROCARBONS -----

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/kg)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	33	10/06/95	5279025
Acenaphthylene	ND	33	10/06/95	5279025
Anthracene	ND	17	10/06/95	5279025
Benzo (a) anthracene	ND	0.67	10/06/95	5279025
Benzo (b) fluoranthene	ND	0.67	10/06/95	5279025
Benzo (k) fluoranthene	ND	0.67	10/06/95	5279025
Benzo (g, h, i) perylene	ND	1.7	10/06/95	5279025
Benzo (a) pyrene	ND	0.67	10/06/95	5279025
Chrysene	ND	5.0	10/06/95	5279025
Fluoranthene	ND	6.7	10/06/95	5279025
Fluorene	ND	6.7	10/06/95	5279025
Indeno (1,2,3-cd) pyrene	ND	1.7	10/06/95	5279025
Naphthalene	ND	33	10/06/95	5279025
Phenanthrene	ND	17	10/06/95	5279025
Pyrene	ND	6.7	10/06/95	5279025
Dibenzo (a, h) anthracene	ND	1.0	10/06/95	5279025

SURROGATE RECOVERY

Benzo (e) pyrene
2-Fluorobiphenyl

%

82
72

ACCEPTABLE LIMITS

(36 - 144)
(47 - 143)

NOTE:

ND (NONE DETECTED)

CHECK SAMPLE REPORT

QC BATCH: 5279025
LAB #: C5J060000-025 C
DILUTION FACTOR: 1.00

PREPARATION DATE: 10/06/95
DATE ANALYZED: 10/06/95

- - - - - **Polynuclear Aromatic Hydrocarbons** - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Naphthalene	103	(52-163)
Phenanthrene	76	(67-123)
Fluoranthene	93	(65-125)
Chrysene	85	(74-124)
Benzo (a) pyrene	97	(48-129)
Indeno (1,2,3-cd) pyrene	97	(63-133)



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9510032

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



BLANK ANALYSIS

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/10/95	10/11/95	**

Notes:

ND = Below practical quantitation limit (PQL)

* = mg/kg

Soil/solid samples based on sample dry weight

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Evaluation:

Hydrocarbon quantitative range:
C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbons observed.

QA/QC Surrogate Recoveries:

Acceptance Criteria

Ortho-terphenyl 87 %

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510032

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.001	0.001	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Copper - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Lead - Total	0.1	ND	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/10/95	10/12/95	7471(c)
Nickel - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	0.2	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.02	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	0.3	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	0.04	ND	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510032

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/09/95	10/11/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/09/95	10/10/95	3050/6010(c)
Beryllium - Total	0.001	0.001	10/09/95	10/10/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/09/95	10/10/95	3050/6010(c)
Chromium - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Copper - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Lead - Total	0.1	ND	10/09/95	10/10/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/10/95	10/12/95	7471(c)
Nickel - Total	0.03	ND	10/09/95	10/10/95	3050/6010(c)
Selenium - Total	0.2	ND	10/09/95	10/10/95	3050/6010(c)
Silver - Total	0.02	ND	10/09/95	10/11/95	3005/6010(c)
Thallium - Total	0.3	ND	10/09/95	10/10/95	3050/6010(c)
Zinc - Total	0.04	ND	10/09/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/l

Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510032

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	10/06/95	9010(c)
Cyanide, Total	0.02	ND	mg/l	10/10/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



1/194

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184				CHAIN OF CUSTODY RECORD				Sample Custodian — (617) 849-1800				Page 1 of 1		
Client: <u>CHES</u>		Project Name: <u>MURPHY'S WASTE OIL SERVICE</u>				Work Order/P.O. #: <u>EN-170</u>		Date: <u>10/2/95</u>						
Report To: <u>JAY MCCREERY</u>		Address: <u>12 MERCER ROAD, NATICK</u>				Phone #: <u>X6399</u>								
Date Samples Collected: <u>10/2/95</u>		by: <u>MCCREERY/NEWBASS</u>				Date Samples Received:								
Airbill/Bill of Lading? Y N				NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.				Samples were: Preserved Unpreserved						
Sample I.D.	Sampling Information				Analysis							# of con.	CHAS Sample #	
	Date	Time	Station Location	Sample Matrix	VOA 8240	TPH	GCFID	PAHs by APIC	13 PP. Tot. Arocl	Total Gravide	SIEVE ANALYSIS			
B-2	10/2		SS-3	SOIL	1	1	1	1	1			2	9510032 01A, M, O, Q	
B-3	↓		SS-2	↓	1	1	1	1	1		1	2	02A, M, O, Q	
B-3	↓		SS-3	↓							1		Continue equal parts from 03X	
B-3	↓		SS-4	↓	1	1	1	1	1		1		04A, M, O, Q	
B-3	↓		SS-5	↓							1		200µ Sample and run composite	
B-3	↓		SS-6	↓							1		for sieve test. 05X	
											1		06X	
													07L	
Relinquished by: <u>[Signature]</u>				VOA Vial				REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions) Total of 9 Sample Containers Run VOA first, then for additional parameters 13 more sample volume is needed.						
Date: <u>10/3/95</u> Time: <u>5:45 PM</u>				Glass Bottle										
Received by: <u>[Signature]</u>				Plastic Bottle										
Date: <u>10/3/95</u> Time: <u>5:41</u>				Pres.										
Relinquished by: _____				Volume										
Date: _____ Time: _____				Preservation Key: A — Acidified with _____ B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other										
Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.						Location of samples: <u>R4, R9B2 Quaternary</u>								
Accelerated turnaround requested: _____						Turnaround: 24 Hrs. 48 Hrs. 1 Week <u>2 Weeks</u> Other: _____								
Confirmed by: _____ Surcharge: _____														

OFFICE COPY



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/06/95
CHES Lab #: 9510112

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 10/25/95

Michael J. Murray
Laboratory Manager



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D, SS-6
Sample Type: Soil

CHES Lab #: 9510112-01A
Date Received: 10/06/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 10/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 113 %
Toluene-d8: 122 %
p-BFB: 103 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D, SS-6
Sample Type: Soil

CHES Lab #: 9510112-010
Date Received: 10/06/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/17/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

No significant hydrocarbons observed.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 90%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D, SS-6
Sample Type: Soil

CHES Lab #: 9510112-01M
Date Received: 10/06/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/17/95	10/18/95	3005/6010(c)
Arsenic - Total	6	6	10/17/95	10/18/95	3050/6010(c)
Beryllium - Total	0.029	0.260	10/17/95	10/18/95	3050/6010(c)
Cadmium - Total	0.29	ND	10/17/95	10/18/95	3050/6010(c)
Chromium - Total	0.87	9.1	10/17/95	10/18/95	3050/6010(c)
Copper - Total	0.87	8.0	10/17/95	10/18/95	3050/6010(c)
Lead - Total	3	4	10/17/95	10/18/95	3050/6010(c)
Mercury - Total	0.0855	ND	10/17/95	10/19/95	7471(c)
Nickel - Total	0.87	6.7	10/17/95	10/18/95	3050/6010(c)
Selenium - Total	6	ND	10/17/95	10/18/95	3050/6010(c)
Silver - Total	0.55	ND	10/17/95	10/18/95	3005/6010(c)
Thallium - Total	9	ND	10/17/95	10/18/95	3050/6010(c)
Zinc - Total	1.2	14	10/17/95	10/18/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D, SS-6
Sample Type: Soil

CHES Lab #: 9510112-01M
Date Received: 10/06/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/19/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	0.2
4	4.75	0.8
10	2.00	0.4
20	0.850	0.6
40	0.425	1.2
60	0.250	2.7
100	0.150	11.2
200	0.075	45.6
Bottom Tray	<0.075	37.2



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D, SS-6
Sample Type: Soil

CHES Lab #: 9510112-01M
Date Received: 10/06/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.1	ND	mg/kg	10/17/95	9010(c)
Total Solids	--	32.7	%	10/13/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238

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ANALYTICAL REPORT

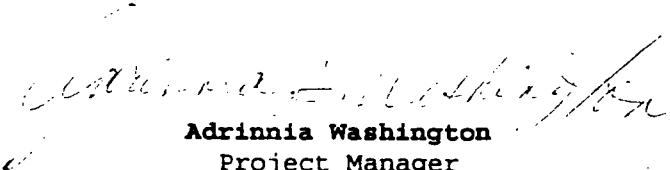
PROJECT NO. 9510112-01Q

CLEAN HARBOR

MICHAEL J. WEDGE

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED


Adrinna Washington
Project Manager

October 19, 1995

NARRATIVE

The following report contains the analytical results for samples submitted to Quanterra Incorporated. The samples were received into the laboratory in accordance with documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods and instrumentation in all analytical work. The methods used for the analyses presented in this study can be found on the following pages.

A Quality Control Section, containing a summary of QA/QC data for these analyses, is included at the end of the report.

The following codes are utilized in various analyses of this report:

ND	(None Detected)
DIL	(Diluted Out)
MI	(Matrix Interference)
NEG	(Negative)
J	(Detected, but below quantitation limit; estimated value)
B	(Compounds detected in method blank associated with this sample)
W	(Post digestion spike recovery fell between 40 - 85 %)
S	(Sample result determined by the Method of Standard Additions)
+	(Sample result determined by the Method of Standard Additions and the correlation coefficient was less than 0.995)

ANALYTICAL METHODS SUMMARY

Parameters

Polynuclear Aromatic Hydrocarbons
Hydrocarbons
Solids, Total (TS)

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL:
Cincinnati, OH: March 1983 and subsequent revisions
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, September, 1986 and subsequent
revisions

SAMPLE SUMMARY

The analytical results of the samples listed below are presented
on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
A5PA9	C5J100007-001	9510112-01Q	10/06/95



CLEAN HARBORS ANALYTICAL

9510112-01Q

WO #: ASPA9101
 LAB #: C5J100007-001
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/06/95
 TIME SAMPLED:
 DATE RECEIVED: 10/10/95

----- REQUESTED PARAMETERS -----

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/kg)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	42	SW846 8310	10/11-10/17/95	5284020
Acenaphthylene	ND	42	SW846 8310	10/11-10/17/95	5284020
Acenaphthene	ND	42	SW846 8310	10/11-10/17/95	5284020
Fluorene	ND	8.5	SW846 8310	10/11-10/17/95	5284020
Phenanthrene	ND	21	SW846 8310	10/11-10/17/95	5284020
Anthracene	ND	21	SW846 8310	10/11-10/17/95	5284020
Fluoranthene	ND	8.5	SW846 8310	10/11-10/17/95	5284020
Pyrene	ND	8.5	SW846 8310	10/11-10/17/95	5284020
Benzo (a) anthracene	ND	0.85	SW846 8310	10/11-10/17/95	5284020
Chrysene	ND	6.3	SW846 8310	10/11-10/17/95	5284020
Benzo (b) fluoranthene	ND	0.85	SW846 8310	10/11-10/17/95	5284020
Benzo (k) fluoranthene	ND	0.85	SW846 8310	10/11-10/17/95	5284020
Benzo (a) pyrene	ND	0.85	SW846 8310	10/11-10/17/95	5284020
Indeno (1,2,3-cd) pyrene	ND	2.1	SW846 8310	10/11-10/17/95	5284020
Dibenzo (a,h) anthracene	ND	1.3	SW846 8310	10/11-10/17/95	5284020
Benzo (g,h,i) perylene	ND	2.1	SW846 8310	10/11-10/17/95	5284020

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	98	(36 - 144)
2-Fluorobiphenyl	85	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510112-01Q

WO #: ASPA9
LAB #: C5J100007-001
MATRIX: SOLID

DATE SAMPLED: 10/06/95
TIME SAMPLED:
DATE RECEIVED: 10/10/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	79.3		%	MCAWW 160.3 M	10/11/95	5284022

NOTE: DRY WEIGHT

QUALITY CONTROL SECTION

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY

Quanterra Incorporated considers continuous analytical performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

SURROGATE SPIKE RECOVERY EVALUATIONS

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compounds analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recoveries calculated from the subsequent spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten percent (10%) each. For Pesticides, one (1) of two (2) surrogates meeting performance criteria is acceptable.

LABORATORY ANALYTICAL METHOD BLANK EVALUATIONS

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.) substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule, provided they are not present at a greater than five times the detection limit.

Volatiles

Methylene chloride
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY (CONT)

LABORATORY ANALYTICAL METHOD CHECK SAMPLE EVALUATIONS

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved. All compounds must meet laboratory recovery criteria. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) RECOVERY EVALUATION

Known concentration of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Actual percent recovery data is displayed alongside the acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

EXAMPLE

COMPOUND	SAMPLE CONCENTRATION	MS % RECOVERY	MSD % RECOVERY	QC LIMITS' RECOVERY
4-4'-DDT	0	95	112	(66-119)
Benzene	10	86	93	(39-150)
compound name	sample result	1st % recovery	2nd % recovery	acceptable method limits

¹QC limits are statistically derived from historical laboratory data. Where insufficient data exists to statistically derive these limits, they will be labelled "advisory". In this case, they are based on the best available technical information.

For metals analyses, the recoveries of the MS/MSD must be within the range of 80-120%. If they do not meet this criteria, but the RPD of the two results is <20% OR the absolute difference is less than 10% when the recoveries are below 50%, no corrective action is required. If these criteria are not met, the sample with its MS/MSD is reprepared and reanalyzed once more.

INTRA-LAB BLANK REPORT

LAB #: C5J110000-020

----- POLYNUCLEAR AROMATIC HYDROCARBONS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	33	10/11-10/17/95	5284020
Acenaphthylene	ND	33	10/11-10/17/95	5284020
Anthracene	ND	17	10/11-10/17/95	5284020
Benzo (a) anthracene	ND	0.67	10/11-10/17/95	5284020
Benzo (b) fluoranthene	ND	0.67	10/11-10/17/95	5284020
Benzo (k) fluoranthene	ND	0.67	10/11-10/17/95	5284020
Benzo (g,h,i) perylene	ND	1.7	10/11-10/17/95	5284020
Benzo (a) pyrene	ND	0.67	10/11-10/17/95	5284020
Chrysene	ND	5.0	10/11-10/17/95	5284020
Fluoranthene	ND	6.7	10/11-10/17/95	5284020
Fluorene	ND	6.7	10/11-10/17/95	5284020
Indeno (1,2,3-cd) pyrene	ND	1.7	10/11-10/17/95	5284020
Naphthalene	ND	33	10/11-10/17/95	5284020
Phenanthrene	ND	17	10/11-10/17/95	5284020
Pyrene	ND	6.7	10/11-10/17/95	5284020
Dibenzo (a,h) anthracene	ND	1.0	10/11-10/17/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	109	(36 - 144)
2-Fluorobiphenyl	103	(47 - 143)

NOTE:

ND (NONE DETECTED)

LABORATORY CONTROL SAMPLE REPORT

LAB #: C5J100007
QC BATCH: 5284020
WORK ORDER: A5PFQ

PREPARATION DATE: 10/11/95
DATE ANALYZED: 10/17/95

----- HPLC -----

<u>PARAMETER</u>	<u>TRUE SPIKE</u>	<u>MEASURED SPIKE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Naphthalene	167	240	144	(52-163)
Phenanthrene	167	198	119	(67-123)
Fluoranthene	167	198	118	(65-125)
Chrysene	167	210	126 a	(74-124)
Benzo (a) pyrene	167	173	103	(48-129)
Indeno (1,2,3-cd) pyrene	167	226	135 a	(63-133)

NOTE:

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

a Spiked analyte recovery outside control limits.



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9510112

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 10/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 112%
Toluene-d8: 128%
p-BFB: 103%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Parameter	PQL*	Result	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/17/95	10/17/95	**

Notes:

ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Hydrocarbon quantitative range:

C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbon observed.

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 83 %

Acceptance Criteria:

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510112

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/17/95	10/18/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/17/95	10/18/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/17/95	10/18/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/17/95	10/18/95	3050/6010(c)
Chromium - Total	0.03	ND	10/17/95	10/18/95	3050/6010(c)
Copper - Total	0.03	ND	10/17/95	10/18/95	3050/6010(c)
Lead - Total	0.1	ND	10/17/95	10/18/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/17/95	10/19/95	7471(c)
Nickel - Total	0.03	ND	10/17/95	10/18/95	3050/6010(c)
Selenium - Total	0.2	ND	10/17/95	10/18/95	3050/6010(c)
Silver - Total	0.02	ND	10/17/95	10/18/95	3005/6010(c)
Thallium - Total	0.3	ND	10/17/95	10/18/95	3050/6010(c)
Zinc - Total	0.04	ND	10/17/95	10/18/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/l

Soil/solid samples based on sample dry weight.



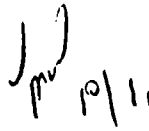
Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510112

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	10/17/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight





Method References

- (a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 18th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1992.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., November 1986, updated July 1992 and September 1994.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, September 1982.
- (e) "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions; Final Rule," Federal Register, Vol. 55, No. 126, Friday, June 29, 1990, and revision in Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992.
- (f) "Guidelines Establishing Test Procedures for Analysis of Pollutants," Code of Federal Regulations, Part 136 Appendix A and Appendix B, July 1, 1993.
- (g) "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency, Office of Research and Development, Washington, D.C., December 1988, revised July 1991.
- (h) "The Determination of Inorganic Anions in Water by Ion Chromatography - Method 300.0," Publication EPA-600/4-84-017, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, March 1984.
- (i) "Hach Water Analysis Handbook," Hach Chemical Company, Loveland, CO, 1992.
- (j) "USEPA-CLP Statement of Work for Organic Analysis," Publication OLM01.0 (including revisions, U.S. Environmental Protection Agency, Contract Laboratory Program, August 1991.
- (k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing Materials, Philadelphia, 1989 & 1991.
- (l) "Annual Book of Standards," Section 5: Petroleum Products and Lubricants, Vols. 5.01, American Society for Testing Materials, Philadelphia, 1993.
- (m) "Annual Book of Standards," Section 4: Construction, Vol. 4.08, American Society for Testing Materials, Philadelphia, 1993.
- (n) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982, updated April 1984.
- (o) "Annual Book of Standards," Section 15: Engine Coolants; Halogenated Organic Solvents, Vol. 15.05, American Society for Testing Materials, Philadelphia, 1995.

[REF-09/21/95]



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/05/95
CHES Lab #: 9510080

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date: Michael J. Murray 10/25/95
Michael J. Murray
Laboratory Manager

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA 086 NH 198958-A CT PR 6574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: Clean Harbors

Laboratory Job Number: L9507825

Address: 325 Wood Road

Invoice Number: 78066

Braintree, MA 02184

Date Received: 12-OCT-95

Attn: Mike Wedge

Date Reported: 19-OCT-95

Project Number: 9510080

Delivery Method: Alpha

Site:

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9507825-01	9510081-01	
L9507825-02	9510081-02	
L9507825-03	9510081-03	
L9507825-04	9510081-04	
L9507825-05	9510081-05	
L9507825-06	9510081-06	
L9507825-07	9510081-07	
L9507825-08	9510081-08	
L9507825-09	9510080-01	
L9507825-10	9510080-02	
L9507825-11	9510080-05	
L9507825-12	9510080-07	
L9507825-13	9510080-08	
L9507825-14	9510080-09	

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-09

Date Collected: 05-OCT-95

9510080-01

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	82.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1.	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-09
9510080-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1.	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	80.0	%					
4-Bromofluorobenzene	79.0	%					
Dibromofluoromethane	81.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-10

Date Collected: 05-OCT-95

9510080-02

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	16-Oct 16-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-10
9510080-02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	16-Oct 16-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	83.0	%					
4-Bromofluorobenzene	101.	%					
Dibromofluoromethane	86.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-11

Date Collected: 05-OCT-95

9510080-05

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	16-Oct 16-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-11
9510080-05

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	16-Oct 16-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	87.0	%					
4-Bromofluorobenzene	98.0	%					
Dibromofluoromethane	83.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-12

Date Collected: 04-OCT-95

9510080-07

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	16-Oct 16-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-12
9510080-07

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	16-Oct 16-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	83.0	%					
4-Bromofluorobenzene	89.0	%					
Dibromofluoromethane	93.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-13

Date Collected: 04-OCT-95

9510080-08

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	91.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	17-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-13
9510080-08

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1.	8260	17-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	91.0	%					
4-Bromofluorobenzene	85.0	%					
Dibromofluoromethane	93.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-14

Date Collected: 04-OCT-95

9510080-09

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	89.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	16-Oct 16-Oct	DB
Methylene chloride	ND	ug/kg	50.				
1,1-Dichloroethane	ND	ug/kg	15.				
Chloroform	ND	ug/kg	15.				
Carbon tetrachloride	ND	ug/kg	10.				
1,2-Dichloropropane	ND	ug/kg	35.				
Dibromochloromethane	ND	ug/kg	10.				
1,1,2-Trichloroethane	ND	ug/kg	15.				
2-Chloroethylvinyl ether	ND	ug/kg	100				
Tetrachloroethene	ND	ug/kg	15.				
Chlorobenzene	ND	ug/kg	35.				
Trichlorofluoromethane	ND	ug/kg	50.				
1,2-Dichloroethane	ND	ug/kg	15.				
1,1,1-Trichloroethane	ND	ug/kg	10.				
Bromodichloromethane	ND	ug/kg	10.				
trans-1,3-Dichloropropene	ND	ug/kg	15.				
cis-1,3-Dichloropropene	ND	ug/kg	10.				
Bromoform	ND	ug/kg	10.				
1,1,2,2-Tetrachloroethane	ND	ug/kg	10.				
Benzene	ND	ug/kg	10.				
Toluene	ND	ug/kg	15.				
Ethylbenzene	ND	ug/kg	10.				
Chloromethane	ND	ug/kg	100				
Bromomethane	ND	ug/kg	20.				
Vinyl chloride	ND	ug/kg	35.				
Chloroethane	ND	ug/kg	20.				
1,1-Dichloroethene	ND	ug/kg	15.				
trans-1,2-Dichloroethene	ND	ug/kg	15.				
Trichloroethene	ND	ug/kg	10.				
1,2-Dichlorobenzene	330	ug/kg	100				
1,3-Dichlorobenzene	ND	ug/kg	100				
1,4-Dichlorobenzene	ND	ug/kg	100				
Methyl tert butyl ether	ND	ug/kg	100				
Xylenes	290	ug/kg	10.				
cis-1,2-Dichloroethene	64.	ug/kg	10.				
Dibromomethane	ND	ug/kg	100				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-14
9510080-09

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	16-Oct 16-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	100				
Iodomethane	ND	ug/kg	100				
1,2,3-Trichloropropane	ND	ug/kg	100				
Styrene	ND	ug/kg	10.				
Dichlorodifluoromethane	ND	ug/kg	100				
Acetone	ND	ug/kg	100				
Carbon Disulfide	ND	ug/kg	100				
2-Butanone	ND	ug/kg	45.				
Vinyl Acetate	ND	ug/kg	100				
4-Methyl-2-pentanone	ND	ug/kg	100				
2-Hexanone	ND	ug/kg	100				
Ethyl methacrylate	ND	ug/kg	100				
Acrolein	ND	ug/kg	250				
Acrylonitrile	ND	ug/kg	100				
Bromochloromethane	ND	ug/kg	50.				
2,2-Dichloropropane	ND	ug/kg	50.				
1,2-Dibromoethane	ND	ug/kg	50.				
1,3-Dichloropropane	ND	ug/kg	50.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.				
Bromobenzene	ND	ug/kg	50.				
n-Butylbenzene	400	ug/kg	50.				
sec-Butylbenzene	260	ug/kg	50.				
tert-Butylbenzene	ND	ug/kg	50.				
o-Chlorotoluene	ND	ug/kg	50.				
p-Chlorotoluene	ND	ug/kg	50.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	50.				
Hexachlorobutadiene	ND	ug/kg	50.				
Isopropylbenzene	ND	ug/kg	50.				
p-Isopropyltoluene	200	ug/kg	50.				
Naphthalene	310	ug/kg	50.				
n-Propylbenzene	ND	ug/kg	50.				
1,2,3-Trichlorobenzene	ND	ug/kg	50.				
1,2,4-Trichlorobenzene	ND	ug/kg	50.				
1,3,5-Trimethylbenzene	470	ug/kg	50.				
1,2,4-Trimethylbenzene	920	ug/kg	50.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	50.				
Ethyl ether	ND	ug/kg	250				
SURROGATE RECOVERY							
Toluene-d8	92.0	%					
4-Bromofluorobenzene	101.	%					
Dibromofluoromethane	92.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9507825

Parameter	MS %	MSD %	RPD
Volatile Organics by GC/MS Spike Recovery MS/MSD for sample(s) 10-14			
1,1-Dichloroethene	100	94	6
Trichloroethene	93	96	3
Benzene	95	95	0
Toluene	91	90	1
Chlorobenzene	93	93	0
Volatile Organics by GC/MS Spike Recovery MS/MSD for sample(s) 06-09			
1,1-Dichloroethene	115	120	4
Trichloroethene	100	106	6
Benzene	103	113	9
Toluene	95	101	6
Chlorobenzene	102	103	1
Volatile Organics by GC/MS Spike Recovery MS/MSD for sample(s) 01-05			
1,1-Dichloroethene	91	94	3
Trichloroethene	99	100	1
Benzene	97	95	2
Toluene	94	94	0
Chlorobenzene	100	110	10

ALPHA ANALYTICAL LABS
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.
3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.
METHOD Method number by which analysis was performed.
ID Initials of the analyst.

Quanterra Incorporated
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ANALYTICAL REPORT

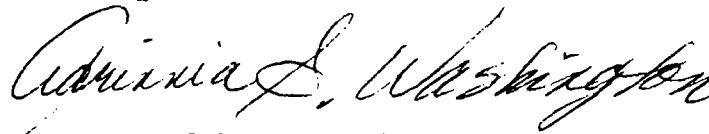
PROJECT NO. 9510080

CLEAN HARBOR

MICHAEL J. WEDGE

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED



Adrinna Washington
Project Manager

October 23, 1995

US EPA ARCHIVE DOCUMENT

NARRATIVE

The following report contains the analytical results for samples submitted to Quanterra Incorporated. The samples were received into the laboratory in accordance with documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods and instrumentation in all analytical work. The methods used for the analyses presented in this study can be found on the following pages.

A Quality Control Section, containing a summary of QA/QC data for these analyses, is included at the end of the report.

The following codes are utilized in various analyses of this report:

ND	(None Detected)
DIL	(Diluted Out)
MI	(Matrix Interference)
NEG	(Negative)
J	(Detected, but below quantitation limit; estimated value)
B	(Compounds detected in method blank associated with this sample)
W	(Post digestion spike recovery fell between 40 - 85 %)
S	(Sample result determined by the Method of Standard Additions)
+	(Sample result determined by the Method of Standard Additions and the correlation coefficient was less than 0.995)

CASE NARRATIVE

Due to the sample matrix, the compound indeno(1,2,3-cd) pyrene for samples 9510080-08Q and 09Q is reported as a matrix interference (MI). However, the value is estimated as maximum concentration. The laboratory control sample is outside for QC limits.

ANALYTICAL METHODS SUMMARY

Parameters

Polynuclear Aromatic Hydrocarbons
Hydrocarbons
Solids, Total (TS)

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL:
Cincinnati, OH: March 1983 and subsequent revisions
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, September, 1986 and subsequent
revisions

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
A5P7A	C5J090003-001	9510080-01Q	10/05/95
A5P7C	C5J090003-002	9510080-02Q	10/05/95
A5P7D	C5J090003-003	9510080-05Q	10/05/95
A5P7E	C5J090003-004	9510080-07Q	10/04/95
A5P7F	C5J090003-005	9510080-08Q	10/04/95
A5P7G	C5J090003-006	9510080-09Q	10/04/95



CLEAN HARBORS ANALYTICAL

9510080-01Q

WO #: ASP7A101
 LAB #: C5J090003-001
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/05/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	220	40	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.1	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	28	21	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	21	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	56	8.1	SW846 8310	10/11-10/18/95	5284020
Pyrene	46	8.1	SW846 8310	10/11-10/18/95	5284020
Benzo (a) anthracene	24	0.81	SW846 8310	10/11-10/18/95	5284020
Chrysene	37	6.0	SW846 8310	10/11-10/18/95	5284020
Benzo (b) fluoranthene	25	0.81	SW846 8310	10/11-10/18/95	5284020
Benzo (k) fluoranthene	13	0.81	SW846 8310	10/11-10/18/95	5284020
Benzo (a) pyrene	31	0.81	SW846 8310	10/11-10/18/95	5284020
Indeno (1,2,3-cd) pyrene	17	2.1	SW846 8310	10/11-10/18/95	5284020
Dibenzo (a,h) anthracene	3.3	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo (g,h,i) perylene	27	2.1	SW846 8310	10/11-10/18/95	5284020

SURROGATE RECOVERY	±	ACCEPTABLE LIMITS
Benzo (e) pyrene	114	(36 - 144)
2-Fluorobiphenyl	67	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510080-01Q

WO #: ASP7A
LAB #: C5J090003-001
MATRIX: SOLID

DATE SAMPLED: 10/05/95
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	82.7		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510080-02Q

WO #: A5P7C101
 LAB #: C5J090003-002
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/05/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	40	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.1	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	21	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	21	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	9.5	8.1	SW846 8310	10/11-10/18/95	5284020
Pyrene	ND	8.1	SW846 8310	10/11-10/18/95	5284020
Benzo (a) anthracene	3.7	0.81	SW846 8310	10/11-10/18/95	5284020
Chrysene	ND	6.0	SW846 8310	10/11-10/18/95	5284020
Benzo (b) fluoranthene	4.0	0.81	SW846 8310	10/11-10/18/95	5284020
Benzo (k) fluoranthene	2.1	0.81	SW846 8310	10/11-10/18/95	5284020
Benzo (a) pyrene	4.5	0.81	SW846 8310	10/11-10/18/95	5284020
Indeno (1,2,3-cd) pyrene	3.6	2.1	SW846 8310	10/11-10/18/95	5284020
Dibenzo (a,h) anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo (g,h,i) perylene	4.6	2.1	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	96	(36 - 144)
2-Fluorobiphenyl	75	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510080-02Q

WO #: ASP7C
LAB #: C5J090003-002
MATRIX: SOLID

DATE SAMPLED: 10/05/95
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	82.9		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510080-05Q

WO #: A5P7D101
 LAB #: C5J090003-003
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/05/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	41	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	41	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	41	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.3	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	21	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	21	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	ND	8.3	SW846 8310	10/11-10/18/95	5284020
Pyrene	ND	8.3	SW846 8310	10/11-10/18/95	5284020
Benzo (a) anthracene	ND	0.83	SW846 8310	10/11-10/18/95	5284020
Chrysene	ND	6.2	SW846 8310	10/11-10/18/95	5284020
Benzo (b) fluoranthene	ND	0.83	SW846 8310	10/11-10/18/95	5284020
Benzo (k) fluoranthene	ND	0.83	SW846 8310	10/11-10/18/95	5284020
Benzo (a) pyrene	ND	0.83	SW846 8310	10/11-10/18/95	5284020
Indeno (1,2,3-cd) pyrene	ND	2.1	SW846 8310	10/11-10/18/95	5284020
Dibenzo (a,h) anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo (g,h,i) perylene	ND	2.1	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	89	(36 - 144)
2-Fluorobiphenyl	74	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510080-05Q

WO #: A5P7D
LAB #: C5J090003-003
MATRIX: SOLID

DATE SAMPLED: 10/05/95
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	80.4		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510080-07Q

WO #: A5P7E101
 LAB #: C5J090003-004
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/04/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	40	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.1	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	20	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	20	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	ND	8.1	SW846 8310	10/11-10/18/95	5284020
Pyrene	ND	8.1	SW846 8310	10/11-10/18/95	5284020
Benzo (a) anthracene	1.0	0.81	SW846 8310	10/11-10/18/95	5284020
Chrysene	ND	6.0	SW846 8310	10/11-10/18/95	5284020
Benzo (b) fluoranthene	3.2	0.81	SW846 8310	10/11-10/18/95	5284020
Benzo (k) fluoranthene	1.2	0.81	SW846 8310	10/11-10/18/95	5284020
Benzo (a) pyrene	2.8	0.81	SW846 8310	10/11-10/18/95	5284020
Indeno (1,2,3-cd) pyrene	ND	2.0	SW846 8310	10/11-10/18/95	5284020
Dibenzo (a,h) anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo (g,h,i) perylene	4.1	2.0	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	96	(36 - 144)
2-Fluorobiphenyl	73	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510080-07Q

WO #: ASP7E
LAB #: C5J090003-004
MATRIX: SOLID

DATE SAMPLED: 10/04/95
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	83.2		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510080-08Q

WO #: ASP7F101
 LAB #: C5J090003-005
 MATRIX: SOLID
 DILUTION FACTOR: 90.00

DATE SAMPLED: 10/04/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	3,200	SW846 8310	10/11-10/20/95	5284020
Acenaphthylene	ND	3,200	SW846 8310	10/11-10/20/95	5284020
Acenaphthene	3,200	3,200	SW846 8310	10/11-10/20/95	5284020
Fluorene	730	640	SW846 8310	10/11-10/20/95	5284020
Phenanthrene	5,600	1,600	SW846 8310	10/11-10/20/95	5284020
Anthracene	1,600	1,600	SW846 8310	10/11-10/20/95	5284020
Fluoranthene	7,000	640	SW846 8310	10/11-10/20/95	5284020
Pyrene	7,600	640	SW846 8310	10/11-10/20/95	5284020
Benzo (a) anthracene	3,000	64	SW846 8310	10/11-10/20/95	5284020
Chrysene	3,700	480	SW846 8310	10/11-10/20/95	5284020
Benzo (b) fluoranthene	2,300	64	SW846 8310	10/11-10/20/95	5284020
Benzo (k) fluoranthene	1,300	64	SW846 8310	10/11-10/20/95	5284020
Benzo (a) pyrene	2,800	64	SW846 8310	10/11-10/20/95	5284020
Indeno (1,2,3-cd) pyrene	MI (6,500)	160	SW846 8310	10/11-10/20/95	5284020
Dibenzo (a,h) anthracene	210	96	SW846 8310	10/11-10/20/95	5284020
Benzo (g,h,i) perylene	2,300	160	SW846 8310	10/11-10/20/95	5284020

<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510080-08Q

WO #: A5P7F
LAB #: C5J090003-005
MATRIX: SOLID

DATE SAMPLED: 10/04/95
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	93.7		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510080-09Q

WO #: A5P7G101
 LAB #: C5J090003-006
 MATRIX: SOLID
 DILUTION FACTOR: 20.00

DATE SAMPLED: 10/04/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	750	SW846 8310	10/11-10/20/95	5284020
Acenaphthylene	ND	750	SW846 8310	10/11-10/20/95	5284020
Acenaphthene	ND	750	SW846 8310	10/11-10/20/95	5284020
Fluorene	180	150	SW846 8310	10/11-10/20/95	5284020
Phenanthrene	560	390	SW846 8310	10/11-10/20/95	5284020
Anthracene	ND	390	SW846 8310	10/11-10/20/95	5284020
Fluoranthene	430	150	SW846 8310	10/11-10/20/95	5284020
Pyrene	310	150	SW846 8310	10/11-10/20/95	5284020
Benzo (a) anthracene	170	15	SW846 8310	10/11-10/20/95	5284020
Chrysene	500	110	SW846 8310	10/11-10/20/95	5284020
Benzo (b) fluoranthene	150	15	SW846 8310	10/11-10/20/95	5284020
Benzo (k) fluoranthene	51	15	SW846 8310	10/11-10/20/95	5284020
Benzo (a) pyrene	220	15	SW846 8310	10/11-10/20/95	5284020
Indeno (1,2,3-cd) pyrene	MI (61)	39	SW846 8310	10/11-10/20/95	5284020
Dibenzo (a,h) anthracene	ND	23	SW846 8310	10/11-10/20/95	5284020
Benzo (g,h,i) perylene	150	39	SW846 8310	10/11-10/20/95	5284020

SURROGATE RECOVERY±ACCEPTABLE LIMITS

Benzo (e) pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510080-09Q

WO #: A5P7G
 LAB #: C5J090003-006
 MATRIX: SOLID

DATE SAMPLED: 10/04/95
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>	<u>PREPARATION -</u>	<u>QC</u>
		<u>LIMIT</u>	<u>UNIT</u>		<u>ANALYSIS DATE</u>	<u>BATCH</u>
Solids, Total (TS)	88.0		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT

QUALITY CONTROL SECTION

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY

Quanterra Incorporated considers continuous analytical performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

SURROGATE SPIKE RECOVERY EVALUATIONS

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compounds analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recoveries calculated from the subsequent spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten percent (10%) each. For Pesticides, one (1) of two (2) surrogates meeting performance criteria is acceptable.

LABORATORY ANALYTICAL METHOD BLANK EVALUATIONS

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.) substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule, provided they are not present at a greater than five times the detection limit.

Volatiles

Methylene chloride
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY (CONT)

LABORATORY ANALYTICAL METHOD CHECK SAMPLE EVALUATIONS

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved. All compounds must meet laboratory recovery criteria. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) RECOVERY EVALUATION

Known concentration of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Actual percent recovery data is displayed alongside the acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

EXAMPLE

COMPOUND	SAMPLE CONCENTRATION	MS % RECOVERY	MSD % RECOVERY	QC LIMITS' RECOVERY
4-4'-DDT	0	95	112	(66-119)
Benzene	10	86	93	(39-150)
compound name	sample result	1st % recovery	2nd % recovery	acceptable method limits

¹QC limits are statistically derived from historical laboratory data. Where insufficient data exists to statistically derive these limits, they will be labelled "advisory". In this case, they are based on the best available technical information.

For metals analyses, the recoveries of the MS/MSD must be within the range of 80-120%. If they do not meet this criteria, but the RPD of the two results is <20% OR the absolute difference is less than 10% when the recoveries are below 50%, no corrective action is required. If these criteria are not met, the sample with its MS/MSD is reprepared and reanalyzed once more.

INTRA-LAB BLANK REPORT

LAB #: C5J110000-020

----- POLYNUCLEAR AROMATIC HYDROCARBONS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	33	10/11-10/17/95	5284020
Acenaphthylene	ND	33	10/11-10/17/95	5284020
Anthracene	ND	17	10/11-10/17/95	5284020
Benzo (a) anthracene	ND	0.67	10/11-10/17/95	5284020
Benzo (b) fluoranthene	ND	0.67	10/11-10/17/95	5284020
Benzo (k) fluoranthene	ND	0.67	10/11-10/17/95	5284020
Benzo (g,h,i) perylene	ND	1.7	10/11-10/17/95	5284020
Benzo (a) pyrene	ND	0.67	10/11-10/17/95	5284020
Chrysene	ND	5.0	10/11-10/17/95	5284020
Fluoranthene	ND	6.7	10/11-10/17/95	5284020
Fluorene	ND	6.7	10/11-10/17/95	5284020
Indeno (1,2,3-cd) pyrene	ND	1.7	10/11-10/17/95	5284020
Naphthalene	ND	33	10/11-10/17/95	5284020
Phenanthrene	ND	17	10/11-10/17/95	5284020
Pyrene	ND	6.7	10/11-10/17/95	5284020
Dibenzo (a,h) anthracene	ND	1.0	10/11-10/17/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	109	(36 - 144)
2-Fluorobiphenyl	103	(47 - 143)

NOTE:

ND (NONE DETECTED)

CHECK SAMPLE REPORT

QC BATCH: 5284020
LAB #: C5J110000-020 C
DILUTION FACTOR: 1.00

PREPARATION DATE: 10/11/95
DATE ANALYZED: 10/17/95

- - - - - Polynuclear Aromatic Hydrocarbons - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Naphthalene	144	(52-163)
Phenanthrene	119	(67-123)
Fluoranthene	118	(65-125)
Chrysene	126	(74-124)
Benzo (a) pyrene	103	(48-129)
Indeno (1,2,3-cd) pyrene	135	(63-133)



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-6, SS-5
Sample Type: Soil

CHES Lab #: 9510080-010
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
No significant hydrocarbons observed.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 72%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-6, SS-5
Sample Type: Soil

CHES Lab #: 9510080-01M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.037	0.222	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.37	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	1.1	11	10/13/95	10/16/95	3050/6010(c)
Copper - Total	1.1	12	10/13/95	10/16/95	3050/6010(c)
Lead - Total	4	10	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0667	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	1.1	5.9	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.75	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.5	24	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-6, SS-5
Sample Type: Soil

CHES Lab #: 9510080-01M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.1	ND	mg/kg	10/10/95	9010(c)
Total Solids	--	83.6	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-10,SS-6
Sample Type: Soil

CHES Lab #: 9510080-020
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	14	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 79%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-10,SS-6
Sample Type: Soil

CHES Lab #: 9510080-02M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.036	0.073	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.36	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	1.1	4.8	10/13/95	10/16/95	3050/6010(c)
Copper - Total	1.1	2.8	10/13/95	10/17/95	3050/6010(c)
Lead - Total	4	4	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0745	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	1.1	3.3	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.86	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.5	7.9	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-10,SS-6
Sample Type: Soil

CHES Lab #: 9510080-02M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.8	ND	mg/kg	10/10/95	9010(c)
Total Solids	--	81.4	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9,SS-6
Sample Type: Soil

CHES Lab #: 9510080-050
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

No significant hydrocarbons observed.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 76%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9,SS-6
Sample Type: Soil

CHES Lab #: 9510080-05M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	8	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.042	0.127	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.42	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	1.3	6.0	10/13/95	10/16/95	3050/6010(c)
Copper - Total	1.3	3.0	10/13/95	10/16/95	3050/6010(c)
Lead - Total	4	ND	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0742	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	1.3	ND	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	8	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.79	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.7	7.8	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9,SS-6
Sample Type: Soil

CHES Lab #: 9510080-05M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.0	ND	mg/kg	10/10/95	9010(c)
Total Solids	--	82.5	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMPOSITE MW-9,SS-3,5,6
Sample Type: Soil

CHES Lab #: 9510080-06L
Date Received: 10/05/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/18/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	0.6
4	4.75	0.8
10	2.00	2.7
20	0.850	3.6
40	0.425	6.6
60	0.250	21.5
100	0.150	35.8
200	0.075	23.5
Bottom Tray	<0.075	4.6



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-9, SS-5
Sample Type: Soil

CHES Lab #: 9510080-070
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	13	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method. Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 68%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-9, SS-5
Sample Type: Soil

CHES Lab #: 9510080-07M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	8	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.041	0.122	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.41	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	1.2	5.1	10/13/95	10/16/95	3050/6010(c)
Copper - Total	1.2	3.9	10/13/95	10/16/95	3050/6010(c)
Lead - Total	4	5	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0692	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	1.2	ND	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	8	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.70	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.6	7.7	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-9, SS-5
Sample Type: Soil

CHES Lab #: 9510080-07M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.4	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	81.4	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-4, SS-1
Sample Type: Soil

CHES Lab #: 9510080-080
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	22	660	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method. Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-4, SS-1
Sample Type: Soil

CHES Lab #: 9510080-08M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	7	8	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.033	0.329	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.33	0.56	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	0.99	29	10/13/95	10/16/95	3050/6010(c)
Copper - Total	0.99	38	10/13/95	10/16/95	3050/6010(c)
Lead - Total	3	100	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0676	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	0.99	13	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.64	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.3	84	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-4, SS-1
Sample Type: Soil

CHES Lab #: 9510080-08M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	92.1	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-4, SS-6
Sample Type: Soil

CHES Lab #: 9510080-090
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	23	7,700	10/10/95	10/11/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-4, SS-6
Sample Type: Soil

CHES Lab #: 9510080-09M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	5	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	8	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.038	0.266	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.38	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	1.1	16	10/13/95	10/16/95	3050/6010(c)
Copper - Total	1.1	27	10/13/95	10/16/95	3050/6010(c)
Lead - Total	4	60	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0600	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	1.1	11	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	8	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.81	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.5	36	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-4, SS-6
Sample Type: Soil

CHES Lab #: 9510080-09M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.5	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	87.5	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9510080

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Parameter	PQL*	Result	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/10/95	10/11/95	**

Notes:

ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Hydrocarbon quantitative range:

C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbon observed.

QA/QC**Surrogate Recoveries:**

Ortho-terphenyl: 87 %

Acceptance Criteria:

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510080

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	0.03	ND	10/13/95	10/16/95	3050/6010(c)
Copper - Total	0.03	ND	10/13/95	10/16/95	3050/6010(c)
Lead - Total	0.1	ND	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/13/95	10/17/95	7471(c)
Nickel - Total	0.03	ND	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	0.2	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.02	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	0.3	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	0.04	ND	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510080

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	10/10/95	9010(c)
Cyanide, Total	0.02	ND	mg/l	10/11/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



Method References

- (a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 18th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1992.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., November 1986, updated July 1992 and September 1994.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, September 1982.
- (e) "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions; Final Rule," Federal Register, Vol. 55, No. 126, Friday, June 29, 1990, and revision in Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992.
- (f) "Guidelines Establishing Test Procedures for Analysis of Pollutants," Code of Federal Regulations, Part 136 Appendix A and Appendix B, July 1, 1993.
- (g) "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency, Office of Research and Development, Washington, D.C., December 1988, revised July 1991.
- (h) "The Determination of Inorganic Anions in Water by Ion Chromatography - Method 300.0," Publication EPA-600/4-84-017, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, March 1984.
- (i) "Hach Water Analysis Handbook," Hach Chemical Company, Loveland, CO, 1992.
- (j) "USEPA-CLP Statement of Work for Organic Analysis," Publication OLM01.0 (including revisions, U.S. Environmental Protection Agency, Contract Laboratory Program, August 1991.
- (k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing Materials, Philadelphia, 1989 & 1991.
- (l) "Annual Book of Standards," Section 5: Petroleum Products and Lubricants, Vols. 5.01, American Society for Testing Materials, Philadelphia, 1993.
- (m) "Annual Book of Standards," Section 4: Construction, Vol. 4.08, American Society for Testing Materials, Philadelphia, 1993.
- (n) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982, updated April 1984.
- (o) "Annual Book of Standards," Section 15: Engine Coolants; Halogenated Organic Solvents, Vol. 15.05, American Society for Testing Materials, Philadelphia, 1995.

[REF-09/21/95]



1/19

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184

CHAIN OF CUSTODY RECORD

Sample Custodian — (617) 849-1800

Page of

Client: CHES Project Name: MURPHY'S WASTE OIL SERVICE Work Order/P.O. #: EN-170 Date: 10/5/95
 Report To: JAY MCCREARY Address: 12 MERCER RD, NATICK, MA Phone #: 86379
 Date Samples Collected: 10/5/95 by: P. NICELUNGER Date Samples Received: _____

Airbill/Bill of Lading? Y N

NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.

Samples were: Preserved

Unpreserved

Sample I.D.	Sampling Information				Analysis								# of con.	CHAS Sample #	
	Date	Time	Station Location	Sample Matrix	VOA	B240	TPH	GC/ED	PAHs by HPLC	13 P.P.	TOT. MET.	TOT. CYANIDE			SEVE ANALYSIS
B-6	10/5		SS-5	SOIL	1	1	1	1	1	1	1			2	9510080
B-10	1		SS-6	↓	1	1	1	1	1	1				2	01A, M, O, Q
MW-9	1		SS-3	↓									(1)	1	Combine equal parts 03x
MW-9	1		SS-5	↓									(1)	1	of each sample into 04x
MW-9	1		SS-6	↓	1	1	1	1	1	1			(1)	2	sieve analysis. 05A, M, O, Q
Composite															06L
Relinquished by: <u>[Signature]</u> Date: <u>10/5/95</u> Time: <u>5:00 PM</u>				VOA Vial									REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)		
Received by: <u>[Signature]</u> Date: <u>10-5-95</u> Time: <u>1700</u>				Glass Bottle											
Relinquished by: <u>[Signature]</u> Date: <u>10-5-95</u> Time: <u>1800</u>				Plastic Bottle											
				Pres.											
				Volume											
Received by: <u>[Signature]</u> Date: <u>10/5/95</u> Time: <u>1800</u>				Preservation Key: A — Acidified with _____ B — Filtered C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other											

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.

Accelerated turnaround requested: _____

Confirmed by: _____ Surcharge: _____

Location of samples: R4, B9R2, QuaternaryTurnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: _____

OFFICE COPY

OFFICE COPY



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/05/95
CHES Lab #: 9510081

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 10/25/95

Michael J. Murray
Laboratory Manager

US EPA ARCHIVE DOCUMENT

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: Clean Harbors

Laboratory Job Number: L9507825

Address: 325 Wood Road

Invoice Number: 78066

Braintree, MA 02184

Date Received: 12-OCT-95

Attn: Mike Wedge

Date Reported: 19-OCT-95

Project Number: 9510080

Delivery Method: Alpha

Site:

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9507825-01	9510081-01	
L9507825-02	9510081-02	
L9507825-03	9510081-03	
L9507825-04	9510081-04	
L9507825-05	9510081-05	
L9507825-06	9510081-06	
L9507825-07	9510081-07	
L9507825-08	9510081-08	
L9507825-09	9510080-01	
L9507825-10	9510080-02	
L9507825-11	9510080-05	
L9507825-12	9510080-07	
L9507825-13	9510080-08	
L9507825-14	9510080-09	

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-01

Date Collected: 04-OCT-95

9510081-01

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	87.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1.	8260	17-Oct 17-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-01
9510081-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1.	8260	17-Oct 17-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	98.0	%					
4-Bromofluorobenzene	103.	%					
Dibromofluoromethane	95.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-02

Date Collected: 04-OCT-95

9510081-02

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-02
9510081-02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	96.0	%					
4-Bromofluorobenzene	126.	%					
Dibromofluoromethane	100.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-03

Date Collected: 04-OCT-95

9510081-03

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
Tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-03
9510081-03

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	99.0	%					
4-Bromofluorobenzene	119.	%					
Dibromofluoromethane	98.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-04

Date Collected: 04-OCT-95

9510081-04

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	94.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	50.				
1,1-Dichloroethane	46.	ug/kg	15.				
Chloroform	ND	ug/kg	15.				
Carbon tetrachloride	ND	ug/kg	10.				
1,2-Dichloropropane	ND	ug/kg	35.				
Dibromochloromethane	ND	ug/kg	10.				
1,1,2-Trichloroethane	ND	ug/kg	15.				
2-Chloroethylvinyl ether	ND	ug/kg	100				
Tetrachloroethene	29.	ug/kg	15.				
Chlorobenzene	ND	ug/kg	35.				
Trichlorofluoromethane	ND	ug/kg	50.				
1,2-Dichloroethane	ND	ug/kg	15.				
1,1,1-Trichloroethane	32.	ug/kg	10.				
Bromodichloromethane	ND	ug/kg	10.				
trans-1,3-Dichloropropene	ND	ug/kg	15.				
cis-1,3-Dichloropropene	ND	ug/kg	10.				
Bromoform	ND	ug/kg	10.				
1,1,2,2-Tetrachloroethane	ND	ug/kg	10.				
Benzene	ND	ug/kg	10.				
Toluene	ND	ug/kg	15.				
Ethylbenzene	ND	ug/kg	10.				
Chloromethane	ND	ug/kg	100				
Bromomethane	ND	ug/kg	20.				
Vinyl chloride	ND	ug/kg	35.				
Chloroethane	ND	ug/kg	20.				
1,1-Dichloroethene	ND	ug/kg	15.				
trans-1,2-Dichloroethene	ND	ug/kg	15.				
Trichloroethene	86.	ug/kg	10.				
1,2-Dichlorobenzene	ND	ug/kg	100				
1,3-Dichlorobenzene	ND	ug/kg	100				
1,4-Dichlorobenzene	ND	ug/kg	100				
Methyl tert butyl ether	ND	ug/kg	100				
Xylenes	ND	ug/kg	10.				
cis-1,2-Dichloroethene	210	ug/kg	10.				
Dibromomethane	ND	ug/kg	100				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-04
9510081-04

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	100				
Iodomethane	ND	ug/kg	100				
1,2,3-Trichloropropane	ND	ug/kg	100				
Styrene	ND	ug/kg	10.				
Dichlorodifluoromethane	ND	ug/kg	100				
Acetone	ND	ug/kg	100				
Carbon Disulfide	ND	ug/kg	100				
2-Butanone	ND	ug/kg	45.				
Vinyl Acetate	ND	ug/kg	100				
4-Methyl-2-pentanone	ND	ug/kg	100				
2-Hexanone	ND	ug/kg	100				
Ethyl methacrylate	ND	ug/kg	100				
Acrolein	ND	ug/kg	250				
Acrylonitrile	ND	ug/kg	100				
Bromochloromethane	ND	ug/kg	50.				
2,2-Dichloropropane	ND	ug/kg	50.				
1,2-Dibromoethane	ND	ug/kg	50.				
1,3-Dichloropropane	ND	ug/kg	50.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.				
Bromobenzene	ND	ug/kg	50.				
n-Butylbenzene	ND	ug/kg	50.				
sec-Butylbenzene	ND	ug/kg	50.				
tert-Butylbenzene	ND	ug/kg	50.				
o-Chlorotoluene	ND	ug/kg	50.				
p-Chlorotoluene	ND	ug/kg	50.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	50.				
Hexachlorobutadiene	ND	ug/kg	50.				
Isopropylbenzene	ND	ug/kg	50.				
p-Isopropyltoluene	ND	ug/kg	50.				
Naphthalene	ND	ug/kg	50.				
n-Propylbenzene	ND	ug/kg	50.				
1,2,3-Trichlorobenzene	ND	ug/kg	50.				
1,2,4-Trichlorobenzene	ND	ug/kg	50.				
1,3,5-Trimethylbenzene	ND	ug/kg	50.				
1,2,4-Trimethylbenzene	ND	ug/kg	50.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	50.				
Ethyl ether	ND	ug/kg	250				
SURROGATE RECOVERY							
Toluene-d8	89.0	%					
4-Bromofluorobenzene	83.0	%					
Dibromofluoromethane	100.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-05

Date Collected: 04-OCT-95

9510081-05

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	84.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	50.				
1,1-Dichloroethane	ND	ug/kg	15.				
Chloroform	ND	ug/kg	15.				
Carbon tetrachloride	ND	ug/kg	10.				
1,2-Dichloropropane	ND	ug/kg	35.				
Dibromochloromethane	ND	ug/kg	10.				
1,1,2-Trichloroethane	ND	ug/kg	15.				
?-Chloroethylvinyl ether	ND	ug/kg	100				
tetrachloroethene	ND	ug/kg	15.				
Chlorobenzene	ND	ug/kg	35.				
Trichlorofluoromethane	ND	ug/kg	50.				
1,2-Dichloroethane	ND	ug/kg	15.				
1,1,1-Trichloroethane	ND	ug/kg	10.				
Bromodichloromethane	ND	ug/kg	10.				
trans-1,3-Dichloropropene	ND	ug/kg	15.				
cis-1,3-Dichloropropene	ND	ug/kg	10.				
Bromoform	ND	ug/kg	10.				
1,1,2,2-Tetrachloroethane	ND	ug/kg	10.				
Benzene	ND	ug/kg	10.				
Toluene	ND	ug/kg	15.				
Ethylbenzene	ND	ug/kg	10.				
Chloromethane	ND	ug/kg	100				
Bromomethane	ND	ug/kg	20.				
Vinyl chloride	ND	ug/kg	35.				
Chloroethane	ND	ug/kg	20.				
1,1-Dichloroethene	ND	ug/kg	15.				
trans-1,2-Dichloroethene	ND	ug/kg	15.				
Trichloroethene	ND	ug/kg	10.				
1,2-Dichlorobenzene	ND	ug/kg	100				
1,3-Dichlorobenzene	ND	ug/kg	100				
1,4-Dichlorobenzene	ND	ug/kg	100				
Methyl tert butyl ether	ND	ug/kg	100				
Xylenes	ND	ug/kg	10.				
cis-1,2-Dichloroethene	ND	ug/kg	10.				
Dibromomethane	ND	ug/kg	100				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-05
9510081-05

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	100				
Iodomethane	ND	ug/kg	100				
1,2,3-Trichloropropane	ND	ug/kg	100				
Styrene	ND	ug/kg	10.				
Dichlorodifluoromethane	ND	ug/kg	100				
Acetone	ND	ug/kg	100				
Carbon Disulfide	ND	ug/kg	100				
2-Butanone	ND	ug/kg	45.				
Vinyl Acetate	ND	ug/kg	100				
4-Methyl-2-pentanone	ND	ug/kg	100				
2-Hexanone	ND	ug/kg	100				
Ethyl methacrylate	ND	ug/kg	100				
Acrolein	ND	ug/kg	250				
Acrylonitrile	ND	ug/kg	100				
Bromochloromethane	ND	ug/kg	50.				
2,2-Dichloropropane	ND	ug/kg	50.				
1,2-Dibromoethane	ND	ug/kg	50.				
1,3-Dichloropropane	ND	ug/kg	50.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.				
Bromobenzene	ND	ug/kg	50.				
n-Butylbenzene	ND	ug/kg	50.				
sec-Butylbenzene	ND	ug/kg	50.				
tert-Butylbenzene	ND	ug/kg	50.				
o-Chlorotoluene	ND	ug/kg	50.				
p-Chlorotoluene	ND	ug/kg	50.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	50.				
Hexachlorobutadiene	ND	ug/kg	50.				
Isopropylbenzene	ND	ug/kg	50.				
p-Isopropyltoluene	ND	ug/kg	50.				
Naphthalene	ND	ug/kg	50.				
n-Propylbenzene	ND	ug/kg	50.				
1,2,3-Trichlorobenzene	ND	ug/kg	50.				
1,2,4-Trichlorobenzene	ND	ug/kg	50.				
1,3,5-Trimethylbenzene	ND	ug/kg	50.				
1,2,4-Trimethylbenzene	ND	ug/kg	50.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	50.				
Ethyl ether	ND	ug/kg	250				
SURROGATE RECOVERY							
Toluene-d8	99.0	%					
4-Bromofluorobenzene	106.	%					
Dibromofluoromethane	99.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-06
9510081-06

Date Collected: 04-OCT-95
Date Received : 12-OCT-95
Date Reported : 19-OCT-95

Sample Matrix: SOIL

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	80.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
?-Chloroethylvinyl ether	ND	ug/kg	50.				
tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9507825-06
9510081-06

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	81.0	%					
4-Bromofluorobenzene	82.0	%					
Dibromofluoromethane	82.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-07

Date Collected: 04-OCT-95

9510081-07

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	92.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct	DB
Methylene chloride	ND	ug/kg	25.				
1,1-Dichloroethane	ND	ug/kg	7.5				
Chloroform	ND	ug/kg	7.5				
Carbon tetrachloride	ND	ug/kg	5.0				
1,2-Dichloropropane	ND	ug/kg	18.				
Dibromochloromethane	ND	ug/kg	5.0				
1,1,2-Trichloroethane	ND	ug/kg	7.5				
2-Chloroethylvinyl ether	ND	ug/kg	50.				
tetrachloroethene	ND	ug/kg	7.5				
Chlorobenzene	ND	ug/kg	18.				
Trichlorofluoromethane	ND	ug/kg	25.				
1,2-Dichloroethane	ND	ug/kg	7.5				
1,1,1-Trichloroethane	ND	ug/kg	5.0				
Bromodichloromethane	ND	ug/kg	5.0				
trans-1,3-Dichloropropene	ND	ug/kg	7.5				
cis-1,3-Dichloropropene	ND	ug/kg	5.0				
Bromoform	ND	ug/kg	5.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0				
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	7.5				
Ethylbenzene	ND	ug/kg	5.0				
Chloromethane	ND	ug/kg	50.				
Bromomethane	ND	ug/kg	10.				
Vinyl chloride	ND	ug/kg	18.				
Chloroethane	ND	ug/kg	10.				
1,1-Dichloroethene	ND	ug/kg	7.5				
trans-1,2-Dichloroethene	ND	ug/kg	7.5				
Trichloroethene	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	50.				
1,3-Dichlorobenzene	ND	ug/kg	50.				
1,4-Dichlorobenzene	ND	ug/kg	50.				
Methyl tert butyl ether	ND	ug/kg	50.				
Xylenes	ND	ug/kg	5.0				
cis-1,2-Dichloroethene	ND	ug/kg	5.0				
Dibromomethane	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-07
9510081-07

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	50.				
Iodomethane	ND	ug/kg	50.				
1,2,3-Trichloropropane	ND	ug/kg	50.				
Styrene	ND	ug/kg	5.0				
Dichlorodifluoromethane	ND	ug/kg	50.				
Acetone	ND	ug/kg	50.				
Carbon Disulfide	ND	ug/kg	50.				
2-Butanone	ND	ug/kg	23.				
Vinyl Acetate	ND	ug/kg	50.				
4-Methyl-2-pentanone	ND	ug/kg	50.				
2-Hexanone	ND	ug/kg	50.				
Ethyl methacrylate	ND	ug/kg	50.				
Acrolein	ND	ug/kg	130				
Acrylonitrile	ND	ug/kg	50.				
Bromochloromethane	ND	ug/kg	25.				
2,2-Dichloropropane	ND	ug/kg	25.				
1,2-Dibromoethane	ND	ug/kg	25.				
1,3-Dichloropropane	ND	ug/kg	25.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	25.				
Bromobenzene	ND	ug/kg	25.				
n-Butylbenzene	ND	ug/kg	25.				
sec-Butylbenzene	ND	ug/kg	25.				
tert-Butylbenzene	ND	ug/kg	25.				
o-Chlorotoluene	ND	ug/kg	25.				
p-Chlorotoluene	ND	ug/kg	25.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	25.				
Hexachlorobutadiene	ND	ug/kg	25.				
Isopropylbenzene	ND	ug/kg	25.				
p-Isopropyltoluene	ND	ug/kg	25.				
Naphthalene	ND	ug/kg	25.				
n-Propylbenzene	ND	ug/kg	25.				
1,2,3-Trichlorobenzene	ND	ug/kg	25.				
1,2,4-Trichlorobenzene	ND	ug/kg	25.				
1,3,5-Trimethylbenzene	ND	ug/kg	25.				
1,2,4-Trimethylbenzene	ND	ug/kg	25.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	25.				
Ethyl ether	ND	ug/kg	130				
SURROGATE RECOVERY							
Toluene-d8	83.0	%					
4-Bromofluorobenzene	76.0	%					
Dibromofluoromethane	98.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9507825-08

Date Collected: 04-OCT-95

9510081-08

Date Received : 12-OCT-95

Sample Matrix: SOIL

Date Reported : 19-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	67.	%	0.10	3	2540B	18-Oct	ST
Volatile Organics by GC/MS				1	8260	18-Oct 18-Oct	DB
Methylene chloride	ND	ug/kg	37.				
1,1-Dichloroethane	ND	ug/kg	11.				
Chloroform	ND	ug/kg	11.				
Carbon tetrachloride	ND	ug/kg	7.5				
1,2-Dichloropropane	ND	ug/kg	26.				
Dibromochloromethane	ND	ug/kg	7.5				
1,1,2-Trichloroethane	ND	ug/kg	11.				
2-Chloroethylvinyl ether	ND	ug/kg	75.				
Tetrachloroethene	ND	ug/kg	11.				
Chlorobenzene	ND	ug/kg	26.				
Trichlorofluoromethane	ND	ug/kg	37.				
1,2-Dichloroethane	ND	ug/kg	11.				
1,1,1-Trichloroethane	ND	ug/kg	7.5				
Bromodichloromethane	ND	ug/kg	7.5				
trans-1,3-Dichloropropene	ND	ug/kg	11.				
cis-1,3-Dichloropropene	ND	ug/kg	7.5				
Bromoform	ND	ug/kg	7.5				
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.5				
Benzene	ND	ug/kg	7.5				
Toluene	ND	ug/kg	11.				
Ethylbenzene	ND	ug/kg	7.5				
Chloromethane	ND	ug/kg	75.				
Bromomethane	ND	ug/kg	15.				
Vinyl chloride	ND	ug/kg	26.				
Chloroethane	ND	ug/kg	15.				
1,1-Dichloroethene	ND	ug/kg	11.				
trans-1,2-Dichloroethene	ND	ug/kg	11.				
Trichloroethene	ND	ug/kg	7.5				
1,2-Dichlorobenzene	ND	ug/kg	75.				
1,3-Dichlorobenzene	ND	ug/kg	75.				
1,4-Dichlorobenzene	ND	ug/kg	75.				
Methyl tert butyl ether	ND	ug/kg	75.				
Xylenes	ND	ug/kg	7.5				
cis-1,2-Dichloroethene	ND	ug/kg	7.5				
Dibromomethane	ND	ug/kg	75.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9507825-08
9510081-08

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	18-Oct 18-Oct	DB
1,4-Dichlorobutane	ND	ug/kg	75.				
Iodomethane	ND	ug/kg	75.				
1,2,3-Trichloropropane	ND	ug/kg	75.				
Styrene	ND	ug/kg	7.5				
Dichlorodifluoromethane	ND	ug/kg	75.				
Acetone	ND	ug/kg	75.				
Carbon Disulfide	ND	ug/kg	75.				
2-Butanone	ND	ug/kg	34.				
Vinyl Acetate	ND	ug/kg	75.				
4-Methyl-2-pentanone	ND	ug/kg	75.				
2-Hexanone	ND	ug/kg	75.				
Ethyl methacrylate	ND	ug/kg	75.				
Acrolein	ND	ug/kg	190				
Acrylonitrile	ND	ug/kg	75.				
Bromochloromethane	ND	ug/kg	37.				
2,2-Dichloropropane	ND	ug/kg	37.				
1,2-Dibromoethane	ND	ug/kg	37.				
1,3-Dichloropropane	ND	ug/kg	37.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	37.				
Bromobenzene	ND	ug/kg	37.				
n-Butylbenzene	ND	ug/kg	37.				
sec-Butylbenzene	ND	ug/kg	37.				
tert-Butylbenzene	ND	ug/kg	37.				
o-Chlorotoluene	ND	ug/kg	37.				
p-Chlorotoluene	ND	ug/kg	37.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	37.				
Hexachlorobutadiene	ND	ug/kg	37.				
Isopropylbenzene	ND	ug/kg	37.				
p-Isopropyltoluene	ND	ug/kg	37.				
Naphthalene	ND	ug/kg	37.				
n-Propylbenzene	ND	ug/kg	37.				
1,2,3-Trichlorobenzene	ND	ug/kg	37.				
1,2,4-Trichlorobenzene	ND	ug/kg	37.				
1,3,5-Trimethylbenzene	ND	ug/kg	37.				
1,2,4-Trimethylbenzene	ND	ug/kg	37.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	37.				
Ethyl ether	ND	ug/kg	190				
SURROGATE RECOVERY							
Toluene-d8	80.0	%					
4-Bromofluorobenzene	85.0	%					
Dibromofluoromethane	83.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

APP D



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/03/95
CHES Lab #: 9510031

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 10/19/95

Michael J. Murray
Laboratory Manager

US EPA ARCHIVE DOCUMENT



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-1, SS-3
Sample Type: Soil

CHES Lab #: 9510031-010
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	23	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 98%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-1, SS-3
Sample Type: Soil

CHES Lab #: 9510031-01M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/06/95	10/09/95	3005/6010(c)
Arsenic - Total	8	ND	10/06/95	10/10/95	3050/6010(c)
Beryllium - Total	0.038	ND	10/06/95	10/10/95	3050/6010(c)
Cadmium - Total	0.38	ND	10/06/95	10/10/95	3050/6010(c)
Chromium - Total	1.1	11	10/06/95	10/10/95	3050/6010(c)
Copper - Total	1.1	5.8	10/06/95	10/10/95	3050/6010(c)
Lead - Total	4	9	10/06/95	10/10/95	3050/6010(c)
Mercury - Total	0.0708	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.1	ND	10/06/95	10/10/95	3050/6010(c)
Selenium - Total	8	ND	10/06/95	10/10/95	3050/6010(c)
Silver - Total	0.86	ND	10/06/95	10/09/95	3005/6010(c)
Thallium - Total	10	ND	10/06/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	15	10/06/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-1, SS-3
Sample Type: Soil

CHES Lab #: 9510031-01M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.4	ND	mg/kg	10/05/95	9010(c)
Total Solids	--	78.3	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-1, SS-5
Sample Type: Soil

CHES Lab #: 9510031-020
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	16	10/06/95	10/10/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 86%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-1, SS-5
Sample Type: Soil

CHES Lab #: 9510031-02M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/06/95	10/09/95	3005/6010(c)
Arsenic - Total	7	ND	10/06/95	10/10/95	3050/6010(c)
Beryllium - Total	0.036	ND	10/06/95	10/10/95	3050/6010(c)
Cadmium - Total	0.36	ND	10/06/95	10/10/95	3050/6010(c)
Chromium - Total	1.1	8.0	10/06/95	10/10/95	3050/6010(c)
Copper - Total	1.1	6.8	10/06/95	10/10/95	3050/6010(c)
Lead - Total	4	6	10/06/95	10/10/95	3050/6010(c)
Mercury - Total	0.0620	ND	10/06/95	10/10/95	7471(c)
Nickel - Total	1.1	ND	10/06/95	10/10/95	3050/6010(c)
Selenium - Total	7	ND	10/06/95	10/10/95	3050/6010(c)
Silver - Total	0.74	ND	10/06/95	10/09/95	3005/6010(c)
Thallium - Total	10	ND	10/06/95	10/10/95	3050/6010(c)
Zinc - Total	1.5	17	10/06/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-1, SS-5
Sample Type: Soil

CHES Lab #: 9510031-02M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.0	ND	mg/kg	10/05/95	9010(c)
Total Solids	--	81.6	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-14, SS-2
Sample Type: Soil

CHES Lab #: 9510031-030
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	6,400	10/06/95	10/12/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbon mixture observed with an appearance characteristic of lubricating oil and lightweight fuel oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-14, SS-2
Sample Type: Soil

CHES Lab #: 9510031-03M
Date Received: 10/03/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/06/95	10/09/95	3005/6010(c)
Arsenic - Total	7	ND	10/06/95	10/10/95	3050/6010(c)
Beryllium - Total	0.035	ND	10/06/95	10/10/95	3050/6010(c)
Cadmium - Total	0.35	ND	10/06/95	10/10/95	3050/6010(c)
Chromium - Total	1.1	7.8	10/06/95	10/10/95	3050/6010(c)
Copper - Total	1.1	20	10/06/95	10/10/95	3050/6010(c)
Lead - Total	4	170	10/06/95	10/10/95	3050/6010(c)
Mercury - Total	0.0725	0.1521	10/06/95	10/10/95	7471(c)
Nickel - Total	1.1	2.5	10/06/95	10/10/95	3050/6010(c)
Selenium - Total	7	ND	10/06/95	10/10/95	3050/6010(c)
Silver - Total	0.81	ND	10/06/95	10/09/95	3005/6010(c)
Thallium - Total	10	ND	10/06/95	10/10/95	3050/6010(c)
Zinc - Total	1.4	48	10/06/95	10/10/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-14, SS-2
Sample Type: Soil

CHES Lab #: 9510031-03M
Date Received: 10/03/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.4	ND	mg/kg	10/05/95	9010(c)
Total Solids	--	88.2	%	10/05/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-14, SS-5
Sample Type: Soil

CHES Lab #: 9510031-040
Date Received: 10/03/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	3,000	10/06/95	10/12/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbon mixture observed with an appearance characteristic of lubricating oil and lightweight fuel oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%

ALPHA ANALYTICAL LABS
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.
3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238

412 826-5477 Telephone
412 826-5571 Fax

ANALYTICAL REPORT

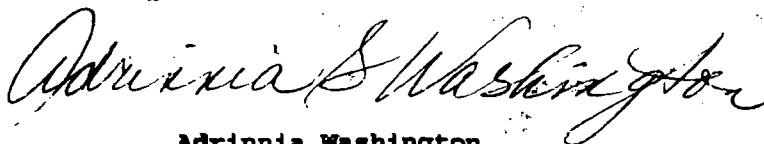
PROJECT NO. CLEAN HARBOR

CLEAN HARBOR

MICHAEL J. WEDGE

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED



Adrinna Washington
Project Manager

October 23, 1995

NARRATIVE

The following report contains the analytical results for samples submitted to Quanterra Incorporated. The samples were received into the laboratory in accordance with documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods and instrumentation in all analytical work. The methods used for the analyses presented in this study can be found on the following pages.

A Quality Control Section, containing a summary of QA/QC data for these analyses, is included at the end of the report.

The following codes are utilized in various analyses of this report:

ND	(None Detected)
DIL	(Diluted Out)
MI	(Matrix Interference)
NEG	(Negative)
J	(Detected, but below quantitation limit; estimated value)
B	(Compounds detected in method blank associated with this sample)
W	(Post digestion spike recovery fell between 40 - 85 %)
S	(Sample result determined by the Method of Standard Additions)
+	(Sample result determined by the Method of Standard Additions and the correlation coefficient was less than 0.995)

ANALYTICAL METHODS SUMMARY

Parameters

Polynuclear Aromatic Hydrocarbons
Hydrocarbons
Solids, Total (TS)

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL:
Cincinnati, OH: March 1983 and subsequent revisions
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, September, 1986 and subsequent
revisions

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
A5P73	C5J090002-001	9510081-01Q	10/04/94
A5P74	C5J090002-002	9510081-02Q	10/04/94
A5P75	C5J090002-003	9510081-03Q	10/04/94
A5P76	C5J090002-004	9510081-04Q	10/04/94
A5P77	C5J090002-005	9510081-06Q	10/04/94
A5P78	C5J090002-006	9510081-07Q	10/04/94
A5P79	C5J090002-007	9510081-08Q	10/04/94
A5PC7	C5J090002-008	9510081-05Q	10/04/95



CLEAN HARBORS ANALYTICAL

9510081-01Q

WO #: ASP73101
 LAB #: C5J090002-001
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	40	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.2	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	21	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	21	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	28	8.2	SW846 8310	10/11-10/18/95	5284020
Pyrene	22	8.2	SW846 8310	10/11-10/18/95	5284020
Benzo(a)anthracene	11	0.82	SW846 8310	10/11-10/18/95	5284020
Chrysene	12	6.1	SW846 8310	10/11-10/18/95	5284020
Benzo(b)fluoranthene	9.4	0.82	SW846 8310	10/11-10/18/95	5284020
Benzo(k)fluoranthene	4.8	0.82	SW846 8310	10/11-10/18/95	5284020
Benzo(a)pyrene	8.7	0.82	SW846 8310	10/11-10/18/95	5284020
Indeno(1,2,3-cd)pyrene	2.9	2.1	SW846 8310	10/11-10/18/95	5284020
Dibenzo(a,h)anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo(g,h,i)perylene	6.2	2.1	SW846 8310	10/11-10/18/95	5284020

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	93	(36 - 144)
2-Fluorobiphenyl	71	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-01Q

WO #: A5P73
LAB #: C5J090002-001
MATRIX: SOLID

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	81.8		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510081-02Q

WO #: A5P74101
 LAB #: C5J090002-002
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	39	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	39	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	39	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.0	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	20	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	20	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	ND	8.0	SW846 8310	10/11-10/18/95	5284020
Pyrene	ND	8.0	SW846 8310	10/11-10/18/95	5284020
Benzo (a) anthracene	3.3	0.80	SW846 8310	10/11-10/18/95	5284020
Chrysene	ND	5.9	SW846 8310	10/11-10/18/95	5284020
Benzo (b) fluoranthene	3.4	0.80	SW846 8310	10/11-10/18/95	5284020
Benzo (k) fluoranthene	1.8	0.80	SW846 8310	10/11-10/18/95	5284020
Benzo (a) pyrene	3.0	0.80	SW846 8310	10/11-10/18/95	5284020
Indeno (1,2,3-cd) pyrene	ND	2.0	SW846 8310	10/11-10/18/95	5284020
Dibenzo (a,h) anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo (g,h,i) perylene	3.3	2.0	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	104	(36 - 144)
2-Fluorobiphenyl	77	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-02Q

WO #: A5P74
LAB #: C5J090002-002
MATRIX: SOLID

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	84.2		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510081-03Q

WO #: A5P75101
 LAB #: C5J090002-003
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	39	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	39	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	39	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	7.9	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	20	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	20	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	ND	7.9	SW846 8310	10/11-10/18/95	5284020
Pyrene	ND	7.9	SW846 8310	10/11-10/18/95	5284020
Benzo(a)anthracene	0.83	0.79	SW846 8310	10/11-10/18/95	5284020
Chrysene	ND	5.9	SW846 8310	10/11-10/18/95	5284020
Benzo(b)fluoranthene	2.7	0.79	SW846 8310	10/11-10/18/95	5284020
Benzo(k)fluoranthene	1.3	0.79	SW846 8310	10/11-10/18/95	5284020
Benzo(a)pyrene	3.6	0.79	SW846 8310	10/11-10/18/95	5284020
Indeno(1,2,3-cd)pyrene	2.8	2.0	SW846 8310	10/11-10/18/95	5284020
Dibenzo(a,h)anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo(g,h,i)perylene	5.8	2.0	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	124	(36 - 144)
2-Fluorobiphenyl	97	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-03Q

WO #: A5P75
LAB #: C5J090002-003
MATRIX: SOLID

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	84.4		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510081-04Q

WO #: A5P76101
 LAB #: C5J090002-004
 MATRIX: SOLID
 DILUTION FACTOR: 40.00

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	1,400	SW846 8310	10/11-10/23/95	5284020
Acenaphthylene	ND	1,400	SW846 8310	10/11-10/23/95	5284020
Acenaphthene	ND	1,400	SW846 8310	10/11-10/23/95	5284020
Fluorene	ND	290	SW846 8310	10/11-10/23/95	5284020
Phenanthrene	2,200	730	SW846 8310	10/11-10/23/95	5284020
Anthracene	ND	730	SW846 8310	10/11-10/23/95	5284020
Fluoranthene	3,600	290	SW846 8310	10/11-10/23/95	5284020
Pyrene	4,300	290	SW846 8310	10/11-10/23/95	5284020
Benzo(a)anthracene	1,000	29	SW846 8310	10/11-10/23/95	5284020
Chrysene	1,900	220	SW846 8310	10/11-10/23/95	5284020
Benzo(b)fluoranthene	1,800	29	SW846 8310	10/11-10/23/95	5284020
Benzo(k)fluoranthene	820	29	SW846 8310	10/11-10/23/95	5284020
Benzo(a)pyrene	1,600	29	SW846 8310	10/11-10/23/95	5284020
Indeno(1,2,3-cd)pyrene	510	73	SW846 8310	10/11-10/23/95	5284020
Dibenzo(a,h)anthracene	110	43	SW846 8310	10/11-10/23/95	5284020
Benzo(g,h,i)perylene	1,400	73	SW846 8310	10/11-10/23/95	5284020

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-04Q

WO #: A5P76
LAB #: C5J090002-004
MATRIX: SOLID

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	92.7		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510081-05Q

WO #: A5PC7101
 LAB #: C5J090002-008
 MATRIX: SOLID
 DILUTION FACTOR: 4.00

DATE SAMPLED: 10/04/95
 TIME SAMPLED:
 DATE RECEIVED: 10/10/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	160	SW846 8310	10/11-10/19/95	5284020
Acenaphthylene	ND	160	SW846 8310	10/11-10/19/95	5284020
Acenaphthene	ND	160	SW846 8310	10/11-10/19/95	5284020
Fluorene	65	33	SW846 8310	10/11-10/19/95	5284020
Phenanthrene	320	84	SW846 8310	10/11-10/19/95	5284020
Anthracene	88	84	SW846 8310	10/11-10/19/95	5284020
Fluoranthene	200	33	SW846 8310	10/11-10/19/95	5284020
Pyrene	190	33	SW846 8310	10/11-10/19/95	5284020
Benzo (a) anthracene	74	3.3	SW846 8310	10/11-10/19/95	5284020
Chrysene	250	25	SW846 8310	10/11-10/19/95	5284020
Benzo (b) fluoranthene	75	3.3	SW846 8310	10/11-10/19/95	5284020
Benzo (k) fluoranthene	33	3.3	SW846 8310	10/11-10/19/95	5284020
Benzo (a) pyrene	93	3.3	SW846 8310	10/11-10/19/95	5284020
Indeno (1,2,3-cd) pyrene	MI (88)	8.4	SW846 8310	10/11-10/19/95	5284020
Dibenzo (a,h) anthracene	12	4.9	SW846 8310	10/11-10/19/95	5284020
Benzo (g,h,i) perylene	48	8.4	SW846 8310	10/11-10/19/95	5284020

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo (e) pyrene	MI* (329)	(36 - 144)
2-Fluorobiphenyl	116	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

• SURROGATES OUT OF CONTROL



CLEAN HARBORS ANALYTICAL

9510081-05Q

WO #: A5PC7
LAB #: C5J090002-008
MATRIX: SOLID

DATE SAMPLED: 10/04/95
TIME SAMPLED:
DATE RECEIVED: 10/10/95

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	81.0		%	MCAWW 160.3 M	10/11/95	5284022

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510081-06Q

WO #: A5P77101
 LAB #: C5J090002-005
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	ND	40	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	ND	40	SW846 8310	10/11-10/18/95	5284020
Fluorene	ND	8.0	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	ND	20	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	20	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	9.3	8.0	SW846 8310	10/11-10/18/95	5284020
Pyrene	ND	8.0	SW846 8310	10/11-10/18/95	5284020
Benzo(a)anthracene	3.1	0.80	SW846 8310	10/11-10/18/95	5284020
Chrysene	ND	6.0	SW846 8310	10/11-10/18/95	5284020
Benzo(b)fluoranthene	4.2	0.80	SW846 8310	10/11-10/18/95	5284020
Benzo(k)fluoranthene	2.0	0.80	SW846 8310	10/11-10/18/95	5284020
Benzo(a)pyrene	3.4	0.80	SW846 8310	10/11-10/18/95	5284020
Indeno(1,2,3-cd)pyrene	2.5	2.0	SW846 8310	10/11-10/18/95	5284020
Dibenzo(a,h)anthracene	ND	1.2	SW846 8310	10/11-10/18/95	5284020
Benzo(g,h,i)perylene	3.5	2.0	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	110	(36 - 144)
2-Fluorobiphenyl	81	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-06Q

WO #: A5P77
 LAB #: C5J090002-005
 MATRIX: SOLID

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Solids, Total (TS)	83.4		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



Environmental
Services

CLEAN HARBORS ANALYTICAL

9510081-07Q

WO #: A5P78101
LAB #: C5J090002-006
MATRIX: SOLID
DILUTION FACTOR: 1.00

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- REQUESTED PARAMETERS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	400	42	SW846 8310	10/11-10/18/95	5284020
Acenaphthylene	150	42	SW846 8310	10/11-10/18/95	5284020
Acenaphthene	410	42	SW846 8310	10/11-10/18/95	5284020
Fluorene	18	8.6	SW846 8310	10/11-10/18/95	5284020
Phenanthrene	100	22	SW846 8310	10/11-10/18/95	5284020
Anthracene	ND	22	SW846 8310	10/11-10/18/95	5284020
Fluoranthene	240	8.6	SW846 8310	10/11-10/18/95	5284020
Pyrene	220	8.6	SW846 8310	10/11-10/18/95	5284020
Benzo(a)anthracene	58	0.86	SW846 8310	10/11-10/18/95	5284020
Chrysene	100	6.4	SW846 8310	10/11-10/18/95	5284020
Benzo(b)fluoranthene	72	0.86	SW846 8310	10/11-10/18/95	5284020
Benzo(k)fluoranthene	36	0.86	SW846 8310	10/11-10/18/95	5284020
Benzo(a)pyrene	58	0.86	SW846 8310	10/11-10/18/95	5284020
Indeno(1,2,3-cd)pyrene	8.9	2.2	SW846 8310	10/11-10/18/95	5284020
Dibenzo(a,h)anthracene	5.4	1.3	SW846 8310	10/11-10/18/95	5284020
Benzo(g,h,i)perylene	41	2.2	SW846 8310	10/11-10/18/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	132	(36 - 144)
2-Fluorobiphenyl	82	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-07Q

WO #: A5P78
LAB #: C5J090002-006
MATRIX: SOLID

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	77.9		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510081-08Q

WO #: A5P79101
 LAB #: C5J090002-007
 MATRIX: SOLID
 DILUTION FACTOR: 15.00

DATE SAMPLED: 10/04/94
 TIME SAMPLED:
 DATE RECEIVED: 10/09/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	540	SW846 8310	10/11-10/19/95	5284020
Acenaphthylene	MI (940)	540	SW846 8310	10/11-10/19/95	5284020
Acenaphthene	580	540	SW846 8310	10/11-10/19/95	5284020
Fluorene	ND	110	SW846 8310	10/11-10/19/95	5284020
Phenanthrene	660	280	SW846 8310	10/11-10/19/95	5284020
Anthracene	ND	280	SW846 8310	10/11-10/19/95	5284020
Fluoranthene	1,200	110	SW846 8310	10/11-10/19/95	5284020
Pyrene	730	110	SW846 8310	10/11-10/19/95	5284020
Benzo (a) anthracene	370	11	SW846 8310	10/11-10/19/95	5284020
Chrysene	350	83	SW846 8310	10/11-10/19/95	5284020
Benzo (b) fluoranthene	580	11	SW846 8310	10/11-10/19/95	5284020
Benzo (k) fluoranthene	280	11	SW846 8310	10/11-10/19/95	5284020
Benzo (a) pyrene	390	11	SW846 8310	10/11-10/19/95	5284020
Indeno (1,2,3-cd) pyrene	300	28	SW846 8310	10/11-10/19/95	5284020
Dibenzo (a,h) anthracene	46	17	SW846 8310	10/11-10/19/95	5284020
Benzo (g,h,i) perylene	500	28	SW846 8310	10/11-10/19/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510081-08Q

WO #: A5P79
LAB #: C5J090002-007
MATRIX: SOLID

DATE SAMPLED: 10/04/94
TIME SAMPLED:
DATE RECEIVED: 10/09/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>	<u>PREPARATION -</u>	<u>QC</u>
		<u>LIMIT</u>	<u>UNIT</u>		<u>ANALYSIS DATE</u>	<u>BATCH</u>
Solids, Total (TS)	90.9		%	MCAWW 160.3 M	10/10/95	5283038

NOTE: DRY WEIGHT

US EPA ARCHIVE DOCUMENT

QUALITY CONTROL SECTION

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY

Quanterra Incorporated considers continuous analytical performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

SURROGATE SPIKE RECOVERY EVALUATIONS

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compounds analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recoveries calculated from the subsequent spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten percent (10%) each. For Pesticides, one (1) of two (2) surrogates meeting performance criteria is acceptable.

LABORATORY ANALYTICAL METHOD BLANK EVALUATIONS

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.) substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule, provided they are not present at a greater than five times the detection limit.

Volatiles

Methylene chloride
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY (CONT)

LABORATORY ANALYTICAL METHOD CHECK SAMPLE EVALUATIONS

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved. All compounds must meet laboratory recovery criteria. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) RECOVERY EVALUATION

Known concentration of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Actual percent recovery data is displayed alongside the acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

EXAMPLE

COMPOUND	SAMPLE CONCENTRATION	MS % RECOVERY	MSD % RECOVERY	QC LIMITS' RECOVERY
4-4'-DDT	0	95	112	(66-119)
Benzene	10	86	93	(39-150)
compound name	sample result	1st % recovery	2nd % recovery	acceptable method limits

¹QC limits are statistically derived from historical laboratory data. Where insufficient data exists to statistically derive these limits, they will be labelled "advisory". In this case, they are based on the best available technical information.

For metals analyses, the recoveries of the MS/MSD must be within the range of 80-120%. If they do not meet this criteria, but the RPD of the two results is <20% OR the absolute difference is less than 10% when the recoveries are below 50%, no corrective action is required. If these criteria are not met, the sample with its MS/MSD is reprepared and reanalyzed once more.

INTRA-LAB BLANK REPORT

LAB #: C5J110000-020

----- POLYNUCLEAR AROMATIC HYDROCARBONS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	33	10/11-10/17/95	5284020
Acenaphthylene	ND	33	10/11-10/17/95	5284020
Anthracene	ND	17	10/11-10/17/95	5284020
Benzo (a) anthracene	ND	0.67	10/11-10/17/95	5284020
Benzo (b) fluoranthene	ND	0.67	10/11-10/17/95	5284020
Benzo (k) fluoranthene	ND	0.67	10/11-10/17/95	5284020
Benzo (g,h,i) perylene	ND	1.7	10/11-10/17/95	5284020
Benzo (a) pyrene	ND	0.67	10/11-10/17/95	5284020
Chrysene	ND	5.0	10/11-10/17/95	5284020
Fluoranthene	ND	6.7	10/11-10/17/95	5284020
Fluorene	ND	6.7	10/11-10/17/95	5284020
Indeno (1,2,3-cd) pyrene	ND	1.7	10/11-10/17/95	5284020
Naphthalene	ND	33	10/11-10/17/95	5284020
Phenanthrene	ND	17	10/11-10/17/95	5284020
Pyrene	ND	6.7	10/11-10/17/95	5284020
Dibenzo (a,h) anthracene	ND	1.0	10/11-10/17/95	5284020

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	109	(36 - 144)
2-Fluorobiphenyl	103	(47 - 143)

NOTE:

ND (NONE DETECTED)

CHECK SAMPLE REPORT

QC BATCH: 5284020
LAB #: C5J110000-020 C
DILUTION FACTOR: 1.00

PREPARATION DATE: 10/11/95
DATE ANALYZED: 10/17/95

- - - - - Polynuclear Aromatic Hydrocarbons - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Naphthalene	144	(52-163)
Phenanthrene	119	(67-123)
Fluoranthene	118	(65-125)
Chrysene	126	(74-124)
Benzo (a) pyrene	103	(48-129)
Indeno (1,2,3-cd) pyrene	135	(63-133)



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-11, SS-4
Sample Type: Soil

CHES Lab #: 9510081-010
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
No significant hydrocarbons observed.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 72%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-11, SS-4
Sample Type: Soil

CHES Lab #: 9510081-01M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	5	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.036	0.108	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.36	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	1.1	5.8	10/13/95	10/16/95	3050/6010(c)
Copper - Total	1.1	3.4	10/13/95	10/16/95	3050/6010(c)
Lead - Total	4	ND	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0603	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	1.1	ND	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	7	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.70	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	10	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	1.4	6.9	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-11, SS-4
Sample Type: Soil

CHES Lab #: 9510081-01M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.5	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	82.7	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-11, SS-6
Sample Type: Soil

CHES Lab #: 9510081-020
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
No significant hydrocarbons observed.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 73%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-11, SS-6
Sample Type: Soil

CHES Lab #: 9510081-02M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/16/95	10/17/95	3005/6010(c)
Arsenic - Total	5	ND	10/16/95	10/17/95	3050/6010(c)
Beryllium - Total	0.026	0.105	10/16/95	10/17/95	3050/6010(c)
Cadmium - Total	0.26	ND	10/16/95	10/17/95	3050/6010(c)
Chromium - Total	0.79	5.7	10/16/95	10/17/95	3050/6010(c)
Copper - Total	0.79	5.2	10/16/95	10/17/95	3050/6010(c)
Lead - Total	3	ND	10/16/95	10/17/95	3050/6010(c)
Mercury - Total	0.0681	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	0.79	ND	10/16/95	10/17/95	3050/6010(c)
Selenium - Total	5	ND	10/16/95	10/17/95	3050/6010(c)
Silver - Total	0.73	ND	10/16/95	10/17/95	3005/6010(c)
Thallium - Total	8	ND	10/16/95	10/17/95	3050/6010(c)
Zinc - Total	1.0	7.1	10/16/95	10/17/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-11, SS-6
Sample Type: Soil

CHES Lab #: 9510081-02M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	85.5	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-12, SS-5
Sample Type: Soil

CHES Lab #: 9510081-030
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	150	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-12, SS-5
Sample Type: Soil

CHES Lab #: 9510081-03M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/16/95	10/17/95	3005/6010(c)
Arsenic - Total	6	ND	10/16/95	10/17/95	3050/6010(c)
Beryllium - Total	0.032	0.161	10/16/95	10/17/95	3050/6010(c)
Cadmium - Total	0.32	ND	10/16/95	10/17/95	3050/6010(c)
Chromium - Total	0.97	10	10/16/95	10/17/95	3050/6010(c)
Copper - Total	0.97	5.2	10/16/95	10/17/95	3050/6010(c)
Lead - Total	3	20	10/16/95	10/17/95	3050/6010(c)
Mercury - Total	0.0644	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	0.97	5.2	10/16/95	10/17/95	3050/6010(c)
Selenium - Total	6	ND	10/16/95	10/17/95	3050/6010(c)
Silver - Total	0.63	ND	10/16/95	10/17/95	3005/6010(c)
Thallium - Total	10	ND	10/16/95	10/17/95	3050/6010(c)
Zinc - Total	1.3	24	10/16/95	10/17/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-12, SS-5
Sample Type: Soil

CHES Lab #: 9510081-03M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	83.9	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-13, SS-1
Sample Type: Soil

CHES Lab #: 9510081-040
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	22	4,700	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-13, SS-1
Sample Type: Soil

CHES Lab #: 9510081-04M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	2	ND	10/16/95	10/17/95	3005/6010(c)
Arsenic - Total	7	9	10/16/95	10/17/95	3050/6010(c)
Beryllium - Total	0.033	0.232	10/16/95	10/17/95	3050/6010(c)
Cadmium - Total	0.33	0.43	10/16/95	10/17/95	3050/6010(c)
Chromium - Total	1.0	15	10/16/95	10/17/95	3050/6010(c)
Copper - Total	1.0	16	10/16/95	10/17/95	3050/6010(c)
Lead - Total	3	70	10/16/95	10/17/95	3050/6010(c)
Mercury - Total	0.0570	0.5339	10/17/95	10/18/95	7471(c)
Nickel - Total	1.0	8.9	10/16/95	10/17/95	3050/6010(c)
Selenium - Total	7	ND	10/16/95	10/17/95	3050/6010(c)
Silver - Total	0.47	ND	10/16/95	10/17/95	3005/6010(c)
Thallium - Total	10	ND	10/16/95	10/17/95	3050/6010(c)
Zinc - Total	1.3	57	10/16/95	10/17/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-13, SS-1
Sample Type: Soil

CHES Lab #: 9510081-04M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.8	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	91.6	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-13, SS-5
Sample Type: Soil

CHES Lab #: 9510081-050
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	24	1,200	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-13, SS-5
Sample Type: Soil

CHES Lab #: 9510081-05M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/16/95	10/17/95	3005/6010(c)
Arsenic - Total	7	ND	10/16/95	10/17/95	3050/6010(c)
Beryllium - Total	0.035	0.140	10/16/95	10/17/95	3050/6010(c)
Cadmium - Total	0.35	ND	10/16/95	10/17/95	3050/6010(c)
Chromium - Total	1.1	6.5	10/16/95	10/17/95	3050/6010(c)
Copper - Total	1.1	6.0	10/16/95	10/17/95	3050/6010(c)
Lead - Total	4	10	10/16/95	10/17/95	3050/6010(c)
Mercury - Total	0.0773	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	1.1	1.1	10/16/95	10/17/95	3050/6010(c)
Selenium - Total	7	ND	10/16/95	10/17/95	3050/6010(c)
Silver - Total	0.68	ND	10/16/95	10/17/95	3005/6010(c)
Thallium - Total	10	ND	10/16/95	10/17/95	3050/6010(c)
Zinc - Total	1.4	15	10/16/95	10/17/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-13, SS-5
Sample Type: Soil

CHES Lab #: 9510081-05M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.3	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	80.5	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-7, SS-5
Sample Type: Soil

CHES Lab #: 9510081-060
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	11	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 81%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-7, SS-5
Sample Type: Soil

CHES Lab #: 9510081-06M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/17/95	10/18/95	3005/6010(c)
Arsenic - Total	7	ND	10/17/95	10/18/95	3050/6010(c)
Beryllium - Total	0.036	0.109	10/17/95	10/18/95	3050/6010(c)
Cadmium - Total	0.36	ND	10/17/95	10/18/95	3050/6010(c)
Chromium - Total	1.1	6.1	10/17/95	10/18/95	3050/6010(c)
Copper - Total	1.1	3.6	10/17/95	10/18/95	3050/6010(c)
Lead - Total	4	ND	10/17/95	10/18/95	3050/6010(c)
Mercury - Total	0.0639	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	1.1	3.2	10/17/95	10/18/95	3050/6010(c)
Selenium - Total	7	ND	10/17/95	10/18/95	3050/6010(c)
Silver - Total	0.77	ND	10/17/95	10/18/95	3005/6010(c)
Thallium - Total	10	ND	10/17/95	10/18/95	3050/6010(c)
Zinc - Total	1.5	9.7	10/17/95	10/18/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-7, SS-5
Sample Type: Soil

CHES Lab #: 9510081-06M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.4	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	83.9	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-8, SS-1
Sample Type: Soil

CHES Lab #: 9510081-070
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	22	1,600	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-8, SS-1
Sample Type: Soil

CHES Lab #: 9510081-07M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	4	ND	10/17/95	10/18/95	3005/6010(c)
Arsenic - Total	6	10	10/17/95	10/18/95	3050/6010(c)
Beryllium - Total	0.031	0.309	10/17/95	10/18/95	3050/6010(c)
Cadmium - Total	0.31	0.83	10/17/95	10/18/95	3050/6010(c)
Chromium - Total	0.93	24	10/17/95	10/18/95	3050/6010(c)
Copper - Total	0.93	48	10/17/95	10/18/95	3050/6010(c)
Lead - Total	3	1,900	10/17/95	10/18/95	3050/6010(c)
Mercury - Total	0.0567	0.3167	10/17/95	10/18/95	7471(c)
Nickel - Total	0.93	17	10/17/95	10/18/95	3050/6010(c)
Selenium - Total	6	ND	10/17/95	10/18/95	3050/6010(c)
Silver - Total	0.70	ND	10/17/95	10/18/95	3005/6010(c)
Thallium - Total	9	ND	10/17/95	10/18/95	3050/6010(c)
Zinc - Total	1.2	70	10/17/95	10/18/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-8, SS-1
Sample Type: Soil

CHES Lab #: 9510081-07M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	90.1	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-8, SS-4
Sample Type: Soil

CHES Lab #: 9510081-080
Date Received: 10/05/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	38	10/12/95	10/17/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbon mixture observed with an appearance characteristic of diesel fuel or #2 fuel oil and lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 75%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-8, SS-4
Sample Type: Soil

CHES Lab #: 9510081-08M
Date Received: 10/05/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/17/95	10/18/95	3005/6010(c)
Arsenic - Total	8	ND	10/17/95	10/18/95	3050/6010(c)
Beryllium - Total	0.041	0.205	10/17/95	10/18/95	3050/6010(c)
Cadmium - Total	0.41	ND	10/17/95	10/18/95	3050/6010(c)
Chromium - Total	1.2	5.8	10/17/95	10/18/95	3050/6010(c)
Copper - Total	1.2	1.9	10/17/95	10/18/95	3050/6010(c)
Lead - Total	4	10	10/17/95	10/18/95	3050/6010(c)
Mercury - Total	0.0818	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	1.2	ND	10/17/95	10/18/95	3050/6010(c)
Selenium - Total	8	ND	10/17/95	10/18/95	3050/6010(c)
Silver - Total	0.66	ND	10/17/95	10/18/95	3005/6010(c)
Thallium - Total	10	ND	10/17/95	10/18/95	3050/6010(c)
Zinc - Total	1.6	6.6	10/17/95	10/18/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-8, SS-4
Sample Type: Soil

CHES Lab #: 9510081-08M
Date Received: 10/05/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.5	ND	mg/kg	10/11/95	9010(c)
Total Solids	--	75.9	%	10/06/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9510081

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Parameter	PQL*	Result	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/12/95	10/17/95	**

Notes:

ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Hydrocarbon quantitative range:

C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbon observed.

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 69 %

Acceptance Criteria:

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510081

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/13/95	10/16/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/13/95	10/16/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/13/95	10/16/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/13/95	10/16/95	3050/6010(c)
Chromium - Total	0.03	ND	10/13/95	10/16/95	3050/6010(c)
Copper - Total	0.03	ND	10/13/95	10/16/95	3050/6010(c)
Lead - Total	0.1	ND	10/13/95	10/16/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	0.03	ND	10/13/95	10/16/95	3050/6010(c)
Selenium - Total	0.2	ND	10/13/95	10/16/95	3050/6010(c)
Silver - Total	0.02	ND	10/13/95	10/16/95	3005/6010(c)
Thallium - Total	0.3	ND	10/13/95	10/16/95	3050/6010(c)
Zinc - Total	0.04	ND	10/13/95	10/16/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510081

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/16/95	10/17/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/16/95	10/17/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/16/95	10/17/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/16/95	10/17/95	3050/6010(c)
Chromium - Total	0.03	ND	10/16/95	10/17/95	3050/6010(c)
Copper - Total	0.03	ND	10/16/95	10/17/95	3050/6010(c)
Lead - Total	0.1	ND	10/16/95	10/17/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	0.03	ND	10/16/95	10/17/95	3050/6010(c)
Selenium - Total	0.2	ND	10/16/95	10/17/95	3050/6010(c)
Silver - Total	0.02	ND	10/16/95	10/17/95	3005/6010(c)
Thallium - Total	0.3	ND	10/16/95	10/17/95	3050/6010(c)
Zinc - Total	0.04	ND	10/16/95	10/17/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510081

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/17/95	10/18/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/17/95	10/18/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/17/95	10/18/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/17/95	10/18/95	3050/6010(c)
Chromium - Total	0.03	ND	10/17/95	10/18/95	3050/6010(c)
Copper - Total	0.03	ND	10/17/95	10/18/95	3050/6010(c)
Lead - Total	0.1	ND	10/17/95	10/18/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/17/95	10/18/95	7471(c)
Nickel - Total	0.03	ND	10/17/95	10/18/95	3050/6010(c)
Selenium - Total	0.2	ND	10/17/95	10/18/95	3050/6010(c)
Silver - Total	0.02	ND	10/17/95	10/18/95	3005/6010(c)
Thallium - Total	0.3	ND	10/17/95	10/18/95	3050/6010(c)
Zinc - Total	0.04	ND	10/17/95	10/18/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510081

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	10/11/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



1/10/16

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184				CHAIN OF CUSTODY RECORD				Sample Custodian — (617) 849-1800				Page 1 of 2	
Client: <u>CHES</u>		Project Name: <u>MURPHY'S WASTE OIL SERVICE</u>		Work Order/P.O. #: <u>EN-170</u>		Date: <u>10/5/95</u>							
Report To: <u>JAY MCKEERLY</u>		Address: <u>12 MERCER ROAD, NATICK, MA.</u>		Phone #: <u>86399</u>									
Date Samples Collected: <u>10/4/95</u>		by: <u>P. NICEWONGER</u>		Date Samples Received:									
Airbill/Bill of Lading? Y N				NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.				Samples were: Preserved Unpreserved					

Sample I.D.	Sampling Information				Analysis								# of con.	CHAS Sample #					
	Date	Time	Station Location	Sample Matrix	VOA	BZD	TPH	BCFID	PAHs by HPLC	13 P.P.	TOT. MET.	TOT. CYANIDE							
B-11	10/4		SS-4	SOIL	1	1	1	1	1	1	1	1	2	9510081					
B-11			SS-6		1	1	1	1	1	1	1	1	2	01A, M, O, G					
B-12			SS-5		1	1	1	1	1	1	1	1	2	02A, M, O, G					
B-13			SS-1		1	1	1	1	1	1	1	1	2	03A, M, O, G					
B-13			SS-5		1	1	1	1	1	1	1	1	2	04A, M, O, G					
B-7			SS-5		1	1	1	1	1	1	1	1	2	05A, M, O, G					
B-8			SS-1		1	1	1	1	1	1	1	1	2	06A, M, O, G					
B-8			SS-4		1	1	1	1	1	1	1	1	2	07A, M, O, G					
														08A, M, O, G					

Relinquished by: <u>[Signature]</u> Date: <u>10/5/95</u> Time: <u>5:00 PM</u>				VOA Vial				REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)			
Received by: <u>[Signature]</u> Date: <u>10-5-95</u> Time: <u>1700</u>				Glass Bottle							
Relinquished by: <u>[Signature]</u> Date: <u>10-5-95</u> Time: <u>1800</u>				Plastic Bottle							
Received by: <u>[Signature]</u> Date: <u>10/5/95</u> Time: <u>1500</u>				Pres.							
				Volume							
Preservation Key: A — Acidified with _____ B — Filtered, (C) — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other											

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge. Accelerated turnaround requested: _____ Confirmed by: _____ Surcharge: _____				Location of samples: <u>R4, R9A2, Quaternary</u> Turnaround: 24 Hrs. 48 Hrs. 1 Week <u>2 Weeks</u> Other: _____			

OFFICE COPY



ENVIRONMENTAL SERVICES, INC.

325 WOOD ROAD • BRAINTREE, MA 02184

(617) 849-1800

REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/10/95
CHES Lab #: 9510133

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 10/28/95

Michael J. Murray
Laboratory Manager

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238

412 826-5477 Telephone
412 826-5571 Fax

ANALYTICAL REPORT

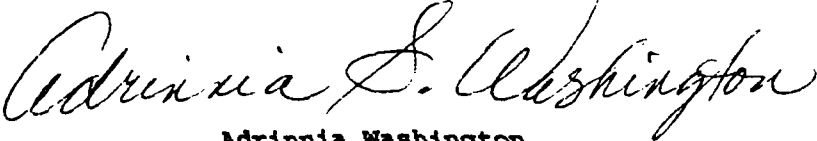
PROJECT NO. 9510133

CLEAN HARBOR

PETER CONROY

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED



Adrinna Washington
Project Manager

October 23, 1995

NARRATIVE

The following report contains the analytical results for samples submitted to Quanterra Incorporated. The samples were received into the laboratory in accordance with documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods and instrumentation in all analytical work. The methods used for the analyses presented in this study can be found on the following pages.

A Quality Control Section, containing a summary of QA/QC data for these analyses, is included at the end of the report.

The following codes are utilized in various analyses of this report:

ND	(None Detected)
DIL	(Diluted Out)
MI	(Matrix Interference)
NEG	(Negative)
J	(Detected, but below quantitation limit; estimated value)
B	(Compounds detected in method blank associated with this sample)
W	(Post digestion spike recovery fell between 40 - 85 %)
S	(Sample result determined by the Method of Standard Additions)
+	(Sample result determined by the Method of Standard Additions and the correlation coefficient was less than 0.995)

CASE NARRATIVE

Due to the sample matrix, several samples required a dilution. As a result, surrogates were diluted out. Also, the compound indeno (1,2,3-cd) pyrene is reported as a matrix interference with a maximum estimated value. The laboratory control sample is outside of QC limits.

ANALYTICAL METHODS SUMMARY

Parameters

Polynuclear Aromatic Hydrocarbons
Hydrocarbons
Solids, Total (TS)

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL:
Cincinnati, OH: March 1983 and subsequent revisions
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, September, 1986 and subsequent
revisions

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
A5PD0	C5J110003-001	9510133-01Q	10/10/95
A5PD1	C5J110003-002	9510133-02Q	10/10/95
A5PD2	C5J110003-003	9510133-03Q	10/10/95
A5PD3	C5J110003-004	9510133-04Q	10/10/95
A5PD4	C5J110003-005	9510133-05Q	10/10/95



CLEAN HARBORS ANALYTICAL

9510133-01Q

WO #: A5PD0101
 LAB #: C5J110003-001
 MATRIX: SOLID
 DILUTION FACTOR: 40.00

DATE SAMPLED: 10/10/95
 TIME SAMPLED:
 DATE RECEIVED: 10/11/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	1,400	SW846 8310	10/16-10/20/95	5290016
Acenaphthylene	MI (4,100)	1,400	SW846 8310	10/16-10/20/95	5290016
Acenaphthene	4,200	1,400	SW846 8310	10/16-10/20/95	5290016
Fluorene	ND	280	SW846 8310	10/16-10/20/95	5290016
Phenanthrene	5,000	710	SW846 8310	10/16-10/20/95	5290016
Anthracene	ND	710	SW846 8310	10/16-10/20/95	5290016
Fluoranthene	5,900	280	SW846 8310	10/16-10/20/95	5290016
Pyrene	5,300	280	SW846 8310	10/16-10/20/95	5290016
Benzo(a)anthracene	990	28	SW846 8310	10/16-10/20/95	5290016
Chrysene	3,100	210	SW846 8310	10/16-10/20/95	5290016
Benzo(b)fluoranthene	1,800	28	SW846 8310	10/16-10/20/95	5290016
Benzo(k)fluoranthene	1,000	28	SW846 8310	10/16-10/20/95	5290016
Benzo(a)pyrene	2,200	28	SW846 8310	10/16-10/20/95	5290016
Indeno(1,2,3-cd)pyrene	2,000	71	SW846 8310	10/16-10/20/95	5290016
Dibenzo(a,h)anthracene	160	42	SW846 8310	10/16-10/20/95	5290016
Benzo(g,h,i)perylene	1,700	71	SW846 8310	10/16-10/20/95	5290016

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510133-01Q

WO #: A5PD0
LAB #: C5J110003-001
MATRIX: SOLID

DATE SAMPLED: 10/10/95
TIME SAMPLED:
DATE RECEIVED: 10/11/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	95.6		%	MCAWW 160.3 M	10/12/95	5285056

NOTE: DRY WEIGHT

CLEAN HARBORS ANALYTICAL

9510133-02Q

WO #: A5PD1101
 LAB #: C5J110003-002
 MATRIX: SOLID
 DILUTION FACTOR:

6.00

DATE SAMPLED: 10/10/95
 TIME SAMPLED:
 DATE RECEIVED: 10/11/95

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	240	SW846 8310	10/16-10/20/95	5290016
Acenaphthylene	MI (730)	240	SW846 8310	10/16-10/20/95	5290016
Acenaphthene	580	240	SW846 8310	10/16-10/20/95	5290016
Fluorene	ND	50	SW846 8310	10/16-10/20/95	5290016
Phenanthrene	820	130	SW846 8310	10/16-10/20/95	5290016
Anthracene	ND	130	SW846 8310	10/16-10/20/95	5290016
Fluoranthene	1,100	50	SW846 8310	10/16-10/20/95	5290016
Pyrene	940	50	SW846 8310	10/16-10/20/95	5290016
Benzo(a)anthracene	170	5.0	SW846 8310	10/16-10/20/95	5290016
Chrysene	620	37	SW846 8310	10/16-10/20/95	5290016
Benzo(b)fluoranthene	410	5.0	SW846 8310	10/16-10/20/95	5290016
Benzo(k)fluoranthene	200	5.0	SW846 8310	10/16-10/20/95	5290016
Benzo(a)pyrene	400	5.0	SW846 8310	10/16-10/20/95	5290016
Indeno(1,2,3-cd)pyrene	MI (670)	13	SW846 8310	10/16-10/20/95	5290016
Dibenzo(a,h)anthracene	30	7.4	SW846 8310	10/16-10/20/95	5290016
Benzo(g,h,i)perylene	310	13	SW846 8310	10/16-10/20/95	5290016

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Benzo(e)pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510133-02Q

WO #: A5PD1
LAB #: C5J110003-002
MATRIX: SOLID

DATE SAMPLED: 10/10/95
TIME SAMPLED:
DATE RECEIVED: 10/11/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	81.0		%	MCAWW 160.3 M	10/12/95	5285056

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510133-03Q

WO #: A5PD2101
 LAB #: C5J110003-003
 MATRIX: SOLID
 DILUTION FACTOR: 80.00

DATE SAMPLED: 10/10/95
 TIME SAMPLED:
 DATE RECEIVED: 10/11/95

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Naphthalene	ND	2,900	SW846 8310	10/16-10/20/95	5290016
Acenaphthylene	3,200	2,900	SW846 8310	10/16-10/20/95	5290016
Acenaphthene	5,100	2,900	SW846 8310	10/16-10/20/95	5290016
Fluorene	700	600	SW846 8310	10/16-10/20/95	5290016
Phenanthrene	9,000	1,500	SW846 8310	10/16-10/20/95	5290016
Anthracene	2,600	1,500	SW846 8310	10/16-10/20/95	5290016
Fluoranthene	11,000	600	SW846 8310	10/16-10/20/95	5290016
Pyrene	13,000	600	SW846 8310	10/16-10/20/95	5290016
Benzo (a) anthracene	4,900	60	SW846 8310	10/16-10/20/95	5290016
Chrysene	7,100	440	SW846 8310	10/16-10/20/95	5290016
Benzo (b) fluoranthene	4,100	60	SW846 8310	10/16-10/20/95	5290016
Benzo (k) fluoranthene	2,300	60	SW846 8310	10/16-10/20/95	5290016
Benzo (a) pyrene	5,900	60	SW846 8310	10/16-10/20/95	5290016
Indeno (1,2,3-cd) pyrene	420	150	SW846 8310	10/16-10/20/95	5290016
Dibenzo (a, h) anthracene	380	89	SW846 8310	10/16-10/20/95	5290016
Benzo (g, h, i) perylene	4,000	150	SW846 8310	10/16-10/20/95	5290016

SURROGATE RECOVERY±ACCEPTABLE LIMITS

Benzo (e) pyrene
 2-Fluorobiphenyl

DIL (36 - 144)
 DIL (47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510133-03Q

WO #: A5PD2
LAB #: C5J110003-003
MATRIX: SOLID

DATE SAMPLED: 10/10/95
TIME SAMPLED:
DATE RECEIVED: 10/11/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	90.1		%	MCAWW 160.3 M	10/12/95	5285056

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510133-04Q

WO #: A5PD3101
 LAB #: C5J110003-004
 MATRIX: SOLID
 DILUTION FACTOR: 5.00

DATE SAMPLED: 10/10/95
 TIME SAMPLED:
 DATE RECEIVED: 10/11/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	190	SW846 8310	10/16-10/23/95	5290016
Acenaphthylene	ND	190	SW846 8310	10/16-10/23/95	5290016
Acenaphthene	ND	190	SW846 8310	10/16-10/23/95	5290016
Fluorene	ND	39	SW846 8310	10/16-10/23/95	5290016
Phenanthrene	130	98	SW846 8310	10/16-10/23/95	5290016
Anthracene	ND	98	SW846 8310	10/16-10/23/95	5290016
Fluoranthene	240	39	SW846 8310	10/16-10/23/95	5290016
Pyrene	250	39	SW846 8310	10/16-10/23/95	5290016
Benzo (a) anthracene	100	3.9	SW846 8310	10/16-10/23/95	5290016
Chrysene	130	29	SW846 8310	10/16-10/23/95	5290016
Benzo (b) fluoranthene	120	3.9	SW846 8310	10/16-10/23/95	5290016
Benzo (k) fluoranthene	62	3.9	SW846 8310	10/16-10/23/95	5290016
Benzo (a) pyrene	160	3.9	SW846 8310	10/16-10/23/95	5290016
Indeno (1,2,3-cd) pyrene	23	9.8	SW846 8310	10/16-10/23/95	5290016
Dibenzo (a,h) anthracene	20	5.8	SW846 8310	10/16-10/23/95	5290016
Benzo (g,h,i) perylene	160	9.8	SW846 8310	10/16-10/23/95	5290016

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	DIL	(36 - 144)
2-Fluorobiphenyl	DIL	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510133-04Q

WO #: A5PD3
LAB #: C5J110003-004
MATRIX: SOLID

DATE SAMPLED: 10/10/95
TIME SAMPLED:
DATE RECEIVED: 10/11/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	87.0		%	MCAWW 160.3 M	10/12/95	5285056

NOTE: DRY WEIGHT



CLEAN HARBORS ANALYTICAL

9510133-05Q

WO #: A5PD4101
 LAB #: C5J110003-005
 MATRIX: SOLID
 DILUTION FACTOR: 1.00

DATE SAMPLED: 10/10/95
 TIME SAMPLED:
 DATE RECEIVED: 10/11/95

- - - - - REQUESTED PARAMETERS - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Naphthalene	ND	37	SW846 8310	10/16-10/20/95	5290016
Acenaphthylene	ND	37	SW846 8310	10/16-10/20/95	5290016
Acenaphthene	ND	37	SW846 8310	10/16-10/20/95	5290016
Fluorene	ND	7.5	SW846 8310	10/16-10/20/95	5290016
Phenanthrene	ND	19	SW846 8310	10/16-10/20/95	5290016
Anthracene	ND	19	SW846 8310	10/16-10/20/95	5290016
Fluoranthene	ND	7.5	SW846 8310	10/16-10/20/95	5290016
Pyrene	ND	7.5	SW846 8310	10/16-10/20/95	5290016
Benzo(a)anthracene	ND	0.75	SW846 8310	10/16-10/20/95	5290016
Chrysene	ND	5.6	SW846 8310	10/16-10/20/95	5290016
Benzo(b)fluoranthene	ND	0.75	SW846 8310	10/16-10/20/95	5290016
Benzo(k)fluoranthene	ND	0.75	SW846 8310	10/16-10/20/95	5290016
Benzo(a)pyrene	ND	0.75	SW846 8310	10/16-10/20/95	5290016
Indeno(1,2,3-cd)pyrene	ND	1.9	SW846 8310	10/16-10/20/95	5290016
Dibenzo(a,h)anthracene	ND	1.1	SW846 8310	10/16-10/20/95	5290016
Benzo(g,h,i)perylene	ND	1.9	SW846 8310	10/16-10/20/95	5290016

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo(e)pyrene	91	(36 - 144)
2-Fluorobiphenyl	75	(47 - 143)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT



CLEAN HARBORS ANALYTICAL

9510133-05Q

WO #: A5PD4
LAB #: C5J110003-005
MATRIX: SOLID

DATE SAMPLED: 10/10/95
TIME SAMPLED:
DATE RECEIVED: 10/11/95

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Solids, Total (TS)	89.9		%	MCAWW 160.3 M	10/12/95	5285056

NOTE: DRY WEIGHT

QUALITY CONTROL SECTION

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY

Quanterra Incorporated considers continuous analytical performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

SURROGATE SPIKE RECOVERY EVALUATIONS

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compounds analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recoveries calculated from the subsequent spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten percent (10%) each. For Pesticides, one (1) of two (2) surrogates meeting performance criteria is acceptable.

LABORATORY ANALYTICAL METHOD BLANK EVALUATIONS

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.) substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule, provided they are not present at a greater than five times the detection limit.

Volatiles

Methylene chloride
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM SUMMARY (CONT)

LABORATORY ANALYTICAL METHOD CHECK SAMPLE EVALUATIONS

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved. All compounds must meet laboratory recovery criteria. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) RECOVERY EVALUATION

Known concentration of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Actual percent recovery data is displayed alongside the acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

EXAMPLE

COMPOUND	SAMPLE CONCENTRATION	MS % RECOVERY	MSD % RECOVERY	QC LIMITS' RECOVERY
4-4'-DDT	0	95	112	(66-119)
Benzene	10	86	93	(39-150)
compound name	sample result	1st % recovery	2nd % recovery	acceptable method limits

¹QC limits are statistically derived from historical laboratory data. Where insufficient data exists to statistically derive these limits, they will be labelled "advisory". In this case, they are based on the best available technical information.

For metals analyses, the recoveries of the MS/MSD must be within the range of 80-120%. If they do not meet this criteria, but the RPD of the two results is <20% OR the absolute difference is less than 10% when the recoveries are below 50%, no corrective action is required. If these criteria are not met, the sample with its MS/MSD is reprepared and reanalyzed once more.

INTRA-LAB BLANK REPORT

LAB #: C5J170000-016

----- POLYNUCLEAR AROMATIC HYDROCARBONS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	33	10/16-10/20/95	5290016
Acenaphthylene	ND	33	10/16-10/20/95	5290016
Anthracene	ND	17	10/16-10/20/95	5290016
Benzo (a) anthracene	ND	0.67	10/16-10/20/95	5290016
Benzo (b) fluoranthene	ND	0.67	10/16-10/20/95	5290016
Benzo (k) fluoranthene	ND	0.67	10/16-10/20/95	5290016
Benzo (g,h,i) perylene	ND	1.7	10/16-10/20/95	5290016
Benzo (a) pyrene	ND	0.67	10/16-10/20/95	5290016
Chrysene	ND	5.0	10/16-10/20/95	5290016
Fluoranthene	ND	6.7	10/16-10/20/95	5290016
Fluorene	ND	6.7	10/16-10/20/95	5290016
Indeno (1,2,3-cd) pyrene	ND	1.7	10/16-10/20/95	5290016
Naphthalene	ND	33	10/16-10/20/95	5290016
Phenanthrene	ND	17	10/16-10/20/95	5290016
Pyrene	ND	6.7	10/16-10/20/95	5290016
Dibenzo (a,h) anthracene	ND	1.0	10/16-10/20/95	5290016

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Benzo (e) pyrene	108	(36 - 144)
2-Fluorobiphenyl	85	(47 - 143)

NOTE:

ND (NONE DETECTED)

LCS - DCS REPORT

QC BATCH: 5290016
LAB #: C5J170000-016 C
DILUTION FACTOR: 1.00

WO #:
PREPARATION DATE: 10/16/95
DATE ANALYZED: 10/20/95

- - - - - Polynuclear Aromatic Hydrocarbons - - - - -

COMPOUND	LCS	DCS	Q/C	RPD	RPD
	PERCENT RECOVERY	PERCENT RECOVERY			
			LIMITS		LIMITS
Naphthalene	114	105	(52-163)	9.0	20
Phenanthrene	90	89	(67-123)	1.5	20
Fluoranthene	95	91	(65-125)	4.4	20
Chrysene	100	100	(74-124)	0.12	20
Benzo (a) pyrene	85	91	(48-129)	7.1	20
Indeno (1,2,3-cd) pyrene	101	100	(63-133)	0.89	20

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



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-1
Sample Type: Soil

CHES Lab #: 9510133-01A
Date Received: 10/10/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 10/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	910	ND	1,2-Dichloropropane	230	ND
Benzene	230	ND	cis-1,3-Dichloropropene	230	ND
Bromodichloromethane	230	ND	trans-1,3-Dichloropropene	230	ND
Bromoform	230	ND	Ethylbenzene	230	ND
Bromomethane	450	ND	2-Hexanone	230	ND
2-Butanone	910	ND	Methylene chloride	910	ND
Carbon disulfide	450	ND	4-Methyl-2-pentanone	230	ND
Carbon tetrachloride	230	ND	Methyl-t-butylether (MTBE)	450	ND
Chlorobenzene	230	ND	Styrene	230	ND
Chloroethane	450	ND	1,1,2,2-Tetrachloroethane	230	ND
2-Chloroethyl vinyl ether	450	ND	Tetrachloroethene	230	240
Chloroform	230	ND	Toluene	230	ND
Chloromethane	450	ND	1,1,1-Trichloroethane	230	ND
Dibromochloromethane	230	ND	1,1,2-Trichloroethane	230	ND
Dibromoethane (EDB)	230	ND	Trichloroethene	230	1,300
1,1-Dichloroethane	230	ND	Trichlorofluoromethane	230	ND
1,2-Dichloroethane	230	ND	Vinyl acetate	450	ND
1,1-Dichloroethene	230	ND	Vinyl chloride	450	ND
trans-1,2-Dichloroethene	230	ND	Total xylenes	230	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 98 %
Toluene-d8: 110 %
p-BFB: 99 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-1
Sample Type: Soil

CHES Lab #: 9510133-010
Date Received: 10/10/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	1,100	10/18/95	10/20/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-1
Sample Type: Soil

CHES Lab #: 9510133-01M
Date Received: 10/10/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	5	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.027	0.243	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.27	3.5	10/18/95	10/19/95	3050/6010(c)
Chromium - Total	0.81	24	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.81	23	10/18/95	10/19/95	3050/6010(c)
Lead - Total	3	560	10/18/95	10/20/95	3050/6010(c)
Mercury - Total	0.0603	0.0804	10/19/95	10/20/95	7471(c)
Nickel - Total	0.81	13	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	5	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.60	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	8	10	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	1.1	68	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-1
Sample Type: Soil

CHES Lab #: 9510133-01M
Date Received: 10/10/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.2	ND	mg/kg	10/17/95	9010(c)
Total Solids	--	95.3	%	10/11/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-3
Sample Type: Soil

CHES Lab #: 9510133-02A
Date Received: 10/10/95

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 10/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	990	ND	1,2-Dichloropropane	250	ND
Benzene	250	ND	cis-1,3-Dichloropropene	250	ND
Bromodichloromethane	250	ND	trans-1,3-Dichloropropene	250	ND
Bromoform	250	ND	Ethylbenzene	250	ND
Bromomethane	490	ND	2-Hexanone	250	ND
2-Butanone	990	ND	Methylene chloride	990	ND
Carbon disulfide	490	ND	4-Methyl-2-pentanone	250	ND
Carbon tetrachloride	250	ND	Methyl-t-butylether (MTBE)	490	ND
Chlorobenzene	250	ND	Styrene	250	ND
Chloroethane	490	ND	1,1,2,2-Tetrachloroethane	250	ND
2-Chloroethyl vinyl ether	490	ND	Tetrachloroethene	250	300
Chloroform	250	ND	Toluene	250	ND
Chloromethane	490	ND	1,1,1-Trichloroethane	250	ND
Dibromochloromethane	250	ND	1,1,2-Trichloroethane	250	ND
Dibromoethane (EDB)	250	ND	Trichloroethene	250	680
1,1-Dichloroethane	250	ND	Trichlorofluoromethane	250	ND
1,2-Dichloroethane	250	ND	Vinyl acetate	490	ND
1,1-Dichloroethene	250	ND	Vinyl chloride	490	ND
trans-1,2-Dichloroethene	250	ND	Total xylenes	250	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 91 %
Toluene-d8: 92 %
p-BFB: 95 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-3
Sample Type: Soil

CHES Lab #: 9510133-020
Date Received: 10/10/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	86	10/18/95	10/19/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 77%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-3
Sample Type: Soil

CHES Lab #: 9510133-02M
Date Received: 10/10/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	5	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.023	0.203	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.23	0.23	10/18/95	10/19/95	3050/6010(c)
Chromium - Total	0.68	8.0	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.68	4.7	10/18/95	10/19/95	3050/6010(c)
Lead - Total	2	40	10/18/95	10/20/95	3050/6010(c)
Mercury - Total	0.0508	ND	10/19/95	10/20/95	7471(c)
Nickel - Total	0.68	ND	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	5	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.68	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	7	ND	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	0.90	14	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-18, SS-3
Sample Type: Soil

CHES Lab #: 9510133-02M
Date Received: 10/10/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.4	ND	mg/kg	10/17/95	9010(c)
Total Solids	--	81.2	%	10/11/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-17, SS-2
Sample Type: Soil

CHES Lab #: 9510133-03A
Date Received: 10/10/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 10/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	980	ND	1,2-Dichloropropane	250	ND
Benzene	250	ND	cis-1,3-Dichloropropene	250	ND
Bromodichloromethane	250	ND	trans-1,3-Dichloropropene	250	ND
Bromoform	250	ND	Ethylbenzene	250	ND
Bromomethane	490	ND	2-Hexanone	250	ND
2-Butanone	980	ND	Methylene chloride	980	ND
Carbon disulfide	490	ND	4-Methyl-2-pentanone	250	ND
Carbon tetrachloride	250	ND	Methyl-t-butylether (MTBE)	490	ND
Chlorobenzene	250	ND	Styrene	250	ND
Chloroethane	490	ND	1,1,2,2-Tetrachloroethane	250	ND
2-Chloroethyl vinyl ether	490	ND	Tetrachloroethene	250	ND
Chloroform	250	ND	Toluene	250	ND
Chloromethane	490	ND	1,1,1-Trichloroethane	250	ND
Dibromochloromethane	250	ND	1,1,2-Trichloroethane	250	ND
Dibromoethane (EDB)	250	ND	Trichloroethene	250	ND
1,1-Dichloroethane	250	ND	Trichlorofluoromethane	250	ND
1,2-Dichloroethane	250	ND	Vinyl acetate	490	ND
1,1-Dichloroethene	250	ND	Vinyl chloride	490	ND
trans-1,2-Dichloroethene	250	ND	Total xylenes	250	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 102 %
Toluene-d8: 111 %
p-BFB: 107 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-17, SS-2
Sample Type: Soil

CHES Lab #: 9510133-030
Date Received: 10/10/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	730	10/18/95	10/19/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbon mixture observed with an appearance characteristic of diesel fuel or #2 fuel oil and lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-17, SS-2
Sample Type: Soil

CHES Lab #: 9510133-03M
Date Received: 10/10/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	5	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	7	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.033	0.460	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.33	0.43	10/18/95	10/19/95	3050/6010(c)
Chromium - Total	0.99	22	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.99	270	10/18/95	10/20/95	3050/6010(c)
Lead - Total	3	120	10/18/95	10/19/95	3050/6010(c)
Mercury - Total	0.0562	0.1592	10/19/95	10/20/95	7471(c)
Nickel - Total	0.99	13	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	7	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.62	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	10	ND	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	1.3	120	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-17, SS-2
Sample Type: Soil

CHES Lab #: 9510133-03M
Date Received: 10/10/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.3	ND	mg/kg	10/17/95	9010(c)
Total Solids	--	90.9	%	10/11/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-2
Sample Type: Soil

CHES Lab #: 9510133-04A
Date Received: 10/10/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 10/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 119 %
Toluene-d8: 127 %
p-BFB: 109 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-2
Sample Type: Soil

CHES Lab #: 9510133-040
Date Received: 10/10/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	94	10/18/95	10/19/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 77%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-2
Sample Type: Soil

CHES Lab #: 9510133-04M
Date Received: 10/10/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	2	ND	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	4	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.022	0.260	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.22	0.24	10/18/95	10/20/95	3050/6010(c)
Chromium - Total	0.65	17	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.65	23	10/18/95	10/19/95	3050/6010(c)
Lead - Total	2	10	10/18/95	10/19/95	3050/6010(c)
Mercury - Total	0.0595	ND	10/19/95	10/20/95	7471(c)
Nickel - Total	0.65	13	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	4	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.41	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	7	ND	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	0.87	38	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-2
Sample Type: Soil

CHES Lab #: 9510133-04M
Date Received: 10/10/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	2.1	ND	mg/kg	10/19/95	9010(c)
Total Solids	--	89.0	%	10/11/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-4
Sample Type: Soil

CHES Lab #: 9510133-05A
Date Received: 10/10/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 10/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 114 %
Toluene-d8: 118 %
p-BFB: 103 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-4
Sample Type: Soil

CHES Lab #: 9510133-050
Date Received: 10/10/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	11	10/18/95	10/19/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 80%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-4
Sample Type: Soil

CHES Lab #: 9510133-05M
Date Received: 10/10/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	3	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	4	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.022	0.246	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.22	0.31	10/18/95	10/20/95	3050/6010(c)
Chromium - Total	0.67	15	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.67	28	10/18/95	10/19/95	3050/6010(c)
Lead - Total	2	9	10/18/95	10/19/95	3050/6010(c)
Mercury - Total	0.0559	ND	10/19/95	10/20/95	7471(c)
Nickel - Total	0.67	14	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	4	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.57	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	7	ND	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	0.90	37	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10,SS-4
Sample Type: Soil

CHES Lab #: 9510133-05M
Date Received: 10/10/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.8	ND	mg/kg	10/18/95	9010(c)
Total Solids	--	92.3	%	10/11/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10, SS-6
Sample Type: Soil

CHES Lab #: 9510133-06L
Date Received: 10/10/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/20/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	5.1
4	4.75	13.5
10	2.00	21.1
20	0.850	16.7
40	0.425	12.8
60	0.250	9.1
100	0.150	5.7
200	0.075	5.9
Bottom Tray	<0.075	10.1



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9510133

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 10/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 92%
Toluene-d8: 99%
p-BFB: 86%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 10/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 116%
Toluene-d8: 119%
p-BFB: 105%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System D
by EPA Method 624 (ref. f)

Analysis Date: 10/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 94%
Toluene-d8: 95%
p-BFB: 91%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Parameter	PQL*	Result	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	10/18/95	10/19/95	**

Notes:

ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Hydrocarbon quantitative range:

C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbon observed.

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 87 %

Acceptance Criteria:

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510133

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/18/95	10/19/95	3050/6010(c)
Chromium - Total	0.03	ND	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.03	ND	10/18/95	10/19/95	3050/6010(c)
Lead - Total	0.1	ND	10/18/95	10/20/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/19/95	10/20/95	7471(c)
Nickel - Total	0.03	ND	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	0.2	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.02	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	0.3	ND	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	0.04	ND	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/l

Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510133

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/18/95	10/19/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/18/95	10/19/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/18/95	10/19/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/18/95	10/19/95	3050/6010(c)
Chromium - Total	0.03	ND	10/18/95	10/19/95	3050/6010(c)
Copper - Total	0.03	ND	10/18/95	10/19/95	3050/6010(c)
Lead - Total	0.1	ND	10/18/95	10/20/95	3050/6010(c)
Mercury - Total	0.0002	ND	10/19/95	10/20/95	7471(c)
Nickel - Total	0.03	ND	10/18/95	10/19/95	3050/6010(c)
Selenium - Total	0.2	ND	10/18/95	10/19/95	3050/6010(c)
Silver - Total	0.02	ND	10/18/95	10/19/95	3005/6010(c)
Thallium - Total	0.3	ND	10/18/95	10/19/95	3050/6010(c)
Zinc - Total	0.04	ND	10/18/95	10/19/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



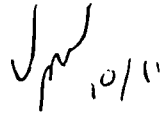
Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510133

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	10/17/95	9010(c)
Cyanide, Total	0.02	ND	mg/l	10/19/95	9010(c)
Cyanide, Total	0.02	ND	mg/l	10/18/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



Samples were:	Preserved	Unpreserved
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1
13	1	1
14	1	1
15	1	1
16	1	1
17	1	1
18	1	1
19	1	1
20	1	1
21	1	1
22	1	1
23	1	1
24	1	1
25	1	1
26	1	1
27	1	1
28	1	1
29	1	1
30	1	1
31	1	1
32	1	1
33	1	1
34	1	1
35	1	1
36	1	1
37	1	1
38	1	1
39	1	1
40	1	1
41	1	1
42	1	1
43	1	1
44	1	1
45	1	1
46	1	1
47	1	1
48	1	1
49	1	1
50	1	1
51	1	1
52	1	1
53	1	1
54	1	1
55	1	1
56	1	1
57	1	1
58	1	1
59	1	1
60	1	1
61	1	1
62	1	1
63	1	1
64	1	1
65	1	1
66	1	1
67	1	1
68	1	1
69	1	1
70	1	1
71	1	1
72	1	1
73	1	1
74	1	1
75	1	1
76	1	1
77	1	1
78	1	1
79	1	1
80	1	1
81	1	1
82	1	1
83	1	1
84	1	1
85	1	1
86	1	1
87	1	1
88	1	1
89	1	1
90	1	1
91	1	1
92	1	1
93	1	1
94	1	1
95	1	1
96	1	1
97	1	1
98	1	1
99	1	1
100	1	1

Location of samples: B4, R10R2, Quarterns

Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: _____

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REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL SERVICE
P.O. #: EN170

Date Received: 10/27/95
CHES Lab #: 9510403

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 11/22/95

Michael J. Murray
Laboratory Manager



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-19, SS-4
Sample Type: Soil

CHES Lab #: 9510403-01A
Date Received: 10/27/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 11/08/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	4000	ND	1,2-Dichloropropane	990	ND
Benzene	990	ND	cis-1,3-Dichloropropene	990	ND
Bromodichloromethane	990	ND	trans-1,3-Dichloropropene	990	ND
Bromoform	990	ND	Ethylbenzene	990	ND
Bromomethane	2000	ND	2-Hexanone	990	ND
2-Butanone	4000	ND	Methylene chloride	4000	ND
Carbon disulfide	2000	ND	4-Methyl-2-pentanone	990	ND
Carbon tetrachloride	990	ND	Methyl-t-butylether (MTBE)	2000	ND
Chlorobenzene	990	ND	Styrene	990	ND
Chloroethane	2000	ND	1,1,2,2-Tetrachloroethane	990	ND
2-Chloroethyl vinyl ether	2000	ND	Tetrachloroethene	990	ND
Chloroform	990	ND	Toluene	990	ND
Chloromethane	2000	ND	1,1,1-Trichloroethane	990	ND
Dibromochloromethane	990	ND	1,1,2-Trichloroethane	990	ND
Dibromoethane (EDB)	990	ND	Trichloroethene	990	ND
1,1-Dichloroethane	990	ND	Trichlorofluoromethane	990	ND
1,2-Dichloroethane	990	ND	Vinyl acetate	2000	ND
1,1-Dichloroethene	990	ND	Vinyl chloride	2000	ND
trans-1,2-Dichloroethene	990	ND	Total xylenes	990	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 84 %
Toluene-d8: 93 %
p-BFB: 85 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-19, SS-4
Sample Type: Soil

CHES Lab #: 9510403-010
Date Received: 10/27/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	1,700	11/06/95	11/07/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-19, SS-4
Sample Type: Soil

CHES Lab #: 9510403-01M
Date Received: 10/27/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/30/95	10/31/95	3005/6010(c)
Arsenic - Total	7	ND	10/30/95	10/31/95	3050/6010(c)
Beryllium - Total	0.036	ND	10/30/95	10/31/95	3050/6010(c)
Cadmium - Total	0.36	ND	10/30/95	10/31/95	3050/6010(c)
Chromium - Total	1.1	33	10/30/95	10/31/95	3050/6010(c)
Copper - Total	1.1	34	10/30/95	10/31/95	3050/6010(c)
Lead - Total	4	240	10/30/95	10/31/95	3050/6010(c)
Mercury - Total	0.0550	0.0565	11/03/95	11/08/95	7471(c)
Nickel - Total	1.1	2.4	10/30/95	10/31/95	3050/6010(c)
Selenium - Total	7	ND	10/30/95	10/31/95	3050/6010(c)
Silver - Total	0.59	ND	10/30/95	10/31/95	3005/6010(c)
Thallium - Total	10	ND	10/30/95	10/31/95	3050/6010(c)
Zinc - Total	1.4	97	10/30/95	10/31/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-19, SS-4
Sample Type: Soil

CHES Lab #: 9510403-01M
Date Received: 10/27/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/31/95	9010(c)
Total Solids	--	83.9	%	10/30/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-20, SS-4
Sample Type: Soil

CHES Lab #: 9510403-02A
Date Received: 10/27/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 11/10/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	15	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 96 %
Toluene-d8: 97 %
p-BFB: 80 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-20, SS-4
Sample Type: Soil

CHES Lab #: 9510403-020
Date Received: 10/27/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	450	11/06/95	11/08/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-20, SS-4
Sample Type: Soil

CHES Lab #: 9510403-02M
Date Received: 10/27/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	3	ND	10/30/95	10/31/95	3005/6010(c)
Arsenic - Total	6	ND	10/30/95	10/31/95	3050/6010(c)
Beryllium - Total	0.031	ND	10/30/95	10/31/95	3050/6010(c)
Cadmium - Total	0.31	ND	10/30/95	10/31/95	3050/6010(c)
Chromium - Total	0.93	14	10/30/95	10/31/95	3050/6010(c)
Copper - Total	0.93	28	10/30/95	10/31/95	3050/6010(c)
Lead - Total	3	260	10/30/95	10/31/95	3050/6010(c)
Mercury - Total	0.0601	ND	11/03/95	11/08/95	7471(c)
Nickel - Total	0.93	5.6	10/30/95	10/31/95	3050/6010(c)
Selenium - Total	6	ND	10/30/95	10/31/95	3050/6010(c)
Silver - Total	0.62	ND	10/30/95	10/31/95	3005/6010(c)
Thallium - Total	9	ND	10/30/95	10/31/95	3050/6010(c)
Zinc - Total	1.2	55	10/30/95	10/31/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: B-20, SS-4
Sample Type: Soil

CHES Lab #: 9510403-02M
Date Received: 10/27/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.9	ND	mg/kg	10/31/95	9010(c)
Total Solids	--	91.0	%	10/30/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMPOSITE OF MW-8
Sample Type: Soil

CHES Lab #: 9510403-07L
Date Received: 10/27/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 11/09/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	30.0
4	4.75	15.7
10	2.00	11.7
20	0.850	13.2
40	0.425	10.5
60	0.250	5.9
100	0.150	3.8
200	0.075	4.2
Bottom Tray	<0.075	4.9



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9510403

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/08/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 74%
Toluene-d8: 95%
p-BFB: 83%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 8260 (ref. c)

Analysis Date: 11/09/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	15	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 106%
Toluene-d8: 132%
p-BFB: 96%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510403

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Antimony - Total	0.1	ND	10/30/95	10/31/95	3005/6010(c)
Arsenic - Total	0.2	ND	10/30/95	10/31/95	3050/6010(c)
Beryllium - Total	0.001	ND	10/30/95	10/31/95	3050/6010(c)
Cadmium - Total	0.01	ND	10/30/95	10/31/95	3050/6010(c)
Chromium - Total	0.03	ND	10/30/95	10/31/95	3050/6010(c)
Copper - Total	0.03	ND	10/30/95	10/31/95	3050/6010(c)
Lead - Total	0.1	ND	10/30/95	10/31/95	3050/6010(c)
Mercury - Total	0.0002	ND	11/03/95	11/08/95	7471(c)
Nickel - Total	0.03	ND	10/30/95	10/31/95	3050/6010(c)
Selenium - Total	0.2	ND	10/30/95	10/31/95	3050/6010(c)
Silver - Total	0.02	ND	10/30/95	10/31/95	3005/6010(c)
Thallium - Total	0.3	ND	10/30/95	10/31/95	3050/6010(c)
Zinc - Total	0.04	ND	10/30/95	10/31/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/l

Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9510403

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	10/31/95	9010(c)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight

CASE NARRATIVE

LABORATORY ID NUMBER: B5K010143

ORGANICS

The reporting limits for Method 8310 PAH on sample Id numbers B5K010143-001 and 002 were elevated due to insufficient sample volume.

EXECUTIVE SUMMARY - Detection Highlights

B5K010143

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>
B14,SS-4 951043-01Q 10/27/95				
Total Residue as Percent Solids	85.6	1.0	%	MCAWW 160.3
B20,SS-11 951043-02Q 10/27/95				
Fluoranthene	660	440	ug/kg	SW846 8310
Pyrene	480	440	ug/kg	SW846 8310
Total Residue as Percent Solids	91.5	1.0	%	MCAWW 160.3

ANALYTICAL METHODS SUMMARY

B5K010143

Parameters

Polynuclear Aromatic
Hydrocarbons by HPLC
Total Residue as
Percent Solids

Methods

SW846 8310
MCAWW 160.3 MODIFIED

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and Final
Update I (7/92).

EXECUTIVE SUMMARY - Detection Highlights

B5K010143

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>
B19,SS-4 10/27/95				
Total Residue as Percent Solids	85.6	1.0	%	MCAWW 160.3
B20,SS-11 10/27/95				
Fluoranthene	660	440	ug/kg	SW846 8310
Pyrene	480	440	ug/kg	SW846 8310
Total Residue as Percent Solids	91.5	1.0	%	MCAWW 160.3

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME SAMPLED</u>
C1NX5	B5K010143-001	B19, SS-4	10/27/95
C1NX9	B5K010143-002	B20, SS-11	10/27/95

CLEAN HARBORS ANALYTICAL

B19, SS-4

WO #: C1NX5101
LAB #: B5K010143-001
MATRIX: SOLID
DILUTION FACTOR: 10.00

DATE SAMPLED: 10/27/95
TIME SAMPLED:
DATE RECEIVED: 11/01/95
% MOISTURE: 14.4

- - - - - REQUESTED PARAMETERS - - - - -

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	4,700	SW846 8310	11/07-11/10/95	5311157
Acenaphthylene	ND	4,700	SW846 8310	11/07-11/10/95	5311157
Anthracene	ND	4,700	SW846 8310	11/07-11/10/95	5311157
Benzo(a)anthracene	ND	470	SW846 8310	11/07-11/10/95	5311157
Benzo(a)pyrene	ND	470	SW846 8310	11/07-11/10/95	5311157
Benzo(b)fluoranthene	ND	470	SW846 8310	11/07-11/10/95	5311157
Benzo(ghi)perylene	ND	470	SW846 8310	11/07-11/10/95	5311157
Benzo(k)fluoranthene	ND	470	SW846 8310	11/07-11/10/95	5311157
Chrysene	ND	470	SW846 8310	11/07-11/10/95	5311157
Dibenz(a,h)anthracene	ND	470	SW846 8310	11/07-11/10/95	5311157
Fluoranthene	ND	470	SW846 8310	11/07-11/10/95	5311157
Fluorene	ND	4,700	SW846 8310	11/07-11/10/95	5311157
Indeno(1,2,3-cd)pyrene	ND	470	SW846 8310	11/07-11/10/95	5311157
Naphthalene	ND	4,700	SW846 8310	11/07-11/10/95	5311157
Phenanthrene	ND	4,700	SW846 8310	11/07-11/10/95	5311157
Pyrene	ND	470	SW846 8310	11/07-11/10/95	5311157

SURROGATE RECOVERY
Carbazole

%
DIL

ACCEPTABLE LIMITS
(30 - 130)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

DIL (DILUTED OUT)

* ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE.



CLEAN HARBORS ANALYTICAL

B20, SS-4

WO #: C1NX9101
LAB #: B5K010143-002
MATRIX: SOLID
DILUTION FACTOR: 10.00

DATE SAMPLED: 10/27/95
TIME SAMPLED:
DATE RECEIVED: 11/01/95
% MOISTURE: 8.5

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	4,400	SW846 8310	11/07-11/10/95	5311157
Acenaphthylene	ND	4,400	SW846-8310	11/07-11/10/95	5311157
Anthracene	ND	4,400	SW846 8310	11/07-11/10/95	5311157
Benzo(a)anthracene	ND	440	SW846 8310	11/07-11/10/95	5311157
Benzo(a)pyrene	ND	440	SW846 8310	11/07-11/10/95	5311157
Benzo(b)fluoranthene	ND	440	SW846 8310	11/07-11/10/95	5311157
Benzo(ghi)perylene	ND	440	SW846 8310	11/07-11/10/95	5311157
Benzo(k)fluoranthene	ND	440	SW846 8310	11/07-11/10/95	5311157
Chrysene	ND	440	SW846 8310	11/07-11/10/95	5311157
Dibenz(a,h)anthracene	ND	440	SW846 8310	11/07-11/10/95	5311157
Fluoranthene	660	440	SW846 8310	11/07-11/10/95	5311157
Fluorene	ND	4,400	SW846 8310	11/07-11/10/95	5311157
Indeno(1,2,3-cd)pyrene	ND	440	SW846 8310	11/07-11/10/95	5311157
Naphthalene	ND	4,400	SW846 8310	11/07-11/10/95	5311157
Phenanthrene	ND	4,400	SW846 8310	11/07-11/10/95	5311157
Pyrene	480	440	SW846 8310	11/07-11/10/95	5311157

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Carbazole	DIL	(30 - 130)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

DIL (DILUTED OUT)

Analysis performed by Quanterra Environmental Services, Tampa, FL

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

<u>Volatiles</u>	<u>Semi-Volatiles</u>	<u>Metals</u>
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable, data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier. Common data qualifiers include, but are not limited to the following:

- J - indicates an estimated concentration is reported due to method limitations such as matrix interference or instrumental detection limitations.
- B - indicates the presence of a particular analyte in the associated laboratory method blank.
- DIL - indicates percent recovery determination was not possible due to dilution associated with the sample matrix conditions or high target analyte concentrations.
- X - indicates internal standards used for a GC or GC/MS analysis did not meet established criteria, typically due to a sample matrix effect.
- E - indicates an estimated concentration is reported due to analyte response beyond the established instrumental calibration range, typically due to presence of a wide range of target analyte concentrations.

METHOD BLANK REPORT

LAB #: B5K070000-157

----- POLYNUCLEAR AROMATIC HYDROCARBONS BY HPLC -----

<u>PARAMETER</u>	<u>RESULT</u> (mq/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	400	11/07-11/09/95	5311157
Acenaphthylene	ND	400	11/07-11/09/95	5311157
Anthracene	ND	400	11/07-11/09/95	5311157
Benzo (a) anthracene	ND	40	11/07-11/09/95	5311157
Benzo (b) fluoranthene	ND	40	11/07-11/09/95	5311157
Benzo (k) fluoranthene	ND	40	11/07-11/09/95	5311157
Benzo (ghi) perylene	ND	40	11/07-11/09/95	5311157
Benzo (a) pyrene	ND	40	11/07-11/09/95	5311157
Chrysene	ND	40	11/07-11/09/95	5311157
Dibenz (a, h) anthracene	ND	40	11/07-11/09/95	5311157
Fluoranthene	ND	40	11/07-11/09/95	5311157
Fluorene	ND	400	11/07-11/09/95	5311157
Indeno (1, 2, 3-cd) pyrene	ND	40	11/07-11/09/95	5311157
Naphthalene	ND	400	11/07-11/09/95	5311157
Phenanthrene	ND	400	11/07-11/09/95	5311157
Pyrene	ND	40	11/07-11/09/95	5311157

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Carbazole	101	(30 - 130)

NOTE:

ND (NONE DETECTED)



Environmental
Services

CHECK SAMPLE REPORT

QC BATCH: 5311157
LAB #: B5K070000-157 C

PREPARATION DATE: 11/07/95
DATE ANALYZED: 11/09/95

- - - - - Polynuclear Aromatic Hydrocarbons by HPLC - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Naphthalene	86	(10-122)
Acenaphthylene	75	(10-139)
Acenaphthene	81	(10-124)
Fluorene	82	(10-142)
Phenanthrene	88	(10-155)
Anthracene	88	(10-126)
Fluoranthene	89	(14-123)
Pyrene	92	(10-140)
Benzo(a)anthracene	89	(12-135)
Chrysene	83	(10-199)
Benzo(b)fluoranthene	91	(10-150)
Benzo(k)fluoranthene	90	(10-159)
Benzo(a)pyrene	83	(10-128)
Dibenzo(a,h)anthracene	86	(10-110)
Benzo(ghi)perylene	89	(10-116)
Indeno(1,2,3-cd)pyrene	87	(10-116)

NOTE:

Quanterra Environmental Services, Tampa
Sample Shipper Evaluation and Receipt Form

Client: Cham Hachon

Project Name/ Number Sal Sample

Samples Received by:

Date Received 11/7/95

V. Ferrans
Signature

Sample Evaluation Form by:

Eral O. Gehr
Signature

Type of shipping containers samples received in:

Quanterra cooler: _____
Quanterra shipper: _____

Client Cooler _____
Box ✓

Other _____

Any "NO" responses or discrepancies should be explained in the "Comments" section.

	Yes	No
1) Were custody seals on shipping container(s) intact?	<u>✓</u>	<u>✓</u>
2) Were custody papers properly included with samples?	<u>✓</u>	
3) Were custody papers properly filled out (ink, signed, match labels)?	<u>✓</u>	
4) Did all bottles arrive in good condition (unbroken)?	<u>✓</u>	
5) Were all bottle labels complete (sample #, date, signed, analysis preservatives)?	<u>✓</u>	
6) Were correct bottles used for the tests indicated?	<u>✓</u>	
7) Were proper sample preservation techniques indicated?	<u>✓</u>	
8) Were samples received within adequate holding times?	<u>✓</u>	
9) Were all VOA bottles checked for the presence of air bubbles? (If air bubbles were found, indicate in comment section)	<u>Not</u>	
10) Were samples in direct contact with wet ice? NOTE TEMPERATURE BELOW	<u>Below</u>	
11) Were samples accepted into the laboratory? (If "No", see comments)	<u>✓</u>	

Cooler # _____ Temp 10 C Cooler # _____ Temp _____ C

Comments _____



Method References

- (a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 18th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1992.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., November 1986, updated July 1992 and September 1994.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, September 1982.
- (e) "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions; Final Rule," Federal Register, Vol. 55, No. 126, Friday, June 29, 1990, and revision in Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992.
- (f) "Guidelines Establishing Test Procedures for Analysis of Pollutants," Code of Federal Regulations, Part 136 Appendix A and Appendix B, July 1, 1993.
- (g) "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency, Office of Research and Development, Washington, D.C., December 1988, revised July 1991.
- (h) "The Determination of Inorganic Anions in Water by Ion Chromatography - Method 300.0," Publication EPA-600/4-84-017, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, March 1984.
- (i) "Hach Water Analysis Handbook," Hach Chemical Company, Loveland, CO, 1992.
- (j) "USEPA-CLP Statement of Work for Organic Analysis," Publication OLM01.0 (including revisions, U.S. Environmental Protection Agency, Contract Laboratory Program, August 1991.
- (k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing Materials, Philadelphia, 1989 & 1991.
- (l) "Annual Book of Standards," Section 5: Petroleum Products and Lubricants, Vols. 5.01, American Society for Testing Materials, Philadelphia, 1993.
- (m) "Annual Book of Standards," Section 4: Construction, Vol. 4.08, American Society for Testing Materials, Philadelphia, 1993.
- (n) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982, updated April 1984.
- (o) "Annual Book of Standards," Section 15: Engine Coolants; Halogenated Organic Solvents, Vol. 15.05, American Society for Testing Materials, Philadelphia, 1995.

[REF-09/21/95]



1/1/95

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184

CHAIN OF CUSTODY RECORD

Sample Custodian -- (617) 849-1800

Page 1 of 1

Client: REM. TECH. Project Name: MURPHY'S WASTE OIL SERVICE Work Order/P.O. #: EN-170 Date: 10/27/95Report To: JAY MCCLEERY Address: 12 HANCOCK ROAD, NATICK, MA Phone #: x6399Date Samples Collected: 10/27/95 by: P. NICKELSON Date Samples Received: _____Airbill/Bill of Lading? Y ☒

NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.

Samples were: Preserved ☐ Unpreserved ☒

Sample I.D.	Sampling Information				Analysis										# of con.	CHAS Sample #			
	Date	Time	Station Location	Sample Matrix	VOA	8240	TPH	GC/FID	PAH's BY	HPLC	13 P.P.	POT. MET.	TOT.	CYANIDE			SIEVE	ANALYSIS	
B-19	10/27		SS-4	SOIL	X	X	X	X	X	X								2	9510403
B-20			SS-4		X	X	X	X	X	X								2	01A, M, O, Q 02A, M, O, Q
MW-8			SS-3												X		1	03X	
MW-8			SS-4												X		1	04X	
MW-8			SS-5												X		1	05X	
MW-8			SS-6												X		1	06X	
																		07X	
Relinquished by: <u>P. Nickel</u> Date: <u>10/27/95</u> Time: <u>3:58 PM</u>					VOA Vial	X												REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)	
Received by: <u>[Signature]</u> Date: <u>10/27/95</u> Time: <u>3:58 PM</u>					Glass Bottle		X	X	X	X					X				
Relinquished by: _____ Date: _____ Time: _____					Plastic Bottle														
Received by: _____ Date: _____ Time: _____					Pres.	C	C	C	C	C					C				
					Volume														
Preservation Key: A — Acidified with _____ B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other																			

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.

Accelerated turnaround requested: _____

Confirmed by: _____ Surcharge: _____

Location of samples: B4, A7R3, QuaternaryTurnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: _____

3. $\text{d}P$



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S
P.O. #: EN170

Date Received: 11/17/95
CHES Lab #: 9511236

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 12/7/95

Michael J. Murray
Laboratory Manager



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-1
Sample Type: Soil

CHES Lab #: 9511236-010
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	44	11/27/95	11/28/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 100%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-1
Sample Type: Soil

CHES Lab #: 9511236-010
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.6	ND	mg/kg
PCB - Aroclor 1221	1.6	ND	mg/kg
PCB - Aroclor 1232	1.6	ND	mg/kg
PCB - Aroclor 1242	1.6	ND	mg/kg
PCB - Aroclor 1248	1.6	ND	mg/kg
PCB - Aroclor 1254	1.6	3.3	mg/kg
PCB - Aroclor 1260	1.6	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-1
Sample Type: Soil

CHES Lab #: 9511236-01M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.8	76	11/27/95	11/28/95	3050/6010(c)
Lead - Total	6	90	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-1
Sample Type: Soil

CHES Lab #: 9511236-01M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	50.6	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-2
Sample Type: Soil

CHES Lab #: 9511236-020
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	92	11/27/95	11/28/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 91%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-2
Sample Type: Soil

CHES Lab #: 9511236-020
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.3	ND	mg/kg
PCB - Aroclor 1221	1.3	ND	mg/kg
PCB - Aroclor 1232	1.3	ND	mg/kg
PCB - Aroclor 1242	1.3	ND	mg/kg
PCB - Aroclor 1248	1.3	ND	mg/kg
PCB - Aroclor 1254	1.3	2.7	mg/kg
PCB - Aroclor 1260	1.3	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-2
Sample Type: Soil

CHES Lab #: 9511236-02M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.4	56	11/27/95	11/28/95	3050/6010(c)
Lead - Total	5	80	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-2
Sample Type: Soil

CHES Lab #: 9511236-02M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	62.0	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-3
Sample Type: Soil

CHES Lab #: 9511236-030
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	320	11/27/95	11/28/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-3
Sample Type: Soil

CHES Lab #: 9511236-030
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.5	ND	mg/kg
PCB - Aroclor 1221	1.5	ND	mg/kg
PCB - Aroclor 1232	1.5	ND	mg/kg
PCB - Aroclor 1242	1.5	ND	mg/kg
PCB - Aroclor 1248	1.5	ND	mg/kg
PCB - Aroclor 1254	1.5	3.1	mg/kg
PCB - Aroclor 1260	1.5	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-3
Sample Type: Soil

CHES Lab #: 9511236-03M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.6	210	11/27/95	11/28/95	3050/6010(c)
Lead - Total	5	140	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-3
Sample Type: Soil

CHES Lab #: 9511236-03M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	53.9	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-4
Sample Type: Soil

CHES Lab #: 9511236-040
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	40	11/27/95	11/28/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 73%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-4
Sample Type: Soil

CHES Lab #: 9511236-040
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	14	ND	mg/kg
PCB - Aroclor 1221	14	ND	mg/kg
PCB - Aroclor 1232	14	ND	mg/kg
PCB - Aroclor 1242	14	ND	mg/kg
PCB - Aroclor 1248	14	ND	mg/kg
PCB - Aroclor 1254	14	15	mg/kg
PCB - Aroclor 1260	14	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-4
Sample Type: Soil

CHES Lab #: 9511236-04M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.7	45.1	11/27/95	11/28/95	3050/6010(c)
Lead - Total	6	30	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-4
Sample Type: Soil

CHES Lab #: 9511236-04M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	59.5	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-5
Sample Type: Soil

CHES Lab #: 9511236-050
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	610	11/27/95	11/28/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-5
Sample Type: Soil

CHES Lab #: 9511236-050
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	21	ND	mg/kg
PCB - Aroclor 1221	21	ND	mg/kg
PCB - Aroclor 1232	21	ND	mg/kg
PCB - Aroclor 1242	21	ND	mg/kg
PCB - Aroclor 1248	21	ND	mg/kg
PCB - Aroclor 1254	21	69	mg/kg
PCB - Aroclor 1260	21	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-5
Sample Type: Soil

CHES Lab #: 9511236-05M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.4	280	11/27/95	11/28/95	3050/6010(c)
Lead - Total	8	1,700	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-5
Sample Type: Soil

CHES Lab #: 9511236-05M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	39.6	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-6
Sample Type: Soil

CHES Lab #: 9511236-060
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	620	11/27/95	11/28/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-6
Sample Type: Soil

CHES Lab #: 9511236-060
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	mg/kg
PCB - Aroclor 1221	1.0	ND	mg/kg
PCB - Aroclor 1232	1.0	ND	mg/kg
PCB - Aroclor 1242	1.0	ND	mg/kg
PCB - Aroclor 1248	1.0	ND	mg/kg
PCB - Aroclor 1254	1.0	6.7	mg/kg
PCB - Aroclor 1260	1.0	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-6
Sample Type: Soil

CHES Lab #: 9511236-06M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.1	500	11/27/95	11/28/95	3050/6010(c)
Lead - Total	4	620	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-6
Sample Type: Soil

CHES Lab #: 9511236-06M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	79.4	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-7
Sample Type: Soil

CHES Lab #: 9511236-070
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	150	3,900	11/27/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-7
Sample Type: Soil

CHES Lab #: 9511236-070
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	3.0	ND	mg/kg
PCB - Aroclor 1221	3.0	ND	mg/kg
PCB - Aroclor 1232	3.0	ND	mg/kg
PCB - Aroclor 1242	3.0	ND	mg/kg
PCB - Aroclor 1248	3.0	ND	mg/kg
PCB - Aroclor 1254	3.0	8.9	mg/kg
PCB - Aroclor 1260	3.0	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-7
Sample Type: Soil

CHES Lab #: 9511236-07M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	3.3	800	11/27/95	11/28/95	3050/6010(c)
Lead - Total	10	2,700	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-7
Sample Type: Soil

CHES Lab #: 9511236-07M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	27.2	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-9
Sample Type: Soil

CHES Lab #: 9511236-080
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	140	11/27/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 79%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-9
Sample Type: Soil

CHES Lab #: 9511236-080
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.3	ND	mg/kg
PCB - Aroclor 1221	1.3	ND	mg/kg
PCB - Aroclor 1232	1.3	ND	mg/kg
PCB - Aroclor 1242	1.3	ND	mg/kg
PCB - Aroclor 1248	1.3	ND	mg/kg
PCB - Aroclor 1254	1.3	5.7	mg/kg
PCB - Aroclor 1260	1.3	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-9
Sample Type: Soil

CHES Lab #: 9511236-08M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.7	110	11/27/95	11/28/95	3050/6010(c)
Lead - Total	6	100	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-9
Sample Type: Soil

CHES Lab #: 9511236-08M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	59.8	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-10
Sample Type: Soil

CHES Lab #: 9511236-090
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	28	610	11/27/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 139%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-10
Sample Type: Soil

CHES Lab #: 9511236-090
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.2	ND	mg/kg
PCB - Aroclor 1221	1.2	ND	mg/kg
PCB - Aroclor 1232	1.2	ND	mg/kg
PCB - Aroclor 1242	1.2	ND	mg/kg
PCB - Aroclor 1248	1.2	ND	mg/kg
PCB - Aroclor 1254	1.2	5.4	mg/kg
PCB - Aroclor 1260	1.2	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-10
Sample Type: Soil

CHES Lab #: 9511236-09M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.5	290	11/27/95	11/28/95	3050/6010(c)
Lead - Total	5	1,400	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-10
Sample Type: Soil

CHES Lab #: 9511236-09M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	71.2	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-11
Sample Type: Soil

CHES Lab #: 9511236-100
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	140	4,100	11/27/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-11
Sample Type: Soil

CHES Lab #: 9511236-100
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	2.8	ND	mg/kg
PCB - Aroclor 1221	2.8	ND	mg/kg
PCB - Aroclor 1232	2.8	ND	mg/kg
PCB - Aroclor 1242	2.8	ND	mg/kg
PCB - Aroclor 1248	2.8	ND	mg/kg
PCB - Aroclor 1254	2.8	8.5	mg/kg
PCB - Aroclor 1260	2.8	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-11
Sample Type: Soil

CHES Lab #: 9511236-10M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.7	180	11/27/95	11/28/95	3050/6010(c)
Lead - Total	9	730	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-11
Sample Type: Soil

CHES Lab #: 9511236-10M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	29.6	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9511236-280
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	86	82,000	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9511236-280
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/29/95
Analysis Date: 11/30/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	17	ND	mg/kg
PCB - Aroclor 1221	17	ND	mg/kg
PCB - Aroclor 1232	17	ND	mg/kg
PCB - Aroclor 1242	17	ND	mg/kg
PCB - Aroclor 1248	17	ND	mg/kg
PCB - Aroclor 1254	17	60	mg/kg
PCB - Aroclor 1260	17	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9511236-28M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.0	340	11/28/95	11/29/95	3050/6010(c)
Lead - Total	7	24,900	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9511236-28M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	45.7	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-13
Sample Type: Soil

CHES Lab #: 9511236-110
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	34	550	11/27/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 66%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-13
Sample Type: Soil

CHES Lab #: 9511236-110
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/30/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	14	ND	mg/kg
PCB - Aroclor 1221	14	ND	mg/kg
PCB - Aroclor 1232	14	ND	mg/kg
PCB - Aroclor 1242	14	ND	mg/kg
PCB - Aroclor 1248	14	ND	mg/kg
PCB - Aroclor 1254	14	37	mg/kg
PCB - Aroclor 1260	14	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-13
Sample Type: Soil

CHES Lab #: 9511236-11M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.4	400	11/27/95	11/28/95	3050/6010(c)
Lead - Total	5	190	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-13
Sample Type: Soil

CHES Lab #: 9511236-11M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	57.4	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-14
Sample Type: Soil

CHES Lab #: 9511236-120
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	71	20,000	11/27/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-14
Sample Type: Soil

CHES Lab #: 9511236-120
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.5	ND	mg/kg
PCB - Aroclor 1221	1.5	ND	mg/kg
PCB - Aroclor 1232	1.5	ND	mg/kg
PCB - Aroclor 1242	1.5	ND	mg/kg
PCB - Aroclor 1248	1.5	ND	mg/kg
PCB - Aroclor 1254	1.5	ND	mg/kg
PCB - Aroclor 1260	1.5	11	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-14
Sample Type: Soil

CHES Lab #: 9511236-12M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.7	820	11/27/95	11/28/95	3050/6010(c)
Lead - Total	6	16,800	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-14
Sample Type: Soil

CHES Lab #: 9511236-12M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	54.6	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-15
Sample Type: Soil

CHES Lab #: 9511236-130
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	83	38,000	11/28/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-15
Sample Type: Soil

CHES Lab #: 9511236-130
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.8	ND	mg/kg
PCB - Aroclor 1221	1.8	ND	mg/kg
PCB - Aroclor 1232	1.8	ND	mg/kg
PCB - Aroclor 1242	1.8	ND	mg/kg
PCB - Aroclor 1248	1.8	ND	mg/kg
PCB - Aroclor 1254	1.8	ND	mg/kg
PCB - Aroclor 1260	1.8	24	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-15
Sample Type: Soil

CHES Lab #: 9511236-13M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.7	1,100	11/28/95	11/29/95	3050/6010(c)
Lead - Total	6	1,700	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-15
Sample Type: Soil

CHES Lab #: 9511236-13M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	47.2	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-17
Sample Type: Soil

CHES Lab #: 9511236-140
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	29	330	11/28/95	11/29/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with an additional single component peak.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-17
Sample Type: Soil

CHES Lab #: 9511236-140
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.3	ND	mg/kg
PCB - Aroclor 1221	1.3	ND	mg/kg
PCB - Aroclor 1232	1.3	ND	mg/kg
PCB - Aroclor 1242	1.3	ND	mg/kg
PCB - Aroclor 1248	1.3	ND	mg/kg
PCB - Aroclor 1254	1.3	5.9	mg/kg
PCB - Aroclor 1260	1.3	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-17
Sample Type: Soil

CHES Lab #: 9511236-14M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.5	1,000	11/28/95	11/29/95	3050/6010(c)
Lead - Total	5	270	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-17
Sample Type: Soil

CHES Lab #: 9511236-14M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	66.1	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-18
Sample Type: Soil

CHES Lab #: 9511236-150
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	120	24,000	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-18
Sample Type: Soil

CHES Lab #: 9511236-150
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	2.6	ND	mg/kg
PCB - Aroclor 1221	2.6	ND	mg/kg
PCB - Aroclor 1232	2.6	ND	mg/kg
PCB - Aroclor 1242	2.6	ND	mg/kg
PCB - Aroclor 1248	2.6	ND	mg/kg
PCB - Aroclor 1254	2.6	ND	mg/kg
PCB - Aroclor 1260	2.6	13	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-18
Sample Type: Soil

CHES Lab #: 9511236-15M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.6	970	11/28/95	11/29/95	3050/6010(c)
Lead - Total	9	3,200	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-18
Sample Type: Soil

CHES Lab #: 9511236-15M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	31.8	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-19
Sample Type: Soil

CHES Lab #: 9511236-160
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	35	770	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-19
Sample Type: Soil

CHES Lab #: 9511236-160
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.4	ND	mg/kg
PCB - Aroclor 1221	1.4	ND	mg/kg
PCB - Aroclor 1232	1.4	ND	mg/kg
PCB - Aroclor 1242	1.4	ND	mg/kg
PCB - Aroclor 1248	1.4	ND	mg/kg
PCB - Aroclor 1254	1.4	ND	mg/kg
PCB - Aroclor 1260	1.4	3.1	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-19
Sample Type: Soil

CHES Lab #: 9511236-16M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.2	2,000	11/28/95	11/29/95	3050/6010(c)
Lead - Total	4	1,500	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-19
Sample Type: Soil

CHES Lab #: 9511236-16M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	55.1	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-20
Sample Type: Soil

CHES Lab #: 9511236-170
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	69	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 62%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-20
Sample Type: Soil

CHES Lab #: 9511236-170
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	0.8	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 80.7%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-20
Sample Type: Soil

CHES Lab #: 9511236-17M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.0	190	11/28/95	11/28/95	3050/6010(c)
Lead - Total	3	70	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Appendix E (- (cont.))

Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-20
Sample Type: Soil

CHES Lab #: 9511236-17M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	70.5	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-21
Sample Type: Soil

CHES Lab #: 9511236-180
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	30	2,100	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.
NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-21
Sample Type: Soil

CHES Lab #: 9511236-180
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.2	ND	mg/kg
PCB - Aroclor 1221	1.2	ND	mg/kg
PCB - Aroclor 1232	1.2	ND	mg/kg
PCB - Aroclor 1242	1.2	ND	mg/kg
PCB - Aroclor 1248	1.2	ND	mg/kg
PCB - Aroclor 1254	1.2	ND	mg/kg
PCB - Aroclor 1260	1.2	1.4	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-21
Sample Type: Soil

CHES Lab #: 9511236-18M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.3	1,800	11/28/95	11/29/95	3050/6010(c)
Lead - Total	4	600	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-21
Sample Type: Soil

CHES Lab #: 9511236-18M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	67.4	g	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-22
Sample Type: Soil

CHES Lab #: 9511236-190
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	23	110	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:
Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 70%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-22
Sample Type: Soil

CHES Lab #: 9511236-190
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	0.4	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 89.3%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-22
Sample Type: Soil

CHES Lab #: 9511236-19M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	0.50	230	11/28/95	11/29/95	3050/6010(c)
Lead - Total	2	70	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-22
Sample Type: Soil

CHES Lab #: 9511236-19M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	87.4	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-23
Sample Type: Soil

CHES Lab #: 9511236-200
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	52	11,000	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

NA = Due to dilutions required to analyze the sample, the surrogate recovery was unable to be calculated.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: NA

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-23
Sample Type: Soil

CHES Lab #: 9511236-200
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	2.2	ND	mg/kg
PCB - Aroclor 1221	2.2	ND	mg/kg
PCB - Aroclor 1232	2.2	ND	mg/kg
PCB - Aroclor 1242	2.2	ND	mg/kg
PCB - Aroclor 1248	2.2	ND	mg/kg
PCB - Aroclor 1254	2.2	10	mg/kg
PCB - Aroclor 1260	2.2	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-23
Sample Type: Soil

CHES Lab #: 9511236-20M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.0	21,300	11/28/95	11/29/95	3050/6010(c)
Lead - Total	7	2,500	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-23
Sample Type: Soil

CHES Lab #: 9511236-20M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	37.0	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9511236-210
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	58	540	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 51%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9511236-210
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 11/30/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.2	ND	mg/kg
PCB - Aroclor 1221	0.2	ND	mg/kg
PCB - Aroclor 1232	0.2	ND	mg/kg
PCB - Aroclor 1242	0.2	ND	mg/kg
PCB - Aroclor 1248	0.2	ND	mg/kg
PCB - Aroclor 1254	0.2	ND	mg/kg
PCB - Aroclor 1260	0.2	1.0	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 55.1%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9511236-21M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.9	62,500	11/28/95	11/29/95	3050/6010(c)
Lead - Total	10	3,300	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9511236-21M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	33.7	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-25
Sample Type: Soil

CHES Lab #: 9511236-220
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	54	260	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with an additional single component peak.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 59%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-25
Sample Type: Soil

CHES Lab #: 9511236-220
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	2.3	ND	mg/kg
PCB - Aroclor 1221	2.3	ND	mg/kg
PCB - Aroclor 1232	2.3	ND	mg/kg
PCB - Aroclor 1242	2.3	ND	mg/kg
PCB - Aroclor 1248	2.3	ND	mg/kg
PCB - Aroclor 1254	2.3	2.9	mg/kg
PCB - Aroclor 1260	2.3	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-25
Sample Type: Soil

CHES Lab #: 9511236-22M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.5	12,400	11/28/95	11/29/95	3050/6010(c)
Lead - Total	8	380	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-25
Sample Type: Soil

CHES Lab #: 9511236-22M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	35.9	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9511236-230
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	67	270	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 57%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9511236-230
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	2.8	ND	mg/kg
PCB - Aroclor 1221	2.8	ND	mg/kg
PCB - Aroclor 1232	2.8	ND	mg/kg
PCB - Aroclor 1242	2.8	ND	mg/kg
PCB - Aroclor 1248	2.8	ND	mg/kg
PCB - Aroclor 1254	2.8	ND	mg/kg
PCB - Aroclor 1260	2.8	6.6	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9511236-23M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.4	66,500	11/28/95	11/29/95	3050/6010(c)
Lead - Total	8	1,400	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL.)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9511236-23M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	29.3	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-27
Sample Type: Soil

CHES Lab #: 9511236-240
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	11	230	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons:
Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of
lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:

C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 51%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-27
Sample Type: Soil

CHES Lab #: 9511236-240
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 11/30/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.2	ND	mg/kg
PCB - Aroclor 1221	0.2	ND	mg/kg
PCB - Aroclor 1232	0.2	ND	mg/kg
PCB - Aroclor 1242	0.2	ND	mg/kg
PCB - Aroclor 1248	0.2	ND	mg/kg
PCB - Aroclor 1254	0.2	ND	mg/kg
PCB - Aroclor 1260	0.2	0.2	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 69.4%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-27
Sample Type: Soil

CHES Lab #: 9511236-24M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.9	14,000	11/28/95	11/29/95	3050/6010(c)
Lead - Total	6	600	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-27
Sample Type: Soil

CHES Lab #: 9511236-24M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	35.9	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-28
Sample Type: Soil

CHES Lab #: 9511236-250
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	22	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 74%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-28
Sample Type: Soil

CHES Lab #: 9511236-250
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.3	ND	mg/kg
PCB - Aroclor 1221	1.3	ND	mg/kg
PCB - Aroclor 1232	1.3	ND	mg/kg
PCB - Aroclor 1242	1.3	ND	mg/kg
PCB - Aroclor 1248	1.3	ND	mg/kg
PCB - Aroclor 1254	1.3	ND	mg/kg
PCB - Aroclor 1260	1.3	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-28
Sample Type: Soil

CHES Lab #: 9511236-25M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.3	3,100	11/28/95	11/29/95	3050/6010(c)
Lead - Total	4	90	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-28
Sample Type: Soil

CHES Lab #: 9511236-25M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	60.8	%	11/22/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-29
Sample Type: Soil

CHES Lab #: 9511236-260
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	130	11/28/95	11/30/95	**

Notes: ND = Below practical quantitation limit (PQL)

* = mg/kg

** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.

Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with an additional single component peak.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 73%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-29
Sample Type: Soil

CHES Lab #: 9511236-260
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 12/01/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.2	ND	mg/kg
PCB - Aroclor 1221	0.2	ND	mg/kg
PCB - Aroclor 1232	0.2	ND	mg/kg
PCB - Aroclor 1242	0.2	ND	mg/kg
PCB - Aroclor 1248	0.2	ND	mg/kg
PCB - Aroclor 1254	0.2	ND	mg/kg
PCB - Aroclor 1260	0.2	0.2	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 65.8%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-29
Sample Type: Soil

CHES Lab #: 9511236-26M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.0	760	11/28/95	11/29/95	3050/6010(c)
Lead - Total	0.68	120	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-29
Sample Type: Soil

CHES Lab #: 9511236-26M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	48.2	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-30
Sample Type: Soil

CHES Lab #: 9511236-270
Date Received: 11/17/95

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	77	11/28/95	12/01/95	**

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
** = U.S.EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual ; November 1990.
Soil/solid samples based on sample dry weight.

Evaluation:

Hydrocarbons observed with an appearance characteristic of lubricating oil with additional single component peaks.

Hydrocarbons quantitated as:
C10 - C38

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 51%

Acceptance Criteria:

50-150%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-30
Sample Type: Soil

CHES Lab #: 9511236-270
Date Received: 11/17/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95
Analysis Date: 11/30/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.2	ND	mg/kg
PCB - Aroclor 1221	0.2	ND	mg/kg
PCB - Aroclor 1232	0.2	ND	mg/kg
PCB - Aroclor 1242	0.2	ND	mg/kg
PCB - Aroclor 1248	0.2	ND	mg/kg
PCB - Aroclor 1254	0.2	ND	mg/kg
PCB - Aroclor 1260	0.2	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 60.3%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-30
Sample Type: Soil

CHES Lab #: 9511236-27M
Date Received: 11/17/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.1	9,400	11/28/95	11/29/95	3050/6010(c)
Lead - Total	7	280	11/28/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-30
Sample Type: Soil

CHES Lab #: 9511236-27M
Date Received: 11/17/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	38.2	%	11/21/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9511236

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Parameter	PQL*	Result	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	11/27/95	11/27/95	**

Notes:

ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Hydrocarbon quantitative range:
C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbon observed.

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 83 %

Acceptance Criteria:

50 - 150%



Parameter	PQL*	Result	Extraction Date	Analysis Date	Method Number and Reference
Total Petroleum Hydrocarbons by GC/FID	10	ND	11/28/95	11/30/95	**

Notes:

ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

* = mg/kg

** = U.S. EPA UST draft method, Measurement of Petroleum Hydrocarbons: Report on Activities to Develop a Manual; November 1990.

Hydrocarbon quantitative range:
C10 - C38

Hydrocarbon qualitative identification:

No significant hydrocarbon observed.

QA/QC

Surrogate Recoveries:

Ortho-terphenyl: 78 %

Acceptance Criteria:

50 - 150%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511236

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/20/95

Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 91.8%	78-148%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511236

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/27/95

Analysis Date: 11/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 90.2%	78-148%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511236

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/28/95

Analysis Date: 11/29/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 89.3%	78-148%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511236

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 11/29/95

Analysis Date: 11/30/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 88.6%	78-148%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511236

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	0.03	ND	11/27/95	11/28/95	3050/6010(c)
Lead - Total	0.1	ND	11/27/95	11/28/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511236

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	0.03	ND	11/28/95	11/29/95	3050/6010(c)
Lead - Total	0.1	ND	11/28/95	11/29/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



1/17/95

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184

CHAIN OF CUSTODY RECORD

Sample Custodian — (617) 849-1800

Page 1 of 3

Client: CHES Project Name: Murphy's Work Order/P.O. #: EN-170 Date: 11/16/95Report To: C. J. McCreery Address: Natick Phone #: X-6399Date Samples Collected: 11/16/95 by: P.N. + T.T. Date Samples Received: 11-17-95Airbill/Bill of Lading? ☒ (N)

NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.

Samples were: Preserved Unpreserved

Sample I.D.	Sampling Information				Analysis							# of con.	CHAS Sample # 11-17-95 24 9511236	
	Date	Time	Station Location	Sample Matrix	TPH by GC/FID	PCB by 8080	Total Pkts 505/6010							
P-1	11/16	9:20		Soil	✓	✓	✓						1	01 M.O
P-2	11/16	9:52			✓	✓	✓						1	02 M.O
P-3	11/16	10:20			✓	✓	✓						1	03 M.O
P-4	11/16	10:09			✓	✓	✓						1	04 M.O
P-5	11/16	11:27			✓	✓	✓						1	05 M.O
P-6	11/16	11:09			✓	✓	✓						1	06 M.O
P-7	11/16	10:44			✓	✓	✓						1	07 M.O
P-9	11/16	11:42			✓	✓	✓						1	08 M.O
P-10	11/16	11:53			✓	✓	✓						1	09 M.O

Relinquished by: <u>Robert A. [Signature]</u>	VOA Vial										REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)
Date: <u>11/17/95</u> Time: <u>12:15 PM</u>	Glass Bottle	✓	✓	✓							
Received by: <u>Robert A. [Signature]</u>	Plastic Bottle										
Date: <u>11-17-95</u> Time: <u>12:15 PM</u>	Pres.	C	C	C							
Relinquished by: _____	Volume										
Date: _____ Time: _____	Preservation Key: A — Acidified with _____ B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other										

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.

Accelerated turnaround requested: _____

Confirmed by: _____ Surcharge: _____

Location of samples: P7R2Turnaround: 24 Hrs. 48 Hrs. 1 Week (2 Weeks) Other: _____

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CHAIN OF CUSTODY RECORD

Sample Custodian — (617) 849-1800

Page 2 of 3

Client: CHES Project Name: Murphy's Work Order/P.O. #: GN-120 Date: 11/16/95Report To: CJ McCreery Address: Natick Phone #: X-6399Date Samples Collected: 11/16/95 by: P.N. + T.T. Date Samples Received: 11-17-95

Airbill/Bill of Lading? Y (N)

NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.

Samples were: Preserved

Unpreserved

Sample I.D.	Sampling Information				Analysis							# of con.	CHAS Sample #	
	Date	Time	Station Location	Sample Matrix	TPH by GC/FID	PCBs by 8080	Total Pb + Cr	9005/600						
P-11	11/16	12:32		soil	✓	✓	✓						1	0+ 10mp
P-13		1:33			✓	✓	✓						1	11 M.O
P-14		1:43			✓	✓	✓						1	12 M.O
P-15		1:51			✓	✓	✓						1	13 M.O
P-17		2:04			✓	✓	✓						1	14 M.O
P-18		2:12			✓	✓	✓						1	15 M.O
P-19		3:13			✓	✓	✓						1	16 M.O
P-20		2:59			✓	✓	✓						1	17 M.O
P-21		3:04			✓	✓	✓						1	18 M.O
Relinquished by: <u>Friedman</u>				VOA Vial							REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)			
Date: <u>11/17/95</u> Time: <u>12:15 pm</u>				Glass Bottle										
Received by: <u>Robert J. [Signature]</u>				Plastic Bottle										
Date: <u>11-17-95</u> Time: <u>12:15 pm</u>				Pres.										
Relinquished by: _____				Volume										
Date: _____ Time: _____				Preservation Key: A — Acidified with _____ B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other										

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.

Accelerated turnaround requested: _____

Confirmed by: _____ Surcharge: _____

Location of samples: RT2Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: _____

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CHAIN OF CUSTODY RECORD

Sample Custodian — (617) 849-1800

Page 3 of 3

Client: CHES Project Name: Murphy's Work Order/P.O. #: EN-170 Date: 11/18/95Report To: CJ McCreery Address: Natick Phone #: X-6399Date Samples Collected: 11/17/95 by: P.V. + T.T. Date Samples Received: 11-17-95Airbill/Bill of Lading? Y ☒ N

NOTE: Samples received unpreserved will be preserved upon arrival at CHAS.

Samples were: Preserved ☐ Unpreserved ☒

Sample I.D.	Sampling Information				Analysis							# of con.	CHAS Sample #	
	Date	Time	Station Location	Sample Matrix	TPH by GC/FID	PCBs by GC/MS	Total Pb + Cr by AAS/MS							
P-22	11/17	8:53		Soil	✓	✓	✓						1	19 M.D
P-23		9:05			✓	✓	✓						1	20 M.D
P-24		9:13			✓	✓	✓						1	21 M.D
P-25		9:20			✓	✓	✓						1	22 M.D
P-26		9:25			✓	✓	✓						1	23 M.D
P-27		9:35			✓	✓	✓						1	24 M.D
P-28		9:38			✓	✓	✓						1	25 M.D
P-29		9:50			✓	✓	✓						1	26 M.D
P-30	11/16	2:25			✓	✓	✓						1	27 M.D
P-12				VOA Vial										
Relinquished by: <u>Fred N</u>				Glass Bottle	✓	✓	✓							
Date: <u>11/17/95</u> Time: <u>12:15 PM</u>				Plastic Bottle										
Received by: <u>Robert J. D.</u>				Pres.	C	C	C							
Date: <u>11-17-95</u> Time: <u>12:15 PM</u>				Volume										
Relinquished by: _____				Preservation Key: A — Acidified with _____										
Date: _____ Time: _____				B — Filtered, C — Sample chilled, D — NaOH,										
				E — NaThiosulfate, W — Sample Ambient, F — Other										

REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.

Accelerated turnaround requested: _____

Confirmed by: _____ Surcharge: _____

Location of samples: R7R3Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: _____

OFFICE COPY

Method References

- (a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 18th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1992.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., November 1986, updated July 1992 and September 1994.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, September 1982.
- (e) "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions; Final Rule," Federal Register, Vol. 55, No. 126, Friday, June 29, 1990, and revision in Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992.
- (f) "Guidelines Establishing Test Procedures for Analysis of Pollutants," Code of Federal Regulations, Part 136 Appendix A and Appendix B, July 1, 1993.
- (g) "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency, Office of Research and Development, Washington, D.C., December 1988, revised July 1991.
- (h) "The Determination of Inorganic Anions in Water by Ion Chromatography - Method 300.0," Publication EPA-600/4-84-017, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, March 1984.
- (i) "Hach Water Analysis Handbook," Hach Chemical Company, Loveland, CO, 1992.
- (j) "USEPA-CLP Statement of Work for Organic Analysis," Publication OLM01.0 (including revisions, U.S. Environmental Protection Agency, Contract Laboratory Program, August 1991.
- (k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing Materials, Philadelphia, 1989 & 1991.
- (l) "Annual Book of Standards," Section 5: Petroleum Products and Lubricants, Vols. 5.01, American Society for Testing Materials, Philadelphia, 1993.
- (m) "Annual Book of Standards," Section 4: Construction, Vol. 4.08, American Society for Testing Materials, Philadelphia, 1993.
- (n) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982, updated April 1984.
- (o) "Annual Book of Standards," Section 15: Engine Coolants; Halogenated Organic Solvents, Vol. 15.05, American Society for Testing Materials, Philadelphia, 1995.

[REF-09/21/95]



ENVIRONMENTAL SERVICES, INC.

325 WOOD ROAD, P.O. BOX 327, BRAINTREE, MA 02184-2402
(617) 849-1800

REPORT OF ANALYSIS
(ADDITIONAL)

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S
P.O. #: EN170

Date Received: 11/17/95
CHES Lab #: 9511236

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 12/21/95

Michael J. Murray
Laboratory Manager



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9511236-23M
Date Received: 11/17/95

Parameter	PQL*	Result*	Analysis Date	Method Number and Reference
Chromium - Hexavalent	0.66	1.4	12/21/95	3060/7196(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.

[illegible]



ENVIRONMENTAL SERVICES, INC.

325 WOOD ROAD, P.O. BOX 327, BRAINTREE, MA 02184-2402
(617) 849-1800

REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL
P.O. #: EN170

Date Received: 12/18/95
CHES Lab #: 9512202

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

A handwritten signature in black ink, appearing to read "Michael J. Murray", followed by the date "1/15/96".

Michael J. Murray
Laboratory Manager

US EPA ARCHIVE DOCUMENT

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

ANALYTICAL REPORT

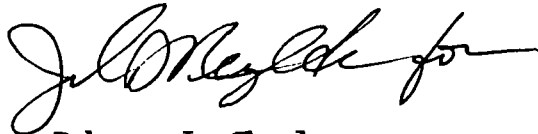
PROJECT NO. 09509110 / 9512202

CLEAN HARBOR ANALYTICAL

Mike Wedge .

CLEAN HARBORS ANALYTICAL

QUANTERRA INCORPORATED



Rebecca L. Charles
Project Manager

January 5, 1996

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>	<u>DATE/TIME</u>	<u>SAMPLE</u>
C2F8G	H5L210151-001	SW-2	12/18/95	10:00
C2F8X	H5L210151-002	P-12	12/18/95	9:15
C2F93	H5L210151-003	P-26	12/18/95	11:10
C2F96	H5L210151-004	P-24	12/18/95	10:45

ANALYTICAL METHODS SUMMARY H5L210151

Parameters

Polynuclear Aromatic
Hydrocarbons by HPLC
Total Residue as
Percent Moisture

Methods

SW846 8310
MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Polynuclear Aromatic Hydrocarbons

These samples were not soluable in ACN/H₂O and had to be run at higher dilutions to become soluable in the solution. Reporting limits were adjusted accordingly. Surrogates were diluted out on all samples.

Samples SW-2 and P-12 could not be brought to the final volume of 1.0 ml.

CLEAN HARBORS ANALYTICAL

P-12

WO #: C2F8X106
LAB #: H5L210151-002
MATRIX: SOLID
DILUTION FACTOR: 100.00

DATE SAMPLED: 12/18/95
TIME SAMPLED: 9:15
DATE RECEIVED: 12/20/95
% MOISTURE: 64.5

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	56,000	SW846 8310	12/27-01/03/96	5356120
Acenaphthylene	ND	56,000	SW846 8310	12/27-01/03/96	5356120
Anthracene	ND	56,000	SW846 8310	12/27-01/03/96	5356120
Benzo(a)anthracene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Benzo(a)pyrene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Benzo(b)fluoranthene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Benzo(ghi)perylene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Benzo(k)fluoranthene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Chrysene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Dibenz(a,h)anthracene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Fluoranthene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Fluorene	ND	56,000	SW846 8310	12/27-01/03/96	5356120
Indeno(1,2,3-cd)pyrene	ND	11,000	SW846 8310	12/27-01/03/96	5356120
Naphthalene	ND	56,000	SW846 8310	12/27-01/03/96	5356120
Phenanthrene	ND	56,000	SW846 8310	12/27-01/03/96	5356120
Pyrene	ND	11,000	SW846 8310	12/27-01/03/96	5356120

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
1-Fluoronaphthalene	DIL	(3 - 130)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

DIL (DILUTED OUT)

CLEAN HARBORS ANALYTICAL

P-24

WO #: C2F96106
LAB #: HSL210151-004
MATRIX: SOLID
DILUTION FACTOR: 10.00

DATE SAMPLED: 12/18/95
TIME SAMPLED: 10:45
DATE RECEIVED: 12/20/95
% MOISTURE: 54.5

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	4,400	SW846 8310	12/27-01/03/96	5356126
Acenaphthylene	ND	4,400	SW846 8310	12/27-01/03/96	5356126
Anthracene	ND	4,400	SW846 8310	12/27-01/03/96	5356126
Benzo (a) anthracene	ND	880	SW846 8310	12/27-01/03/96	5356126
Benzo (a) pyrene	ND	880	SW846 8310	12/27-01/03/96	5356126
Benzo (b) fluoranthene	ND	880	SW846 8310	12/27-01/03/96	5356126
Benzo (ghi) perylene	ND	880	SW846 8310	12/27-01/03/96	5356126
Benzo (k) fluoranthene	ND	880	SW846 8310	12/27-01/03/96	5356126
Chrysene	ND	880	SW846 8310	12/27-01/03/96	5356126
Dibenz (a,h) anthracene	ND	880	SW846 8310	12/27-01/03/96	5356126
Fluoranthene	ND	880	SW846 8310	12/27-01/03/96	5356126
Fluorene	ND	4,400	SW846 8310	12/27-01/03/96	5356126
Indeno (1,2,3-cd) pyrene	ND	880	SW846 8310	12/27-01/03/96	5356126
Naphthalene	ND	4,400	SW846 8310	12/27-01/03/96	5356126
Phenanthrene	ND	4,400	SW846 8310	12/27-01/03/96	5356126
Pyrene	ND	880	SW846 8310	12/27-01/03/96	5356126

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1-Fluoronaphthalene	DIL	(3 - 130)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

DIL (DILUTED OUT)

CLEAN HARBORS ANALYTICAL

P-26

WO #: C2F93106
 LAB #: H5L210151-003
 MATRIX: SOLID
 DILUTION FACTOR: 10.00

DATE SAMPLED: 12/18/95
 TIME SAMPLED: 11:10
 DATE RECEIVED: 12/20/95
 % MOISTURE: 66.4

----- REQUESTED PARAMETERS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	6,000	SW846 8310	12/27-01/03/96	535612
Acenaphthylene	ND	6,000	SW846 8310	12/27-01/03/96	535612
Anthracene	ND	6,000	SW846 8310	12/27-01/03/96	535612
Benzo(a)anthracene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Benzo(a)pyrene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Benzo(b)fluoranthene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Benzo(ghi)perylene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Benzo(k)fluoranthene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Chrysene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Dibenz(a,h)anthracene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Fluoranthene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Fluorene	ND	6,000	SW846 8310	12/27-01/03/96	535612
Indeno(1,2,3-cd)pyrene	ND	1,200	SW846 8310	12/27-01/03/96	535612
Naphthalene	ND	6,000	SW846 8310	12/27-01/03/96	535612
Phenanthrene	ND	6,000	SW846 8310	12/27-01/03/96	535612
Pyrene	ND	1,200	SW846 8310	12/27-01/03/96	535612

SURROGATE RECOVERY
 1-Fluoronaphthalene

%
 DIL

ACCEPTABLE LIMITS
 (3 - 130)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

DIL (DILUTED OUT)

CLEAN HARBORS ANALYTICAL

SW-2

WO #: C2F8G106

LAB #: H5L210151-001

MATRIX: SOLID

DILUTION FACTOR: 100.00

DATE SAMPLED: 12/18/95

TIME SAMPLED: 10:00

DATE RECEIVED: 12/20/95

% MOISTURE: 59.1

----- REQUESTED PARAMETERS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	49,000	SW846 8310	12/27-01/03/96	535612
Acenaphthylene	ND	49,000	SW846 8310	12/27-01/03/96	535612
Anthracene	ND	49,000	SW846 8310	12/27-01/03/96	535612
Benzo (a) anthracene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Benzo (a) pyrene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Benzo (b) fluoranthene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Benzo (ghi) perylene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Benzo (k) fluoranthene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Chrysene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Dibenz (a, h) anthracene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Fluoranthene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Fluorene	ND	49,000	SW846 8310	12/27-01/03/96	535612
Indeno (1, 2, 3-cd) pyrene	ND	9,800	SW846 8310	12/27-01/03/96	535612
Naphthalene	ND	49,000	SW846 8310	12/27-01/03/96	535612
Phenanthrene	ND	49,000	SW846 8310	12/27-01/03/96	535612
Pyrene	ND	9,800	SW846 8310	12/27-01/03/96	535612

SURROGATE RECOVERY
1-Fluoronaphthalene

%
DIL

ACCEPTABLE LIMITS
(3 - 130)

NOTE: DRY WEIGHT

ND NOT DETECTED AT THE STATED REPORTING LIMIT

DIL (DILUTED OUT)

LABORATORY CONTROL SAMPLE REPORT

LAB #: H5L210151
QC BATCH: 5356126
WORK ORDER: C2FH0102
UNITS: ug/kg

PREPARATION DATE: 12/27/95
DATE ANALYZED: 1/03/96

HPLC

PARAMETER		TRUE SPIKE	MEASURED SPIKE	PERCENT RECOVERY	RECOVERY LIMITS
Acenaphthene	***	998	900	90	(25-125)
Acenaphthylene	***	1,000	850	85	(25-125)
Anthracene	***	994	750	75	(25-125)
Benzo (a) anthracene	***	99	92	93	(25-125)
Benzo (b) fluoranthene	***	100	93	93	(25-125)
Benzo (k) fluoranthene	***	50	47	94	(25-125)
Benzo (ghi) perylene	***	99	91	92	(25-125)
Benzo (a) pyrene	***	98	83	85	(25-125)
Chrysene	***	100	93	93	(25-125)
Dibenz (a, h) anthracene	***	99	93	94	(25-125)
Fluoranthene	***	98	84	86	(25-125)
Fluorene	***	998	900	90	(25-125)
Indeno (1, 2, 3-cd) pyrene	***	100	100	100	(25-125)
Naphthalene	***	998	860	86	(25-125)
Phenanthrene	***	991	880	89	(25-125)
Pyrene	***	98	90	92	(25-125)

SURROGATE RECOVERY
1-Fluoronaphthalene

%
102

ACCEPTABLE LIMITS
(3.0-130)

NOTE:

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

*** Control parameters.

METHOD BLANK REPORT

LAB #: H5L220000-126

----- SEMIVOLATILE ORGANICS, HPLC -----

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/kg)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	200	12/27- 1/03/96	5356126
Acenaphthylene	ND	200	12/27- 1/03/96	5356126
Anthracene	ND	200	12/27- 1/03/96	5356126
Benzo (a) anthracene	ND	40	12/27- 1/03/96	5356126
Benzo (b) fluoranthene	ND	40	12/27- 1/03/96	5356126
Benzo (k) fluoranthene	ND	40	12/27- 1/03/96	5356126
Benzo (ghi) perylene	ND	40	12/27- 1/03/96	5356126
Benzo (a) pyrene	ND	40	12/27- 1/03/96	5356126
Chrysene	ND	40	12/27- 1/03/96	5356126
Dibenz (a, h) anthracene	ND	40	12/27- 1/03/96	5356126
Fluoranthene	ND	40	12/27- 1/03/96	5356126
Fluorene	ND	200	12/27- 1/03/96	5356126
Indeno (1, 2, 3-cd) pyrene	ND	40	12/27- 1/03/96	5356126
Naphthalene	ND	200	12/27- 1/03/96	5356126
Phenanthrene	ND	200	12/27- 1/03/96	5356126
Pyrene	ND	40	12/27- 1/03/96	5356126

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
1-Fluoronaphthalene	73	(3 - 130)

NOTE:

ND (NONE DETECTED)



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9512202-02A
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	38000	ND	1,2-Dichloropropane	9500	ND
Benzene	9500	ND	cis-1,3-Dichloropropene	9500	ND
Bromodichloromethane	9500	ND	trans-1,3-Dichloropropene	9500	ND
Bromoform	9500	ND	Ethylbenzene	9500	ND
Bromomethane	19000	ND	2-Hexanone	9500	ND
2-Butanone	38000	ND	Methylene chloride	38000	ND
Carbon disulfide	19000	ND	4-Methyl-2-pentanone	9500	ND
Carbon tetrachloride	9500	ND	Methyl-t-butylether (MTBE)	19000	ND
Chlorobenzene	9500	ND	Styrene	9500	ND
Chloroethane	19000	ND	1,1,2,2-Tetrachloroethane	9500	ND
2-Chloroethyl vinyl ether	19000	ND	Tetrachloroethene	9500	ND
Chloroform	9500	ND	Toluene	9500	ND
Chloromethane	19000	ND	1,1,1-Trichloroethane	9500	ND
Dibromochloromethane	9500	ND	1,1,2-Trichloroethane	9500	ND
Dibromoethane (EDB)	9500	ND	Trichloroethene	9500	ND
1,1-Dichloroethane	9500	ND	Trichlorofluoromethane	9500	ND
1,2-Dichloroethane	9500	ND	Vinyl acetate	19000	ND
1,1-Dichloroethene	9500	ND	Vinyl chloride	19000	ND
trans-1,2-Dichloroethene	9500	ND	Total xylenes	9500	53,000

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 111 %
Toluene-d8: 118 %
p-BFB: 101 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHAS Lab #: 9512202-020
Date Received: 12/18/95

Organochlorine Pesticides
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
Alpha-BHC	8.0	ND	mg/kg
Beta-BHC	8.0	ND	mg/kg
Delta-BHC	8.0	ND	mg/kg
Lindane (Gamma-BHC)	8.0	ND	mg/kg
Heptachlor	8.0	ND	mg/kg
Aldrin	8.0	ND	mg/kg
Heptachlor Epoxide	8.0	ND	mg/kg
Endosulfan I	8.0	ND	mg/kg
4,4'-DDE	8.0	ND	mg/kg
Dieldrin	8.0	ND	mg/kg
Endrin	8.0	ND	mg/kg
4,4'-DDD	8.0	ND	mg/kg
Endosulfan II	8.0	ND	mg/kg
4,4'-DDT	8.0	ND	mg/kg
Endrin Aldehyde	8.0	ND	mg/kg
Endosulfan Sulfate	8.0	ND	mg/kg
Methoxychlor	8.0	ND	mg/kg
Endrin Ketone	8.0	ND	mg/kg
Chlordane	16	ND	mg/kg
Toxaphene	32	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC Surrogate Recovery: Acceptance Criteria: Soil (EPA 3540)

Hexabromobenzene : NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9512202-020
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	16	ND	mg/kg
PCB - Aroclor 1221	16	ND	mg/kg
PCB - Aroclor 1232	16	ND	mg/kg
PCB - Aroclor 1242	16	ND	mg/kg
PCB - Aroclor 1248	16	ND	mg/kg
PCB - Aroclor 1254	16	78	mg/kg
PCB - Aroclor 1260	16	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9512202-02M
Date Received: 12/18/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Arsenic - Total	10	ND	12/20/95	12/20/95	3050/6010(c)
Cadmium - Total	0.65	ND	12/20/95	12/20/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-12
Sample Type: Soil

CHES Lab #: 9512202-02M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	1.01	ND	mg/kg	01/10/96	9010(c)
Cyanide, Chlorine Amenable	10.0	ND	mg/kg	01/10/96	9010(c)
Total Solids	--	49.0	%	12/19/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.
Cyanide analysis performed by TMA, Waltham, MA.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9512202-03A
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	920	ND	1,2-Dichloropropane	230	ND
Benzene	230	ND	cis-1,3-Dichloropropene	230	ND
Bromodichloromethane	230	ND	trans-1,3-Dichloropropene	230	ND
Bromoform	230	ND	Ethylbenzene	230	ND
Bromomethane	460	ND	2-Hexanone	230	ND
2-Butanone	920	ND	Methylene chloride	920	ND
Carbon disulfide	460	ND	4-Methyl-2-pentanone	230	ND
Carbon tetrachloride	230	ND	Methyl-t-butylether (MTBE)	460	ND
Chlorobenzene	230	ND	Styrene	230	ND
Chloroethane	460	ND	1,1,2,2-Tetrachloroethane	230	ND
2-Chloroethyl vinyl ether	460	ND	Tetrachloroethene	230	ND
Chloroform	230	ND	Toluene	230	ND
Chloromethane	460	ND	1,1,1-Trichloroethane	230	ND
Dibromochloromethane	230	ND	1,1,2-Trichloroethane	230	ND
Dibromoethane (EDB)	230	ND	Trichloroethene	230	ND
1,1-Dichloroethane	230	ND	Trichlorofluoromethane	230	ND
1,2-Dichloroethane	230	ND	Vinyl acetate	460	ND
1,1-Dichloroethene	230	ND	Vinyl chloride	460	ND
trans-1,2-Dichloroethene	230	ND	Total xylenes	230	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 106 %
Toluene-d8: 118 %
p-BFB: 102 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHAS Lab #: 9512202-030
Date Received: 12/18/95

Organochlorine Pesticides
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
Alpha-BHC	12	ND	mg/kg
Beta-BHC	12	ND	mg/kg
Delta-BHC	12	ND	mg/kg
Lindane (Gamma-BHC)	12	ND	mg/kg
Heptachlor	12	ND	mg/kg
Aldrin	12	ND	mg/kg
Heptachlor Epoxide	12	ND	mg/kg
Endosulfan I	12	ND	mg/kg
4,4'-DDE	12	ND	mg/kg
Dieldrin	12	ND	mg/kg
Endrin	12	ND	mg/kg
4,4'-DDD	12	ND	mg/kg
Endosulfan II	12	ND	mg/kg
4,4'-DDT	12	ND	mg/kg
Endrin Aldehyde	12	ND	mg/kg
Endosulfan Sulfate	12	ND	mg/kg
Methoxychlor	12	ND	mg/kg
Endrin Ketone	12	ND	mg/kg
Chlordane	24	ND	mg/kg
Toxaphene	49	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC Surrogate Recovery: Acceptance Criteria: Soil (EPA 3540)

Hexabromobenzene : NA

78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9512202-030
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	2.4	ND	mg/kg
PCB - Aroclor 1221	2.4	ND	mg/kg
PCB - Aroclor 1232	2.4	ND	mg/kg
PCB - Aroclor 1242	2.4	ND	mg/kg
PCB - Aroclor 1248	2.4	ND	mg/kg
PCB - Aroclor 1254	2.4	7.0	mg/kg
PCB - Aroclor 1260	2.4	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: NA	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9512202-03M
Date Received: 12/18/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Arsenic - Total	20	ND	12/20/95	12/20/95	3050/6010(c)
Cadmium - Total	1.0	ND	12/20/95	12/20/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-26
Sample Type: Soil

CHES Lab #: 9512202-03M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.98	ND	mg/kg	01/10/96	9010(c)
Cyanide, Chlorine Amenable	10.0	ND	mg/kg	01/10/96	9010(c)
Total Solids	--	33.6	%	12/19/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.
Cyanide analysis performed by TMA, Waltham, MA.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-31
Sample Type: Soil

CHES Lab #: 9512202-04F
Date Received: 12/18/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	1.5	1,500	01/05/96	01/09/96	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-31
Sample Type: Soil

CHES Lab #: 9512202-04F
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	65.5	%	12/19/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-32
Sample Type: Soil

CHES Lab #: 9512202-05F
Date Received: 12/18/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	2.0	7,500	01/05/96	01/09/96	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-32
Sample Type: Soil

CHES Lab #: 9512202-05F
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	60.4	%	12/19/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9512202-06A
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 8260 (ref. c)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	990	ND	1,2-Dichloropropane	250	ND
Benzene	250	ND	cis-1,3-Dichloropropene	250	ND
Bromodichloromethane	250	ND	trans-1,3-Dichloropropene	250	ND
Bromoform	250	ND	Ethylbenzene	250	ND
Bromomethane	490	ND	2-Hexanone	250	ND
2-Butanone	990	ND	Methylene chloride	990	ND
Carbon disulfide	490	ND	4-Methyl-2-pentanone	250	ND
Carbon tetrachloride	250	ND	Methyl-t-butylether (MTBE)	490	ND
Chlorobenzene	250	ND	Styrene	250	ND
Chloroethane	490	ND	1,1,2,2-Tetrachloroethane	250	ND
2-Chloroethyl vinyl ether	490	ND	Tetrachloroethene	250	ND
Chloroform	250	ND	Toluene	250	ND
Chloromethane	490	ND	1,1,1-Trichloroethane	250	ND
Dibromochloromethane	250	ND	1,1,2-Trichloroethane	250	ND
Dibromoethane (EDB)	250	ND	Trichloroethene	250	ND
1,1-Dichloroethane	250	ND	Trichlorofluoromethane	250	ND
1,2-Dichloroethane	250	ND	Vinyl acetate	490	ND
1,1-Dichloroethene	250	ND	Vinyl chloride	490	ND
trans-1,2-Dichloroethene	250	ND	Total xylenes	250	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/kg

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 121 %
Toluene-d8: 118 %
p-BFB: 101 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHAS Lab #: 9512202-060
Date Received: 12/18/95

Organochlorine Pesticides
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/26/95

Parameter	PQL	Concentration	Units
Alpha-BHC	1.0	ND	mg/kg
Beta-BHC	1.0	ND	mg/kg
Delta-BHC	1.0	ND	mg/kg
Lindane (Gamma-BHC)	1.0	ND	mg/kg
Heptachlor	1.0	ND	mg/kg
Aldrin	1.0	ND	mg/kg
Heptachlor Epoxide	1.0	ND	mg/kg
Endosulfan I	1.0	ND	mg/kg
4,4'-DDE	1.0	ND	mg/kg
Dieldrin	1.0	ND	mg/kg
Endrin	1.0	ND	mg/kg
4,4'-DDD	1.0	ND	mg/kg
Endosulfan II	1.0	ND	mg/kg
4,4'-DDT	1.0	ND	mg/kg
Endrin Aldehyde	1.0	ND	mg/kg
Endosulfan Sulfate	1.0	ND	mg/kg
Methoxychlor	1.0	ND	mg/kg
Endrin Ketone	1.0	ND	mg/kg
Chlordane	2.0	ND	mg/kg
Toxaphene	3.9	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight
NA = Due to dilutions required to analyze the sample,
the surrogate recovery was unable to be calculated.

QA/QC Surrogate Recovery: Acceptance Criteria: Soil (EPA 3540)

Hexabromobenzene : NA 78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9512202-060
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.2	ND	mg/kg
PCB - Aroclor 1221	0.2	ND	mg/kg
PCB - Aroclor 1232	0.2	ND	mg/kg
PCB - Aroclor 1242	0.2	ND	mg/kg
PCB - Aroclor 1248	0.2	ND	mg/kg
PCB - Aroclor 1254	0.2	0.4	mg/kg
PCB - Aroclor 1260	0.2	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 87.3%	78-148%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9512202-06M
Date Received: 12/18/95

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Arsenic - Total	20	ND	12/20/95	12/20/95	3050/6010(c)
Cadmium - Total	0.79	ND	12/20/95	12/20/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: P-24
Sample Type: Soil

CHES Lab #: 9512202-06M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.94	ND	mg/kg	01/10/96	9010(c)
Cyanide, Chlorine Amenable	10.0	ND	mg/kg	01/10/96	9010(c)
Total Solids	--	42.2	%	12/19/95	2540G(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.
Cyanide analysis performed by TMA, Waltham, MA.



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9512202

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 105%
Toluene-d8: 117%
p-BFB: 100%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9512202

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95

Analysis Date: 12/21/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 113%	78-148%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9512202

Organochlorine Pesticides Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 12/19/95
Analysis Date: 12/21/95

Parameter	PQL	Concentration	Units
Alpha - BHC	0.05	ND	mg/kg
Beta - BHC	0.05	ND	mg/kg
Delta - BHC	0.05	ND	mg/kg
Lindane (Gamma - BHC)	0.05	ND	mg/kg
Heptachlor	0.05	ND	mg/kg
Aldrin	0.05	ND	mg/kg
Heptachlor Epoxide	0.05	ND	mg/kg
Endosulfan I	0.05	ND	mg/kg
4,4'-DDE	0.05	ND	mg/kg
Dieldrin	0.05	ND	mg/kg
Endrin	0.05	ND	mg/kg
4,4'-DDD	0.05	ND	mg/kg
Endosulfan II	0.05	ND	mg/kg
4,4'-DDT	0.05	ND	mg/kg
Endrin Aldehyde	0.05	ND	mg/kg
Endosulfan Sulfate	0.05	ND	mg/kg
Methoxychlor	0.05	ND	mg/kg
Endrin Ketone	0.05	ND	mg/kg
Chlordane	0.1	ND	mg/kg
Toxaphene	0.2	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight

QA/QC Surrogate Recovery	Acceptance Criteria	
	Water	Soil
Hexabromobenzene: 113%	34-104%	78-148%

US EPA ARCHIVE DOCUMENT



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9512202

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Arsenic - Total	0.2	ND	12/20/95	12/20/95	3050/6010(c)
Cadmium - Total	0.01	ND	12/20/95	12/20/95	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9512202

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Chromium - Total	0.03	ND	01/05/96	01/09/96	3050/6010(c)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



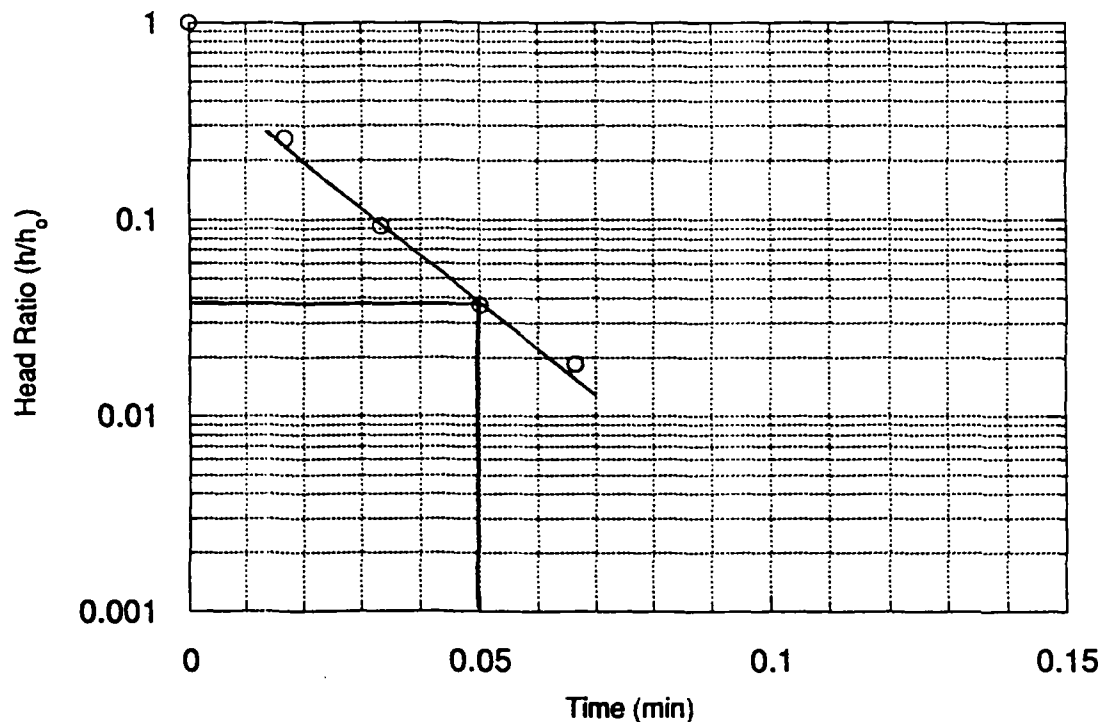
12/12/95

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184				CHAIN OF CUSTODY RECORD				Sample Custodian — (617) 849-1800				Page 1 of 1					
Client: CHES		Project Name: MURPHY'S WASTE OIL				Work Order/P.O. #: EN-170				Date: 12-18-95							
Report To: JAY MCCREERY		Address: 12 MERCER RD., NATICK, MA				Phone #: X6399											
Date Samples Collected: 12/18/95		by: P. NIEWOJNER				Date Samples Received:											
Airbill/Bill of Lading? Y N				NOTE: Samples received unpreserved will be preserved upon arrival at CHAS. Samples were: Preserved Unpreserved													
Sample I.D.	Sampling Information				Analysis								# of con.	CHAS Sample #			
	Date	Time	Station Location	Sample Matrix	PESTICIDES	VOC 8240	PAHs by HPLC	Total Chromium	Total Arsenic	Total Cadmium	Total Cyanide	Arsenite Cyanide					
SW-2	12/18	10:00	0-2'	SOIL			1						1	01Q			
P-12		9:15			1	1	1		1	1	1	1	2	02Q, N, A, F, H, M, O, A			
P-26		11:10			1	1	1		1	1	1	1	2	03Q, N, A, F, H, M, O, A			
P-31		12:30						1					1	04F			
P-32		12:05						1					1	05F			
P-24		10:45			1	1	1		1	1	1	1	2	06Q, N, A, F, H, M, O, A			
Relinquished by: [Signature]				VOA Vial								REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions)					
Date: 12-18-95 Time: 1520				Glass Bottle													
Received by: [Signature]				Plastic Bottle													
Date: 12/18/95 Time: 6:14				Pres.				C	C	C	C					C	C
Relinquished by:				Volume													
Date:																	
Received by:				Preservation Key: A — Acidified with													
Date:				B — Filtered, C — Sample chilled, D — NaOH,													
				E — NaThiosulfate, W — Sample Ambient, F — Other													
Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.										Location of samples: P. 1024, 124							
Accelerated turnaround requested:										Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other:							
Confirmed by:										Surcharge:							

OFFICE COPY

App. E

WELL MW-8



$$L = 85.6 \text{ cm}$$

$$T_0 = 3.0 \text{ sec}$$

$$K = 2.85 \times 10^{-2} \text{ cm/sec}$$

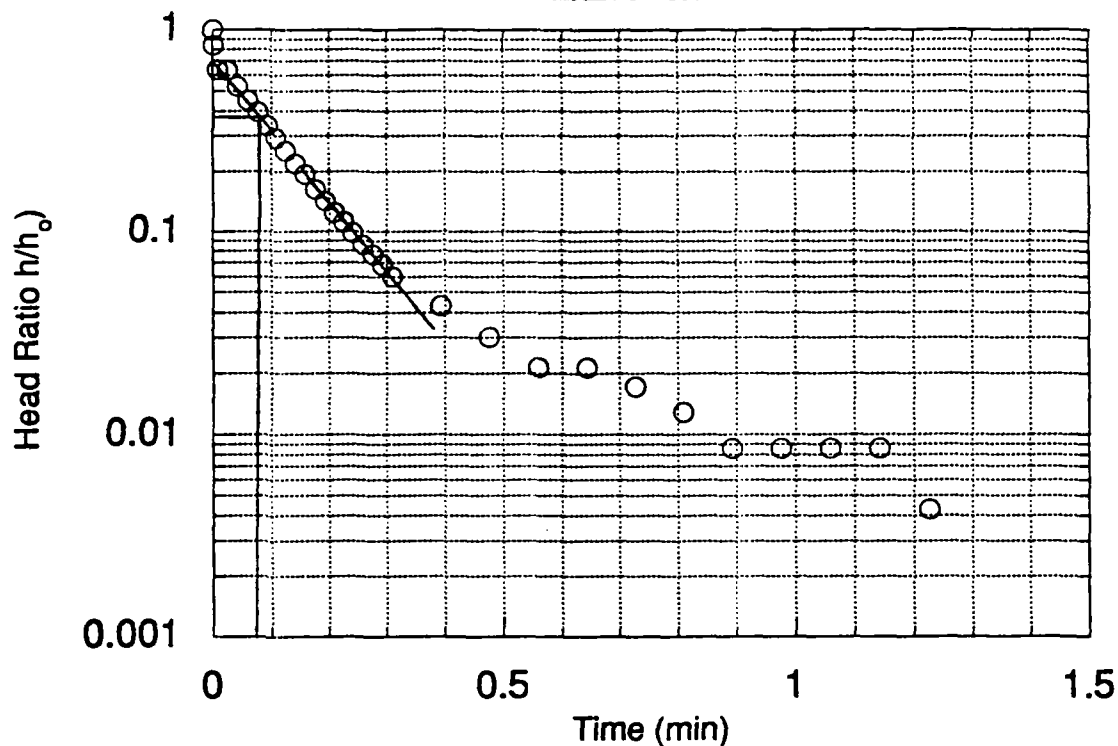
NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_0 is time of recovery to 37 percent of initial change ($h/h_0 = 0.37$).

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS WELL MW-8 SLUG TEST					
PROJECT NO. EN-170		DWG. NO.			
SCALE: NA					

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Remedial Technologies Division
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 NATICK, MASSACHUSETTS 01760
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WELL MW-9



$$L = 165.2 \text{ cm}$$

$$T_0 = 5.0 \text{ sec}$$

$$K = 1.16 \times 10^{-2} \text{ cm/sec}$$

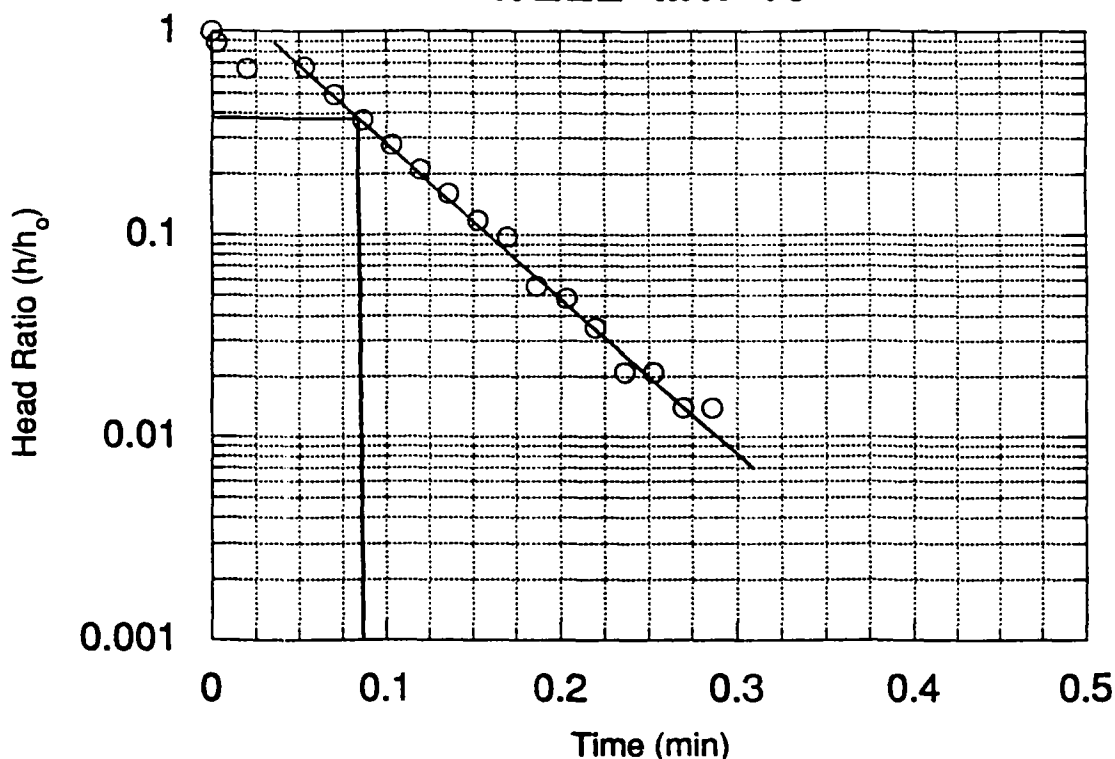
NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_0 is time of recovery to 37 percent of initial change ($h/h_0 = 0.37$).

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS WELL MW-9 SLUG TEST					
PROJECT NO. EN-170		DWG. NO.			
SCALE: NA					

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WELL MW-10



$L = 152.4 \text{ cm}$
 $T_0 = 5.16 \text{ sec}$
 $K = 1.18 \times 10^{-2} \text{ cm/sec}$

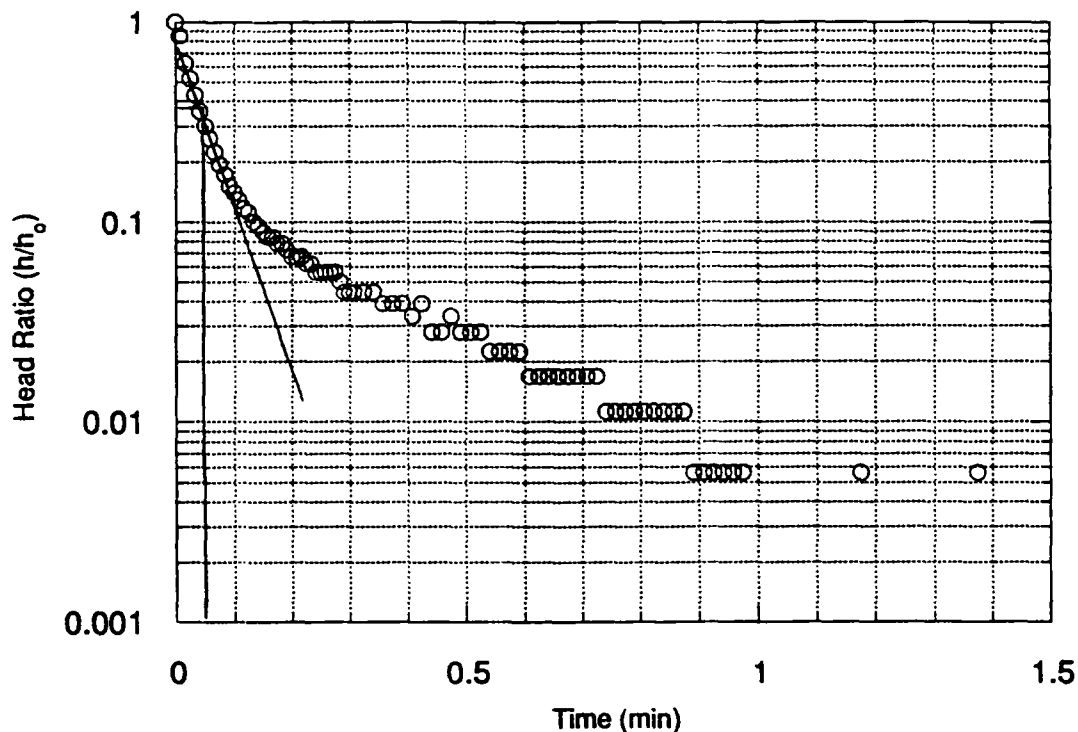
NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_0 is time of recovery to 37 percent of initial change ($h/h_0 = 0.37$).

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
	MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS WELL MW-10 SLUG TEST				
PROJECT NO.	EN-170	DWG. NO.			
SCALE:	NA				

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WELL MW-11



$$L = 182.6 \text{ cm}$$

$$T_0 = 2.41 \text{ sec}$$

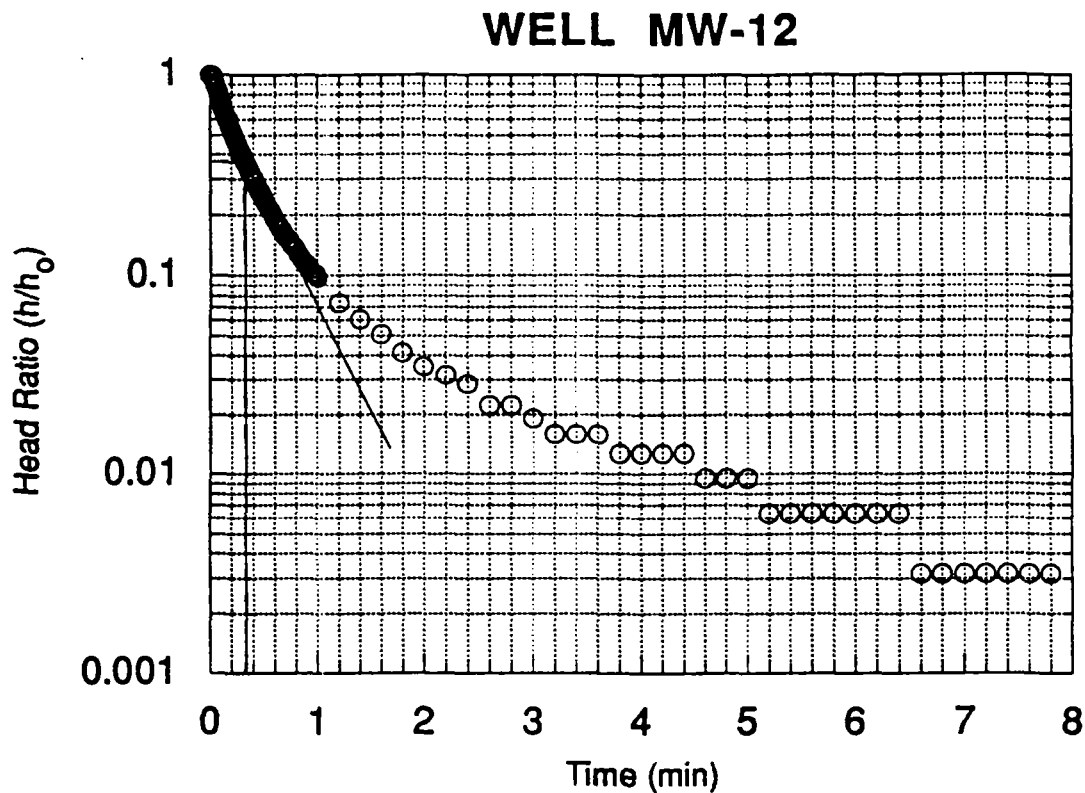
$$K = 2.25 \times 10^{-2} \text{ cm/sec}$$

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_0 is time of recovery to 37 percent of initial change ($h/h_0 = 0.37$).

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS WELL MW-11 SLUG TEST					
PROJECT NO. EN-170		DWG. NO.			
SCALE: NA					

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$$L = 91.4 \text{ cm}$$

$$T_0 = 19.24 \text{ sec}$$

$$K = 2.64 \times 10^{-3} \text{ cm/sec}$$

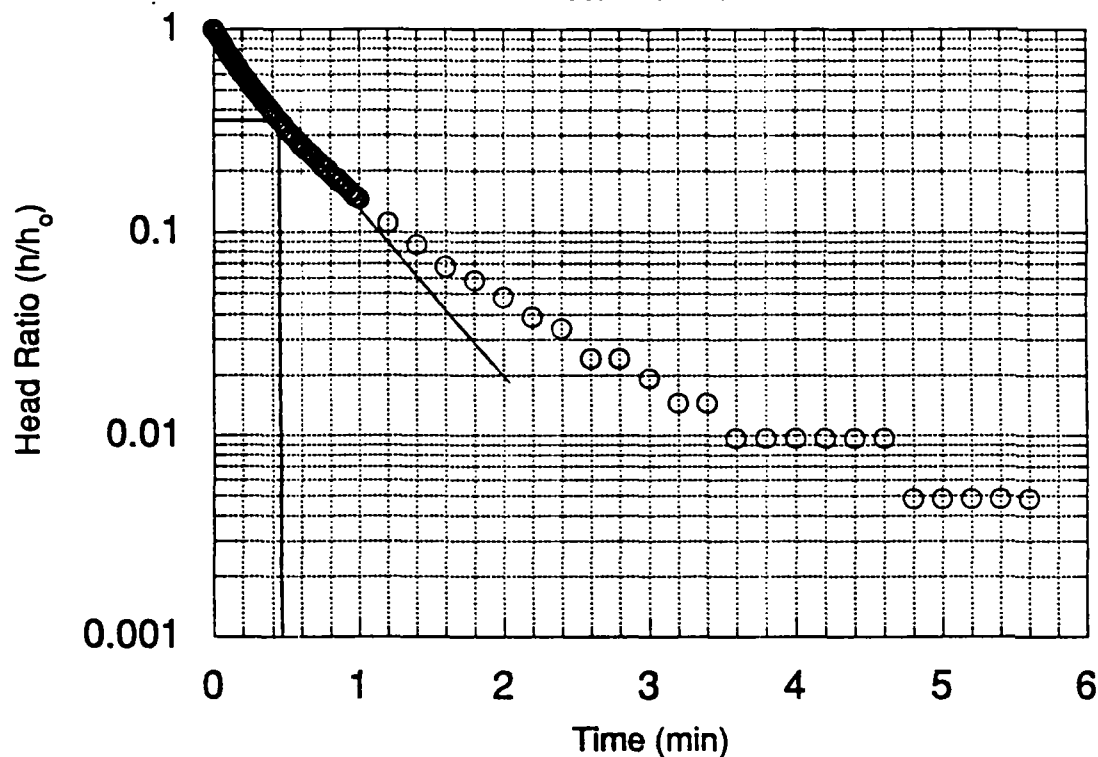
NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_0 is time of recovery to 37 percent of initial change ($h/h_0 = 0.37$).

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS WELL MW-12 SLUG TEST					
PROJECT NO. EN-170		DWG. NO.			
SCALE: NA					

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WELL MW-13



$L = 91.4 \text{ cm}$
 $T_o = 25.47 \text{ sec}$
 $K = 2.00 \times 10^{-3} \text{ cm/sec}$

NOTES:

1. Rising head slug test performed by Clean Harbors on November 17, 1995.
2. L is average length of screen through which water passed during the test.
3. T_o is time of recovery to 37 percent of initial change ($h/h_o = 0.37$).

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC.					
252 SALEM STREET					
WOBURN, MASSACHUSETTS					
WELL MW-13 SLUG TEST					
PROJECT NO. EN-170			DWG. NO.		
SCALE: NA					

CleanHarbors

Environmental Services, Inc.
Remedial Technologies Division

12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

SLUG TEST DATA - WELL MW-8

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h _o)
0.0000	0.00	44.59	0.540	1.0000
0.0166	1.00	44.99	0.140	0.2593
0.0333	2.00	45.08	0.050	0.0926
0.0500	3.00	45.11	0.020	0.0370
0.0666	4.00	45.12	0.010	0.0185
0.0833	5.00	45.13	0.000	0.0000
0.1000	6.00	45.13	0.000	0.0000
0.1166	7.00	45.13	0.000	0.0000
0.1333	8.00	45.13	0.000	0.0000

SLUG TEST DATA - WELL MW-9

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.0000	0.00	42.90	2.340	1.0000
0.0033	0.20	43.29	1.950	0.8333
0.0100	0.60	43.75	1.490	0.6368
0.0267	1.60	43.76	1.480	0.6325
0.0433	2.60	44.01	1.230	0.5256
0.0600	3.60	44.19	1.050	0.4487
0.0767	4.60	44.32	0.920	0.3932
0.0933	5.60	44.45	0.790	0.3376
0.1100	6.60	44.56	0.680	0.2906
0.1267	7.60	44.65	0.590	0.2521
0.1433	8.60	44.73	0.510	0.2179
0.1600	9.60	44.79	0.450	0.1923
0.1767	10.60	44.86	0.380	0.1624
0.1933	11.60	44.91	0.330	0.1410
0.2097	12.58	44.95	0.290	0.1239
0.2267	13.60	44.98	0.260	0.1111
0.2433	14.60	45.01	0.230	0.0983
0.2600	15.60	45.04	0.200	0.0855
0.2767	16.60	45.06	0.180	0.0769
0.2933	17.60	45.08	0.160	0.0684
0.3100	18.60	45.10	0.140	0.0598
0.3934	23.60	45.14	0.100	0.0427
0.4767	28.60	45.17	0.070	0.0299
0.5600	33.60	45.19	0.050	0.0214
0.6434	38.60	45.19	0.050	0.0214
0.7267	43.60	45.20	0.040	0.0171
0.8100	48.60	45.21	0.030	0.0128
0.8934	53.60	45.22	0.020	0.0085
0.9767	58.60	45.22	0.020	0.0085
1.0600	63.60	45.22	0.020	0.0085
1.1434	68.60	45.22	0.020	0.0085
1.2267	73.60	45.23	0.010	0.0043
1.3067	78.40	45.24	0.000	0.0000
1.3933	83.60	45.24	0.000	0.0000
1.4767	88.60	45.24	0.000	0.0000

SLUG TEST DATA - WELL MW-10

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h _o)
0.0000	0.00	43.93	1.440	1.0000
0.0033	0.20	44.10	1.270	0.8819
0.0200	1.20	44.42	0.950	0.6597
0.0533	3.20	44.40	0.970	0.6736
0.0700	4.20	44.66	0.710	0.4931
0.0866	5.20	44.84	0.530	0.3681
0.1033	6.20	44.97	0.400	0.2778
0.1200	7.20	45.07	0.300	0.2083
0.1366	8.20	45.14	0.230	0.1597
0.1533	9.20	45.20	0.170	0.1181
0.1700	10.20	45.23	0.140	0.0972
0.1866	11.20	45.29	0.080	0.0556
0.2033	12.20	45.30	0.070	0.0486
0.2200	13.20	45.32	0.050	0.0347
0.2366	14.20	45.34	0.030	0.0208
0.2533	15.20	45.34	0.030	0.0208
0.2700	16.20	45.35	0.020	0.0139
0.2866	17.20	45.35	0.020	0.0139
0.3033	18.20	45.37	0.000	0.0000

SLUG TEST DATA - WELL MW-11

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.0000	0.00	42.24	1.790	1.0000
0.0083	0.50	42.50	1.530	0.8547
0.0166	1.00	42.92	1.110	0.6201
0.0250	1.50	43.10	0.930	0.5196
0.0333	2.00	43.26	0.770	0.4302
0.0416	2.50	43.39	0.640	0.3575
0.0500	3.00	43.49	0.540	0.3017
0.0583	3.50	43.56	0.470	0.2626
0.0666	4.00	43.63	0.400	0.2235
0.0750	4.50	43.68	0.350	0.1955
0.0833	5.00	43.72	0.310	0.1732
0.0916	5.50	43.76	0.270	0.1508
0.1000	6.00	43.78	0.250	0.1397
0.1083	6.50	43.80	0.230	0.1285
0.1166	7.00	43.82	0.210	0.1173
0.1250	7.50	43.83	0.200	0.1117
0.1333	8.00	43.85	0.180	0.1006
0.1416	8.50	43.86	0.170	0.0950
0.1500	9.00	43.87	0.160	0.0894
0.1583	9.50	43.88	0.150	0.0838
0.1666	10.00	43.88	0.150	0.0838
0.1750	10.50	43.89	0.140	0.0782
0.1833	11.00	43.89	0.140	0.0782
0.1916	11.50	43.90	0.130	0.0726
0.2000	12.00	43.91	0.120	0.0670
0.2083	12.50	43.91	0.120	0.0670
0.2166	13.00	43.91	0.120	0.0670
0.2250	13.50	43.92	0.110	0.0615
0.2333	14.00	43.92	0.110	0.0615
0.2416	14.50	43.93	0.100	0.0559
0.2500	15.00	43.93	0.100	0.0559
0.2583	15.50	43.93	0.100	0.0559
0.2666	16.00	43.93	0.100	0.0559
0.2750	16.50	43.93	0.100	0.0559
0.2833	17.00	43.94	0.090	0.0503
0.2916	17.50	43.95	0.080	0.0447
0.3000	18.00	43.95	0.080	0.0447
0.3083	18.50	43.95	0.080	0.0447
0.3250	19.50	43.95	0.080	0.0447
0.3416	20.50	43.95	0.080	0.0447
0.3583	21.50	43.96	0.070	0.0391
0.3750	22.50	43.96	0.070	0.0391
0.3916	23.50	43.96	0.070	0.0391
0.4083	24.50	43.97	0.060	0.0335
0.4250	25.50	43.96	0.070	0.0391
0.4416	26.50	43.98	0.050	0.0279

SLUG TEST DATA - WELL MW-11

(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.4583	27.50	43.98	0.050	0.0279
0.4750	28.50	43.97	0.060	0.0335
0.4916	29.50	43.98	0.050	0.0279
0.5083	30.50	43.98	0.050	0.0279
0.5250	31.50	43.98	0.050	0.0279
0.5416	32.50	43.99	0.040	0.0223
0.5583	33.50	43.99	0.040	0.0223
0.5750	34.50	43.99	0.040	0.0223
0.5916	35.50	43.99	0.040	0.0223
0.6083	36.50	44.00	0.030	0.0168
0.6250	37.50	44.00	0.030	0.0168
0.6416	38.50	44.00	0.030	0.0168
0.6583	39.50	44.00	0.030	0.0168
0.6750	40.50	44.00	0.030	0.0168
0.6916	41.50	44.00	0.030	0.0168
0.7080	42.48	44.00	0.030	0.0168
0.7250	43.50	44.00	0.030	0.0168
0.7416	44.50	44.01	0.020	0.0112
0.7583	45.50	44.01	0.020	0.0112
0.7750	46.50	44.01	0.020	0.0112
0.7916	47.50	44.01	0.020	0.0112
0.8083	48.50	44.01	0.020	0.0112
0.8250	49.50	44.01	0.020	0.0112
0.8416	50.50	44.01	0.020	0.0112
0.8583	51.50	44.01	0.020	0.0112
0.8750	52.50	44.01	0.020	0.0112
0.8916	53.50	44.02	0.010	0.0056
0.9083	54.50	44.02	0.010	0.0056
0.9250	55.50	44.02	0.010	0.0056
0.9416	56.50	44.02	0.010	0.0056
0.9583	57.50	44.02	0.010	0.0056
0.9750	58.50	44.02	0.010	0.0056
1.1750	70.50	44.02	0.010	0.0056
1.3750	82.50	44.02	0.010	0.0056
1.5750	94.50	44.02	0.010	0.0056
1.7750	106.5	44.02	0.010	0.0056
1.9750	118.5	44.03	0.000	0.0000

SLUG TEST DATA - WELL MW-12

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.0000	0.00	47.50	3.150	1.0000
0.0083	0.50	47.49	3.140	0.9968
0.0166	1.00	47.48	3.130	0.9936
0.0250	1.50	47.43	3.080	0.9778
0.0333	2.00	47.33	2.980	0.9460
0.0416	2.50	47.23	2.880	0.9143
0.0500	3.00	47.14	2.790	0.8857
0.0583	3.50	47.05	2.700	0.8571
0.0666	4.00	46.97	2.620	0.8317
0.0750	4.50	46.89	2.540	0.8063
0.0833	5.00	46.81	2.460	0.7810
0.0916	5.50	46.74	2.390	0.7587
0.1000	6.00	46.67	2.320	0.7365
0.1083	6.50	46.61	2.260	0.7175
0.1166	7.00	46.54	2.190	0.6952
0.1250	7.50	46.48	2.130	0.6762
0.1333	8.00	46.42	2.070	0.6571
0.1416	8.50	46.36	2.010	0.6381
0.1500	9.00	46.30	1.950	0.6190
0.1583	9.50	46.25	1.900	0.6032
0.1666	10.00	46.20	1.850	0.5873
0.1750	10.50	46.25	1.900	0.6032
0.1833	11.00	46.11	1.760	0.5587
0.1916	11.50	46.06	1.710	0.5429
0.2000	12.00	46.01	1.660	0.5270
0.2083	12.50	45.97	1.620	0.5143
0.2166	13.00	45.93	1.580	0.5016
0.2250	13.50	45.89	1.540	0.4889
0.2333	14.00	45.85	1.500	0.4762
0.2416	14.50	45.81	1.460	0.4635
0.2500	15.00	45.78	1.430	0.4540
0.2583	15.50	45.74	1.390	0.4413
0.2666	16.00	45.71	1.360	0.4317
0.2750	16.50	45.68	1.330	0.4222
0.2833	17.00	45.65	1.300	0.4127
0.2916	17.50	45.62	1.270	0.4032
0.3000	18.00	45.59	1.240	0.3936
0.3083	18.50	45.56	1.210	0.3841
0.3166	19.00	45.53	1.180	0.3746
0.3250	19.50	45.50	1.150	0.3651
0.3333	20.00	45.48	1.130	0.3587
0.3500	21.00	45.43	1.080	0.3429
0.3666	22.00	45.38	1.030	0.3270
0.3833	23.00	45.34	0.990	0.3143
0.4000	24.00	45.30	0.950	0.3016
0.4166	25.00	45.26	0.910	0.2889

SLUG TEST DATA - WELL MW-12

(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.4333	26.00	45.22	0.870	0.2762
0.4500	27.00	45.19	0.840	0.2667
0.4666	28.00	45.16	0.810	0.2571
0.4833	29.00	45.13	0.780	0.2476
0.5000	30.00	45.10	0.750	0.2381
0.5166	31.00	45.07	0.720	0.2286
0.5333	32.00	45.05	0.700	0.2222
0.5500	33.00	45.02	0.670	0.2127
0.5666	34.00	45.00	0.650	0.2063
0.5833	35.00	44.98	0.630	0.2000
0.6000	36.00	44.95	0.600	0.1905
0.6166	37.00	44.93	0.580	0.1841
0.6333	38.00	44.91	0.560	0.1778
0.6500	39.00	44.89	0.540	0.1714
0.6666	40.00	44.88	0.530	0.1683
0.6833	41.00	44.86	0.510	0.1619
0.7000	42.00	44.84	0.490	0.1556
0.7166	43.00	44.83	0.480	0.1524
0.7333	44.00	44.82	0.470	0.1492
0.7500	45.00	44.80	0.450	0.1429
0.7666	46.00	44.79	0.440	0.1397
0.7833	47.00	44.78	0.430	0.1365
0.8000	48.00	44.77	0.420	0.1333
0.8166	49.00	44.75	0.400	0.1270
0.8333	50.00	44.74	0.390	0.1238
0.8500	51.00	44.73	0.380	0.1206
0.8666	52.00	44.72	0.370	0.1175
0.8833	53.00	44.71	0.360	0.1143
0.9000	54.00	44.70	0.350	0.1111
0.9166	55.00	44.70	0.350	0.1111
0.9333	56.00	44.69	0.340	0.1079
0.9500	57.00	44.68	0.330	0.1048
0.9666	58.00	44.67	0.320	0.1016
0.9833	59.00	44.67	0.320	0.1016
1.0000	60.00	44.66	0.310	0.0984
1.2000	72.00	44.58	0.230	0.0730
1.4000	84.00	44.54	0.190	0.0603
1.6000	96.00	44.51	0.160	0.0508
1.8000	108.00	44.48	0.130	0.0413
2.0000	120.00	44.46	0.110	0.0349
2.2000	132.00	44.45	0.100	0.0317
2.4000	144.00	44.44	0.090	0.0286
2.6000	156.00	44.42	0.070	0.0222
2.8000	168.00	44.42	0.070	0.0222
3.0000	180.00	44.41	0.060	0.0190

SLUG TEST DATA - WELL MW-12

(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h _o)
3.2000	192.00	44.40	0.050	0.0159
3.4000	204.00	44.40	0.050	0.0159
3.6000	216.00	44.40	0.050	0.0159
3.8000	228.00	44.39	0.040	0.0127
4.0000	240.00	44.39	0.040	0.0127
4.2000	252.00	44.39	0.040	0.0127
4.4000	264.00	44.39	0.040	0.0127
4.6000	276.00	44.38	0.030	0.0095
4.8000	288.00	44.38	0.030	0.0095
5.0000	300.00	44.38	0.030	0.0095
5.2000	312.00	44.37	0.020	0.0064
5.4000	324.00	44.37	0.020	0.0064
5.6000	336.00	44.37	0.020	0.0064
5.8000	348.00	44.37	0.020	0.0064
6.0000	360.00	44.37	0.020	0.0064
6.2000	372.00	44.37	0.020	0.0064
6.4000	384.00	44.37	0.020	0.0064
6.6000	396.00	44.36	0.010	0.0032
6.8000	408.00	44.36	0.010	0.0032
7.0000	420.00	44.36	0.010	0.0032
7.2000	432.00	44.36	0.010	0.0032
7.4000	444.00	44.36	0.010	0.0032
7.6000	456.00	44.36	0.010	0.0032
7.8000	468.00	44.36	0.010	0.0032
8.0000	480.00	44.35	0.000	0.0000

SLUG TEST DATA - WELL MW-13

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.0000	0.00	46.51	2.070	1.0000
0.0083	0.50	46.51	2.070	1.0000
0.0166	1.00	46.45	2.010	0.9710
0.0250	1.50	46.40	1.960	0.9469
0.0333	2.00	46.35	1.910	0.9227
0.0416	2.50	46.30	1.860	0.8986
0.0500	3.00	46.26	1.820	0.8792
0.0583	3.50	46.22	1.780	0.8599
0.0666	4.00	46.18	1.740	0.8406
0.0750	4.50	46.14	1.700	0.8213
0.0833	5.00	46.10	1.660	0.8019
0.0916	5.50	46.06	1.620	0.7826
0.1000	6.00	46.02	1.580	0.7633
0.1083	6.50	45.99	1.550	0.7488
0.1166	7.00	45.96	1.520	0.7343
0.1250	7.50	45.93	1.490	0.7198
0.1333	8.00	45.90	1.460	0.7053
0.1416	8.50	45.86	1.420	0.6860
0.1500	9.00	45.84	1.400	0.6763
0.1583	9.50	45.81	1.370	0.6618
0.1666	10.00	45.78	1.340	0.6473
0.1750	10.50	45.76	1.320	0.6377
0.1833	11.00	45.72	1.280	0.6184
0.1916	11.50	45.70	1.260	0.6087
0.2000	12.00	45.68	1.240	0.5990
0.2083	12.50	45.66	1.220	0.5894
0.2166	13.00	45.63	1.190	0.5749
0.2250	13.50	45.61	1.170	0.5652
0.2333	14.00	45.59	1.150	0.5556
0.2416	14.50	45.57	1.130	0.5459
0.2500	15.00	45.54	1.100	0.5314
0.2583	15.50	45.52	1.080	0.5217
0.2666	16.00	45.50	1.060	0.5121
0.2750	16.50	45.48	1.040	0.5024
0.2833	17.00	45.46	1.020	0.4928
0.2916	17.50	45.45	1.010	0.4879
0.3000	18.00	45.43	0.990	0.4783
0.3083	18.50	45.41	0.970	0.4686
0.3166	19.00	45.39	0.950	0.4589
0.3250	19.50	45.38	0.940	0.4541
0.3333	20.00	45.36	0.920	0.4444
0.3500	21.00	45.33	0.890	0.4300
0.3666	22.00	45.30	0.860	0.4155
0.3833	23.00	45.27	0.830	0.4010
0.4000	24.00	45.24	0.800	0.3865
0.4166	25.00	45.22	0.780	0.3768

SLUG TEST DATA - WELL MW-13

(continued)

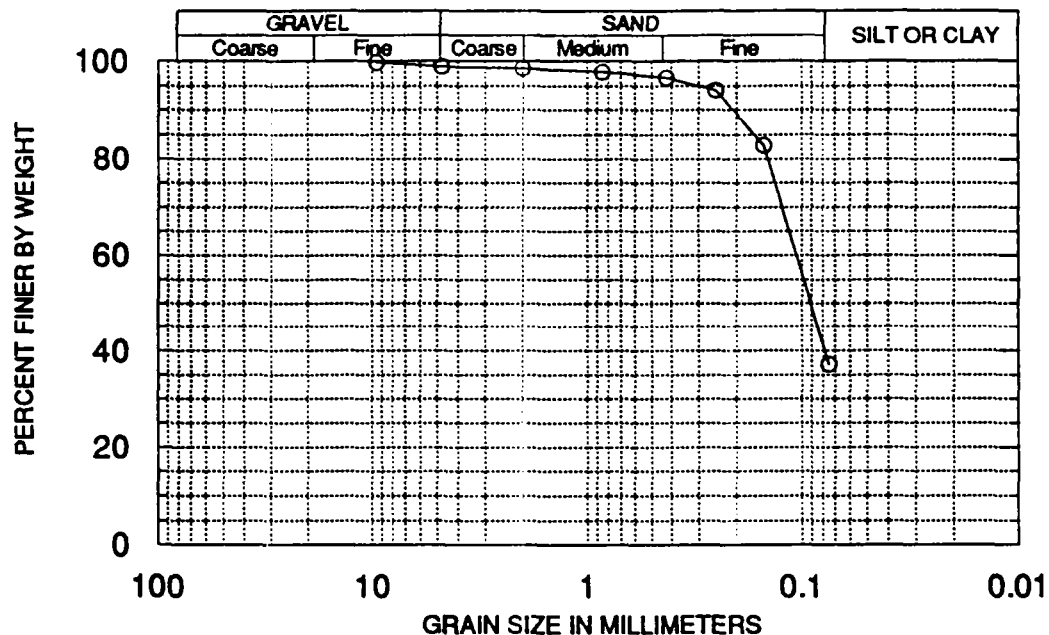
Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
0.4333	26.00	45.19	0.750	0.3623
0.4500	27.00	45.17	0.730	0.3527
0.4666	28.00	45.15	0.710	0.3430
0.4833	29.00	45.13	0.690	0.3333
0.5000	30.00	45.10	0.660	0.3188
0.5166	31.00	45.08	0.640	0.3092
0.5333	32.00	45.06	0.620	0.2995
0.5500	33.00	45.05	0.610	0.2947
0.5666	34.00	45.03	0.590	0.2850
0.5833	35.00	45.01	0.570	0.2754
0.6000	36.00	44.99	0.550	0.2657
0.6166	37.00	44.98	0.540	0.2609
0.6333	38.00	44.96	0.520	0.2512
0.6500	39.00	44.95	0.510	0.2464
0.6666	40.00	44.94	0.500	0.2415
0.6833	41.00	44.93	0.490	0.2367
0.7000	42.00	44.91	0.470	0.2271
0.7166	43.00	44.90	0.460	0.2222
0.7333	44.00	44.89	0.450	0.2174
0.7500	45.00	44.87	0.430	0.2077
0.7666	46.00	44.86	0.420	0.2029
0.7833	47.00	44.86	0.420	0.2029
0.8000	48.00	44.84	0.400	0.1932
0.8166	49.00	44.83	0.390	0.1884
0.8333	50.00	44.82	0.380	0.1836
0.8500	51.00	44.82	0.380	0.1836
0.8666	52.00	44.80	0.360	0.1739
0.8833	53.00	44.80	0.360	0.1739
0.9000	54.00	44.79	0.350	0.1691
0.9166	55.00	44.78	0.340	0.1643
0.9333	56.00	44.77	0.330	0.1594
0.9500	57.00	44.76	0.320	0.1546
0.9666	58.00	44.75	0.310	0.1498
0.9833	59.00	44.75	0.310	0.1498
1.0000	60.00	44.74	0.300	0.1449
1.2000	72.00	44.67	0.230	0.1111
1.4000	84.00	44.62	0.180	0.0870
1.6000	96.00	44.58	0.140	0.0676
1.8000	108.00	44.56	0.120	0.0580
2.0000	120.00	44.54	0.100	0.0483
2.2000	132.00	44.52	0.080	0.0386
2.4000	144.00	44.51	0.070	0.0338
2.6000	156.00	44.49	0.050	0.0242
2.8000	168.00	44.49	0.050	0.0242
3.0000	180.00	44.48	0.040	0.0193

SLUG TEST DATA - WELL MW-13
(continued)

Time (min)	Time (sec)	Elevation (feet)	Change (h)	Head Ratio (h/h ₀)
3.2000	192.00	44.47	0.030	0.0145
3.4000	204.00	44.47	0.030	0.0145
3.6000	216.00	44.46	0.020	0.0097
3.8000	228.00	44.46	0.020	0.0097
4.0000	240.00	44.46	0.020	0.0097
4.2000	252.00	44.46	0.020	0.0097
4.4000	264.00	44.46	0.020	0.0097
4.6000	276.00	44.46	0.020	0.0097
4.8000	288.00	44.45	0.010	0.0048
5.0000	300.00	44.45	0.010	0.0048
5.2000	312.00	44.45	0.010	0.0048
5.4000	324.00	44.45	0.010	0.0048
5.6000	336.00	44.45	0.010	0.0048
5.8000	348.00	44.44	0.000	0.0000

A-12P. 5

Boring MW-3D

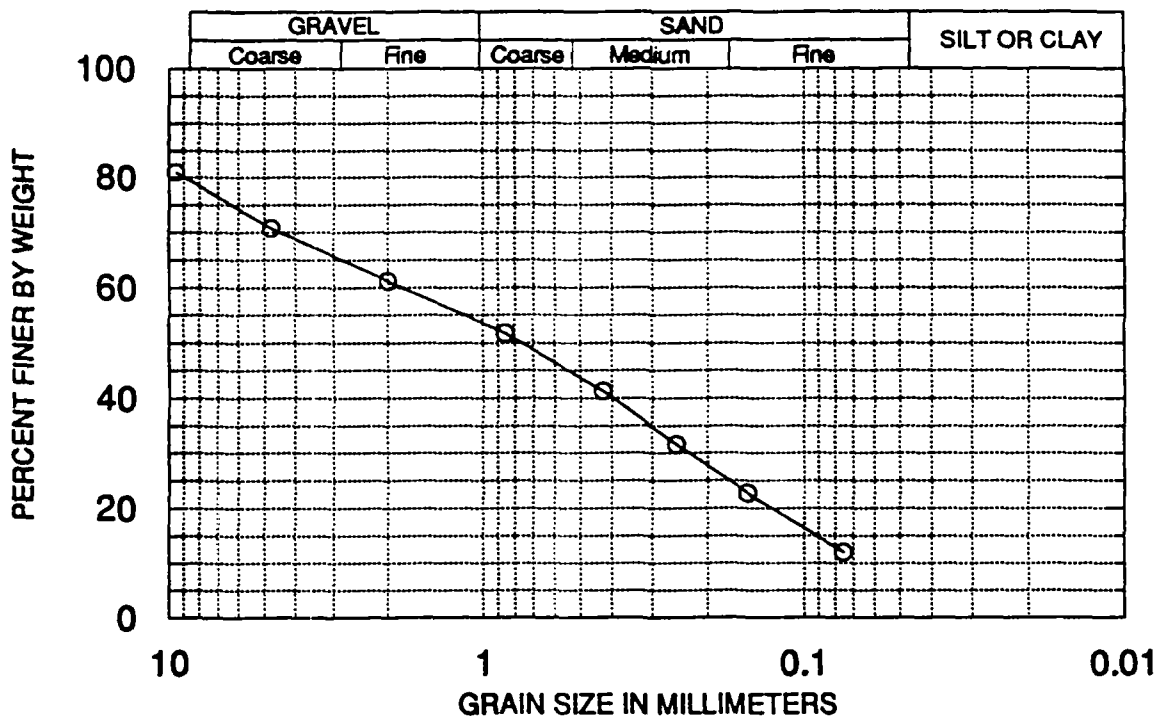


COMPOSITE SAMPLES	DEPTH	VISUAL DESCRIPTION
SS-6	39' - 41'	Fine sand with trace gravel.

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS GRAIN SIZE DISTRIBUTION MW-3D LOWER AQUIFER					
PROJECT NO. EN - 170		DWG. NO.			
SCALE: NA					

Clean Harbors
Environmental Services, Inc.
Remedial Technologies Division
12 MERCER ROAD
NATICK, MASSACHUSETTS 01760
(508) 650-6910

Boring MW-7

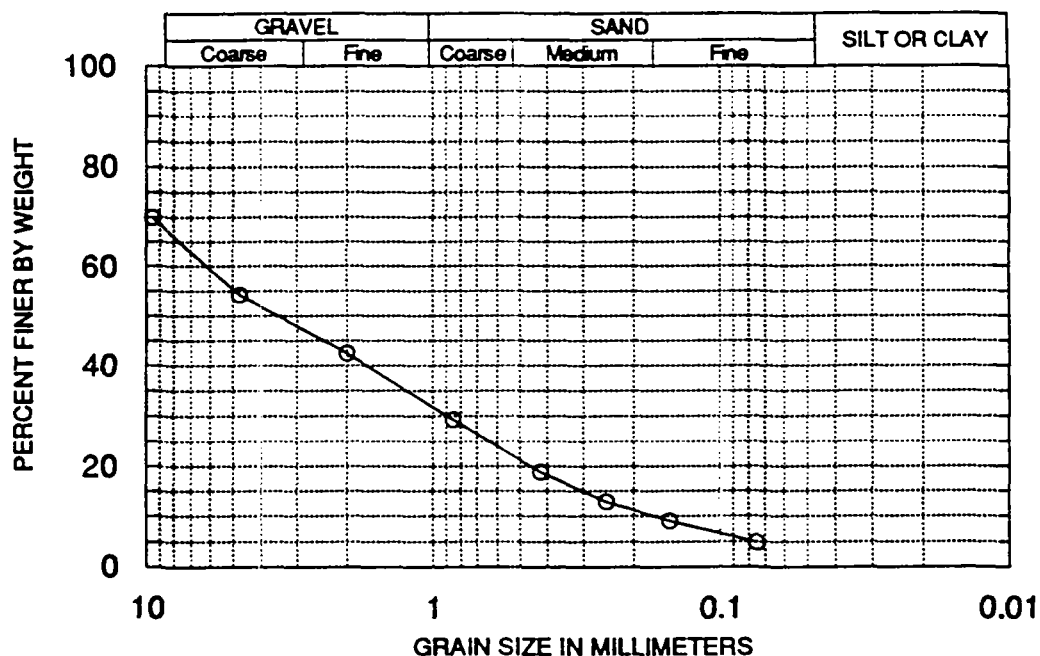


COMPOSITE SAMPLES	DEPTH	VISUAL DESCRIPTION
SS-2	2.5' - 4.5'	Fine sand and silt with some rock fragments.
SS-3	4.5' - 6.5'	Fine sand and silt with some coarse sand and rock fragments.
SS-4	6.5' - 8.5'	Fine sand and silt with some coarse sand and rock fragments.
SS-5	8.5' - 10.5'	Fine to coarse sand with some silt.
SS-6	10.5' - 12.5'	Very coarse sand.

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS GRAIN SIZE DISTRIBUTION MW-7 UPPER AQUIFER					
PROJECT NO. EN - 170		DWG. NO.			
SCALE: NA					

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 Remedial Technologies Division
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Boring MW-8

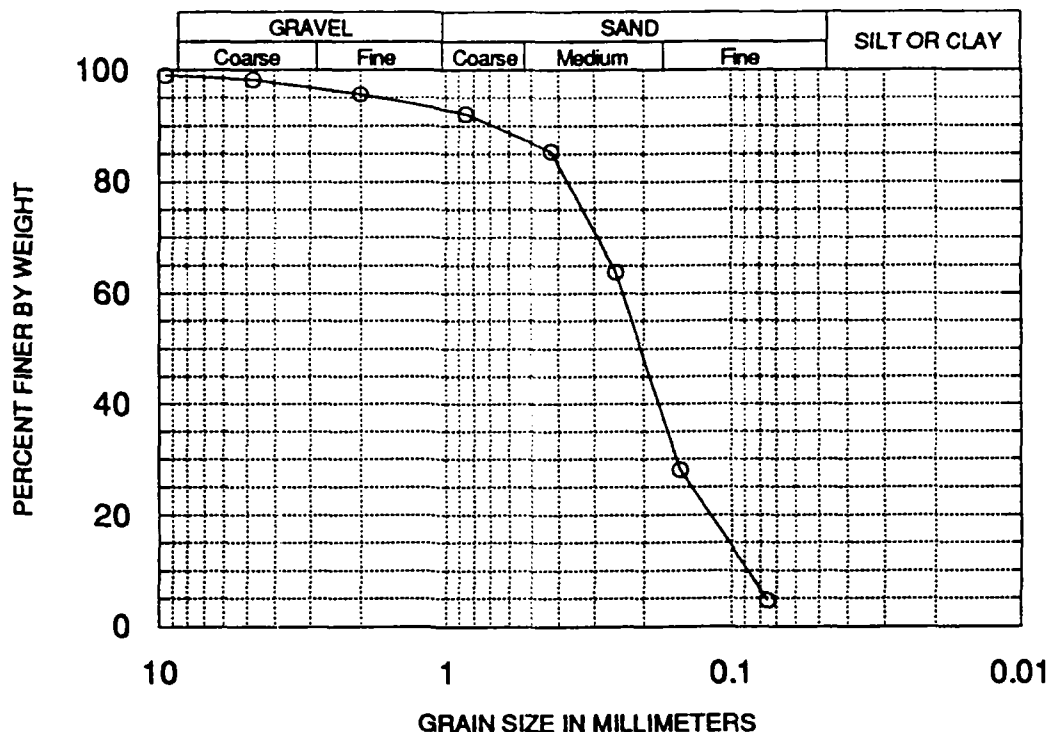


COMPOSITE SAMPLES	DEPTH	VISUAL DESCRIPTION
SS-3	4' - 6'	Medium to fine sand and gravel with trace coarse sand.
SS-4	6' - 8'	Medium to fine sand, some gravel with trace coarse sand.
SS-5	8' - 10'	Medium to coarse sand with trace fine sand and gravel.
SS-6	10' - 12'	Medium to coarse sand with some gravel and trace fine sand.

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A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS GRAIN SIZE DISTRIBUTION MW-8 UPPER AQUIFER					
PROJECT NO. EN - 170		DWG. NO.			
SCALE: NA					

Boring MW-9

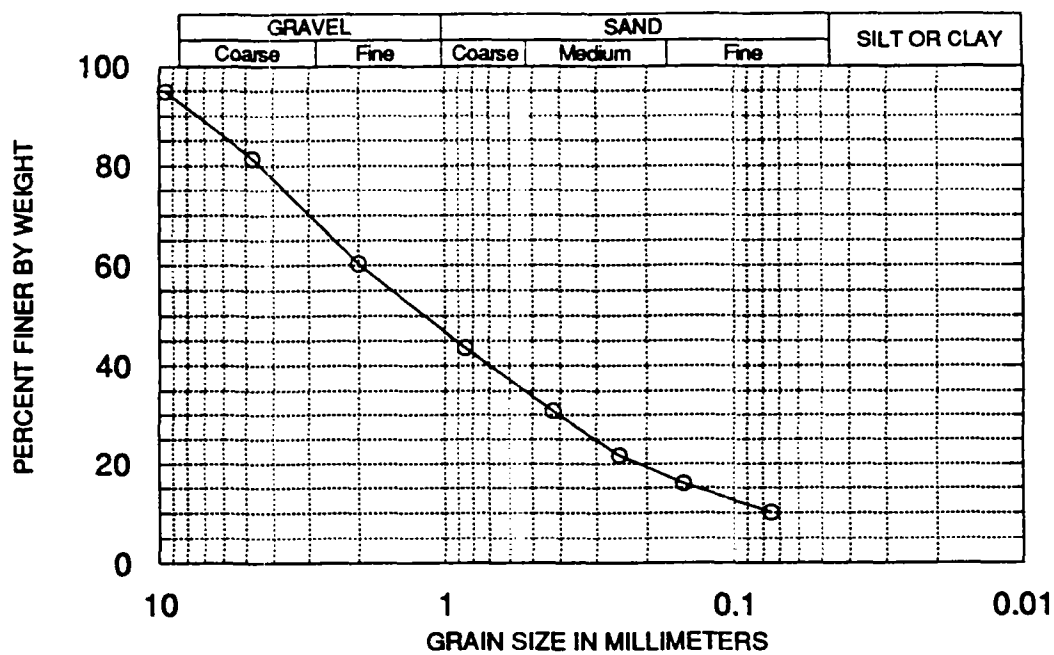


COMPOSITE SAMPLES	DEPTH	VISUAL DESCRIPTION
SS-3	4' - 6'	Medium to coarse sand with some gravel and rock fragments.
SS-5	8' - 10'	Medium to fine sand.
SS-6	10' - 12'	Medium to fine sand.

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS GRAIN SIZE DISTRIBUTION MW-9 UPPER AQUIFER					
PROJECT NO. EN - 170		DWG. NO.			
SCALE: NA					

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Boring MW-10

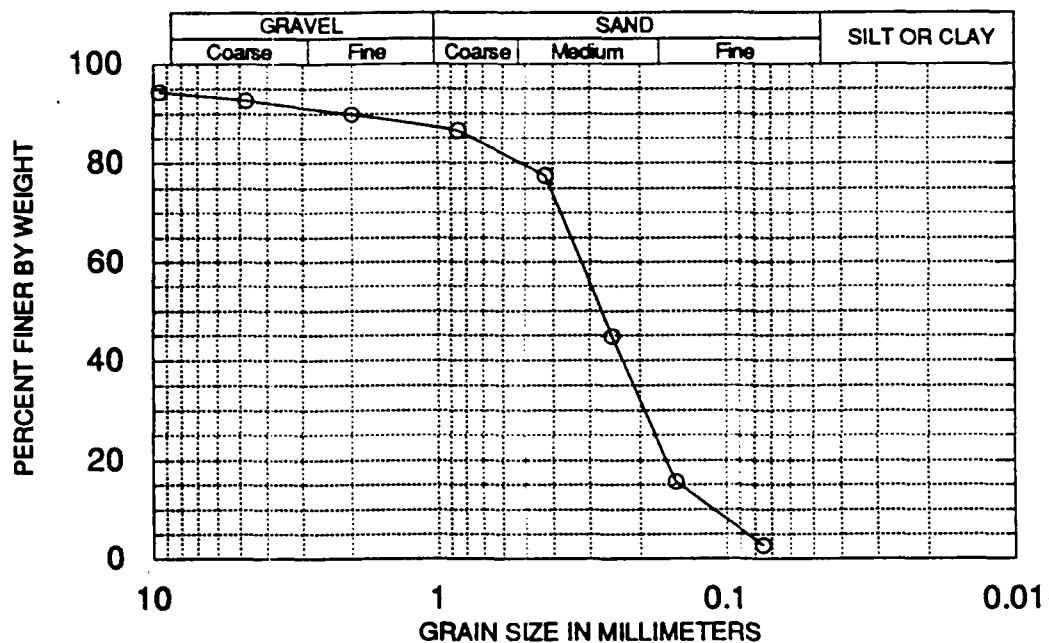


COMPOSITE SAMPLES	DEPTH	VISUAL DESCRIPTION
SS-6	39' - 41'	Medium to coarse sand with some gravel.

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A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS GRAIN SIZE DISTRIBUTION MW-10 LOWER AQUIFER					
PROJECT NO. EN - 170		DWG. NO.			
SCALE: NA					

Boring MW-11



COMPOSITE SAMPLES	DEPTH	VISUAL DESCRIPTION
SS-3	4' - 6'	Medium to fine sand with some gravel.
SS-5	8' - 10'	Medium to fine sand.
SS-6	10' - 12'	Medium to fine sand with trace coarse sand and gravel.

A	PRELIMINARY				
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
MURPHY'S WASTE OIL SERVICE, INC. 252 SALEM STREET WOBURN, MASSACHUSETTS GRAIN SIZE DISTRIBUTION MW-11 UPPER AQUIFER					
PROJECT NO. EN - 170		DWG. NO.			
SCALE: NA					

CleanHarbors
 Environmental Services, Inc.
 Remedial Technologies Division
 12 MERCER ROAD
 NATICK, MASSACHUSETTS 01760
 (508) 650-6910



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D, SS-6
Sample Type: Soil

CHES Lab #: 9510112-01M
Date Received: 10/06/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/19/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	0.2
4	4.75	0.8
10	2.00	0.4
20	0.850	0.6
40	0.425	1.2
60	0.250	2.7
100	0.150	11.2
200	0.075	45.6
Bottom Tray	<0.075	37.2



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMP.OF B-3, SS-2,3,4,5,6 (MW-7)
Sample Type: Soil

CHES Lab #: 9510032-07L
Date Received: 10/03/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/18/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	18.5
4	4.75	10.3
10	2.00	9.6
20	0.850	9.4
40	0.425	10.5
60	0.250	9.7
100	0.150	8.8
200	0.075	10.8
Bottom Tray	<0.075	11.9



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMPOSITE OF MW-8
Sample Type: Soil

CHES Lab #: 9510403-07L
Date Received: 10/27/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 11/09/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	30.0
4	4.75	15.7
10	2.00	11.7
20	0.850	13.2
40	0.425	10.5
60	0.250	5.9
100	0.150	3.8
200	0.075	4.2
Bottom Tray	<0.075	4.9



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMPOSITE MW-9,SS-3,5,6
Sample Type: Soil

CHES Lab #: 9510080-06L
Date Received: 10/05/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/18/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	0.6
4	4.75	0.8
10	2.00	2.7
20	0.850	3.6
40	0.425	6.6
60	0.250	21.5
100	0.150	35.8
200	0.075	23.5
Bottom Tray	<0.075	4.6



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10, SS-6
Sample Type: Soil

CHES Lab #: 9510133-06L
Date Received: 10/10/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/20/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	5.1
4	4.75	13.5
10	2.00	21.1
20	0.850	16.7
40	0.425	12.8
60	0.250	9.1
100	0.150	5.7
200	0.075	5.9
Bottom Tray	<0.075	10.1



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: COMP.OF MW-11,SS-3,SS-5,SS-6
Sample Type: Soil

CHES Lab #: 9510031-08L
Date Received: 10/03/95

SIEVE ANALYSIS

by ASTM Method Mod. D422

Analysis Date: 10/16/95

SIEVE NUMBER	OPENING SIZE in MM	WEIGHT %
--	9.5	5.4
4	4.75	1.8
10	2.00	2.9
20	0.850	3.3
40	0.425	9.0
60	0.250	32.7
100	0.150	29.2
200	0.075	12.9
Bottom Tray	<0.075	2.7

App. #



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S
P.O. #: EN170

Date Received: 11/08/95
CHES Lab #: 9511101

Attn: Mr. Jay McCreary

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 12/5/95

Michael J. Murray
Laboratory Manager



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9511101-01AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 113 %
Toluene-d8: 103 %
p-BFB: 89 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9511101-01G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 61 %
2-Fluorobiphenyl: 62 %
Terphenyl-d14: 62 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9511101-01G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 43 %
Phenol-d5: 33 %
2,4,6-Tribromophenol: 130 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9511101-010
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 76.2%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9511101-01E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9511101-01M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.0	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9511101-02AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	31	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	14
trans-1,2-Dichloroethene	5	140	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 114 %
Toluene-d8: 102 %
p-BFB: 87 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9511101-02G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 111 %
2-Fluorobiphenyl: 90 %
Terphenyl-d14: 93 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9511101-02G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 74 %
Phenol-d5: 55 %
2,4,6-Tribromophenol: 176 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9511101-020
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 58.2%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9511101-02E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	0.006	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9511101-02M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9511101-03AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	25	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 107 %
Toluene-d8: 98 %
p-BFB: 83 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9511101-03G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 61 %
2-Fluorobiphenyl: 54 %
Terphenyl-d14: 51 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9511101-03G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 45 %
Phenol-d5: 32 %
2,4,6-Tribromophenol: 103 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9511101-030
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 62.3%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9511101-03E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9511101-03M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.2	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9511101-04AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	24	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 110 %
Toluene-d8: 100 %
p-BFB: 86 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-2

Sample Type: Water

CHES Lab #: 9511101-04G

Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 59 %
2-Fluorobiphenyl: 56 %
Terphenyl-d14: 56 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9511101-04G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 41 %
Phenol-d5: 30 %
2,4,6-Tribromophenol: 104 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9511101-040
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 67.7%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9511101-04E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9511101-04M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9511101-05AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	500	ND	1,2-Dichloropropane	130	ND
Benzene	130	ND	cis-1,3-Dichloropropene	130	ND
Bromodichloromethane	130	ND	trans-1,3-Dichloropropene	130	ND
Bromoform	130	ND	Ethylbenzene	130	ND
Bromomethane	250	ND	2-Hexanone	130	ND
2-Butanone	500	ND	Methylene chloride	500	ND
Carbon disulfide	250	ND	4-Methyl-2-pentanone	130	ND
Carbon tetrachloride	130	ND	Methyl-t-butylether (MTBE)	250	ND
Chlorobenzene	130	ND	Styrene	130	ND
Chloroethane	250	ND	1,1,2,2-Tetrachloroethane	130	ND
2-Chloroethyl vinyl ether	250	ND	Tetrachloroethene	130	ND
Chloroform	130	ND	Toluene	130	ND
Chloromethane	250	ND	1,1,1-Trichloroethane	130	160
Dibromochloromethane	130	ND	1,1,2-Trichloroethane	130	ND
Dibromoethane (EDB)	130	ND	Trichloroethene	130	140
1,1-Dichloroethane	130	ND	Trichlorofluoromethane	130	ND
1,2-Dichloroethane	130	ND	Vinyl acetate	250	ND
1,1-Dichloroethene	130	ND	Vinyl chloride	250	ND
trans-1,2-Dichloroethene	130	2,200	Total xylenes	130	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 113 %
Toluene-d8: 106 %
p-BFB: 86 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-3

Sample Type: Water

CHES Lab #: 9511101-05G

Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/16/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 40 %
2-Fluorobiphenyl: 42 %
Terphenyl-d14: 44 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9511101-05G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/16/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 32 %
Phenol-d5: 27 %
2,4,6-Tribromophenol: 116 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9511101-050
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 40.3%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9511101-05E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9511101-05M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.5	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-06AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	25	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 112 %
Toluene-d8: 106 %
p-BFB: 88 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-06G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 64 %
2-Fluorobiphenyl: 58 %
Terphenyl-d14: 58 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-06G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 46 %
Phenol-d5: 33 %
2,4,6-Tribromophenol: 103 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-060
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 78.2%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-06E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/22/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-06H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/13/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/10/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9511101-06M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9511101-07AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 103 %
Toluene-d8: 102 %
p-BFB: 83 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9511101-07G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 42 %
2-Fluorobiphenyl: 42 %
Terphenyl-d14: 55 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9511101-07G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 31 %
Phenol-d5: 23 %
2,4,6-Tribromophenol: 76 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9511101-070
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 55.4%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9511101-07E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9511101-07M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9511101-08AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 120 %
Toluene-d8: 107 %
p-BFB: 88 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-5S

Sample Type: Water

CHES Lab #: 9511101-08G

Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 55 %
2-Fluorobiphenyl: 53 %
Terphenyl-d14: 61 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9511101-08G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 41 %
Phenol-d5: 30 %
2,4,6-Tribromophenol: 108 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9511101-080
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 80.9%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9511101-08E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9511101-08M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.2	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9511101-09AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	36	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 115 %
Toluene-d8: 112 %
p-BFB: 90 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9511101-09G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
p-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 41 %
2-Fluorobiphenyl: 43 %
Terphenyl-d14: 47 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9511101-09G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 33 %
Phenol-d5: 29 %
2,4,6-Tribromophenol: 108 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9511101-090
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 45.1%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9511101-09E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9511101-09M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	7.3	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9511101-10AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	32	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 120 %
Toluene-d8: 113 %
p-BFB: 91 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-6

Sample Type: Water

CHES Lab #: 9511101-10G

Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 50 %
2-Fluorobiphenyl: 50 %
Terphenyl-d14: 61 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9511101-10G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 36 %
Phenol-d5: 26 %
2,4,6-Tribromophenol: 90 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9511101-100
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 71.8%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9511101-10E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9511101-10M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-11AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	29	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 109 %
Toluene-d8: 100 %
p-BFB: 85 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-11G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 47 %
2-Fluorobiphenyl: 46 %
Terphenyl-d14: 58 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-11G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/17/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 34 %
Phenol-d5: 27 %
2,4,6-Tribromophenol: 110 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-110
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 57.8%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-11E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-11H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/13/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/10/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9511101-11M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.4	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-12AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	28	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	15
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	48
1,1-Dichloroethane	5	9	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	5	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 109 %
Toluene-d8: 101 %
p-BFB: 88 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-12G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 47 %
2-Fluorobiphenyl: 54 %
Terphenyl-d14: 49 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-12G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 36 %
Phenol-d5: 28 %
2,4,6-Tribromophenol: 86 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-120
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 48.8%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-12E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-12H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/13/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/10/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9511101-12M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.7	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-13AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	24	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 110 %
Toluene-d8: 97 %
p-BFB: 83 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-13G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 48 %
2-Fluorobiphenyl: 46 %
Terphenyl-d14: 47 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-13G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 33 %
Phenol-d5: 25 %
2,4,6-Tribromophenol: 73 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-130
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 81.0%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-13E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-13H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/13/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/10/95	335.1(a)

Notes: ND - Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9511101-13M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-14AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	16
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	13	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 117 %
Toluene-d8: 106 %
p-BFB: 96 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-14G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 45 %
2-Fluorobiphenyl: 54 %
Terphenyl-d14: 60 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-14G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 31 %
Phenol-d5: 29 %
2,4,6-Tribromophenol: 88 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-140
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 53.7%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-14E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-14H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/13/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/10/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9511101-14M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-15AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	10	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	96	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 120 %
Toluene-d8: 109 %
p-BFB: 92 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-15G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 37 %
2-Fluorobiphenyl: 37 %
Terphenyl-d14: 58 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-15G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 25 %
Phenol-d5: 21 %
2,4,6-Tribromophenol: 106 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-150
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/18/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 79.1%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-15E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	0.004	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	1.4	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-15H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9511101-15M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.5	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-16AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 116 %
Toluene-d8: 106 %
p-BFB: 83 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-16G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	47	ND	Dimethylphthalate	47	ND
Acenaphthylene	47	ND	Di-n-butylphthalate	47	ND
Anthracene	47	ND	2,4-Dinitrotoluene	47	ND
Benzo(a)anthracene	47	ND	2,6-Dinitrotoluene	47	ND
Benzo(a)pyrene	47	ND	Di-n-octylphthalate	47	ND
Benzo(b)fluoranthene	47	ND	Fluoranthene	47	ND
Benzo(g,h,i)perylene	47	ND	Fluorene	47	ND
Benzo(k)fluoranthene	47	ND	Hexachlorobenzene	47	ND
Bis(2-chloroethoxy)methane	47	ND	Hexachlorobutadiene	47	ND
Bis(2-chloroethyl)ether	47	ND	Hexachlorocyclopentadiene	47	ND
Bis(2-chloroisopropyl)ether	47	ND	Hexachloroethane	47	ND
Bis(2-ethylhexyl)phthalate	94	ND	Indeno(1,2,3-cd)pyrene	47	ND
4-Bromophenyl phenyl ether	47	ND	Isophorone	47	ND
Butylbenzylphthalate	47	ND	2-Methylnaphthalene	47	ND
4-Chloroaniline	47	ND	Naphthalene	47	ND
2-Chloronaphthalene	47	ND	2-Nitroaniline	240	ND
4-Chlorophenyl phenyl ether	47	ND	3-Nitroaniline	240	ND
Chrysene	47	ND	4-Nitroaniline	240	ND
Dibenzo(a,h)anthracene	47	ND	Nitrobenzene	47	ND
Dibenzofuran	47	ND	N-Nitroso-di-n-propylamine	47	ND
1,2-Dichlorobenzene	47	ND	N-Nitrosodiphenylamine	47	ND
1,3-Dichlorobenzene	47	ND	Phenanthrene	47	ND
1,4-Dichlorobenzene	47	ND	Pyrene	47	ND
3,3'-Dichlorobenzidine	94	ND	1,2,4-Trichlorobenzene	47	ND
Diethylphthalate	47	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 45 %
2-Fluorobiphenyl: 60 %
Terphenyl-d14: 65 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-16G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/20/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	47	ND
2-Chlorophenol	47	ND
2,4-Dichlorophenol	47	ND
2,4-Dimethylphenol	47	ND
4,6-Dinitro-2-methylphenol	240	ND
2,4-Dinitrophenol	240	ND
2-Methylphenol	47	ND
4-Methylphenol	47	ND
2-Nitrophenol	47	ND
4-Nitrophenol	240	ND
Pentachlorophenol	240	ND
Phenol	47	ND
2,4,5-Trichlorophenol	240	ND
2,4,6-Trichlorophenol	240	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 25 %
Phenol-d5: 35 %
2,4,6-Tribromophenol: 125 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-160
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	1.6	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 57.7%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-16E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	0.004	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	0.004	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	0.56	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-16H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9511101-16M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-17AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	16
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	14	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 120 %
Toluene-d8: 107 %
p-BFB: 88 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-17G
Date Received: 11/08/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 29 %
2-Fluorobiphenyl: 49 %
Terphenyl-d14: 58 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-17G
Date Received: 11/08/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/18/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 17 %
Phenol-d5: 21 %
2,4,6-Tribromophenol: 96 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-170
Date Received: 11/08/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95
Analysis Date: 11/17/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 64.2%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-17E
Date Received: 11/08/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	0.003	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-17H
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-11)
Sample Type: Water

CHES Lab #: 9511101-17M
Date Received: 11/08/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	11/08/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: TRIP BLANK
Sample Type: Water

CHES Lab #: 9511101-18AB
Date Received: 11/08/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 113 %
Toluene-d8: 107 %
p-BFB: 90 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9511101

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 114%
Toluene-d8: 97%
p-BFB: 87%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/20/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 100%
Toluene-d8: 102%
p-BFB: 87%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 101%
Toluene-d8: 106%
p-BFB: 90%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/21/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 111%
Toluene-d8: 97%
p-BFB: 83%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Semi-Volatile Base/Neutral Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/16/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 66 %
2-Fluorobiphenyl: 55 %
Terphenyl-d14: 61 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Semi-Volatile Acid Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/11/95

Analysis Date: 11/16/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 51 %
Phenol-d5: 37 %
2,4,6-Tribromophenol: 96 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Semi-Volatile Base/Neutral Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/13/95

Analysis Date: 11/18/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 55 %
2-Fluorobiphenyl: 51 %
Terphenyl-d14: 59 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Semi-Volatile Acid Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/13/95

Analysis Date: 11/18/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 49 %
Phenol-d5: 48 %
2,4,6-Tribromophenol: 94 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511101

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 608 (ref. f)

Extraction Date: 11/13/95

Analysis Date: 11/14/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 84.2%

34-104%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511101

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/08/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/08/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/08/95	11/09/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/08/95	11/09/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/l

Soil/solid samples based on sample dry weight



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511101

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/13/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/10/95	335.1(a)
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



1/11/13

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184

CHAIN OF CUSTODY RECORD

Sample Custodian — (617) 849-1800

Page / of

Client: ENGINEERING Project Name: MURPHY'S Work Order/P.O. #: EN-170 Date: 11-8-95

Report To: J. McCREARY Address: 12 MERGER RD NATICK Phone #: EXT 6349

Date Samples Collected: 11-7-95 by: MICHAEL F. McKEEN Date Samples Received: 11-8-95

Airbill/Bill of Lading? Y ☒ N

NOTE: Samples received unpreserved will be preserved upon arrival at CHAS. Samples were: Preserved Unpreserved

Sample I.D.	Sampling Information				Analysis								# of con.	CHAS Sample #
	Date	Time	Station Location	Sample Matrix	VOC's	S. VOC's HAP's	ALB's	LEAD	ARSENIC	CADMIUM	AMMONIUM	ZINC		
MR-1SS	11-7			H ₂ O									6	9511101 01AB,B,X,Q,M,O,*E NOYB ALL SAMPLES
MR-2SS													6	02AB,B,X,Q,M,O,*E MUST BE ANALYZED
MW-1													6	03AB,B,X,Q,M,O,*E FOR PH
MW-2													6	04AB,B,X,Q,M,O,*E
MW-3													6	05AB,B,X,Q,M,O,*E
MW-3A									X	X	X	X	X	06AB,B,X,Q,M,O,E,H
MW-4													6	07AB,B,X,Q,M,O,E
MW-5S													6	08AB,B,X,Q,M,O,E
MW-5A													6	09AB,B,X,Q,M,O,E
Relinquished by: <u>[Signature]</u> Date: <u>11-8-95</u> Time: <u>8:00 am</u>				VOA Vial	X								REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions) Filter metal samples Analyzed metals Gratic lead / Pb / Cd	
Received by: <u>[Signature]</u> Date: <u>11-8-95</u> Time: <u>8:50 am</u>				Glass Bottle										
Relinquished by: _____ Date: _____ Time: _____				Plastic Bottle										
Received by: _____ Date: _____ Time: _____				Pres.	A									
Relinquished by: _____ Date: _____ Time: _____				Volume										
Received by: _____ Date: _____ Time: _____				Preservation Key: A — Acidified with <u>1:1 HCl</u> B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other										

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.

Accelerated turnaround requested: _____

Confirmed by: _____

Surcharge: _____

Location of samples: R4, R10L3, Quaternary, SM

Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: _____

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1/11/13

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184

CHAIN OF CUSTODY RECORD

Sample Custodian — (617) 849-1800

Page 2 of

Client: ENGINEERING Project Name: MURPHY'S Work Order/P.O. #: EN170 Date: 11-8-95

Report To: J. McCreary Address: 12 MERCER RD NATICK Phone #: EXT 6399

Date Samples Collected: 11-7-95 by: MICHAEL F McKEON Date Samples Received: 11-8-95

Airbill/Bill of Lading? Y (N)

NOTE Samples received unpreserved will be preserved upon arrival at CHAS.

Samples were: Preserved Unpreserved

Sample I.D.	Sampling Information				Analysis								# of con.	CHAS Sample #
	Date	Time	Station Location	Sample Matrix	Voc's	SVCS HVC	POS	LEAD	ARSENIC	CADMIUM	AMMONIUM	ZINC		
MW-6	11-7			H ₂ O	X	X	X	X					6	9511101
MW-8									X	X	X	X	7	10AB, B, X, Q, M, O, E NOTE: All Samples 11AB, B, X, Q, M, O, E, H MUST BE ANALYZED
MW-9													7	FOR PH 12AB, B, X, Q, M, O, E
MW-10													7	13AB, B, X, Q, M, O, E, H
MW-11													7	14AB, B, X, Q, M, O, E, H
MW-12													7	15AB, B, X, Q, M, O, E, H
MW-13													7	16AB, B, X, Q, M, O, E, H
BLIND DUPLICATE													7	17AB, B, X, Q, M, O, E, H
TRIP BLANK													3	18AB, B, X
Relinquished by: <u>[Signature]</u> Date: <u>11-8-95</u> Time: <u>8:00 am</u>				VOA Vial									REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions) Filter metal samples dissolved metals Graphite lead/As/cd S. vocs by 8220 for typ for full BNA compound list	
Received by: <u>[Signature]</u> Date: <u>11/8/95</u> Time: <u>8:30 am</u>				Glass Bottle										
Relinquished by: _____ Date: _____ Time: _____				Plastic Bottle										
Received by: _____ Date: _____ Time: _____				Pres.										
Relinquished by: _____ Date: _____ Time: _____				Volume										
Received by: _____ Date: _____ Time: _____				Preservation Key: A — Acidified with _____ B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other										

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.
Accelerated turnaround requested: _____
Confirmed by: _____ Surcharge: _____

Location of samples: R4, R10B3, Aquilone, SM
Turnaround: 24 Hrs. 48 Hrs. 1 Week 2 Weeks Other: [Signature]

OFFICE COPY



Method References

- (a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 18th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1992.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical methods," 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., November 1986, updated July 1992 and September 1994.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, September 1982.
- (e) "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions; Final Rule," Federal Register, Vol. 55, No. 126, Friday, June 29, 1990, and revision in Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992.
- (f) "Guidelines Establishing Test Procedures for Analysis of Pollutants," Code of Federal Regulations, Part 136 Appendix A and Appendix B, July 1, 1993.
- (g) "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency, Office of Research and Development, Washington, D.C., December 1988, revised July 1991.
- (h) "The Determination of Inorganic Anions in Water by Ion Chromatography - Method 300.0," Publication EPA-600/4-84-017, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, March 1984.
- (i) "Hach Water Analysis Handbook," Hach Chemical Company, Loveland, CO, 1992.
- (j) "USEPA-CLP Statement of Work for Organic Analysis," Publication OLM01.0 (including revisions, U.S. Environmental Protection Agency, Contract Laboratory Program, August 1991.
- (k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing Materials, Philadelphia, 1989 & 1991.
- (l) "Annual Book of Standards," Section 5: Petroleum Products and Lubricants, Vols. 5.01, American Society for Testing Materials, Philadelphia, 1993.
- (m) "Annual Book of Standards," Section 4: Construction, Vol. 4.08, American Society for Testing Materials, Philadelphia, 1993.
- (n) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982, updated April 1984.
- (o) "Annual Book of Standards," Section 15: Engine Coolants; Halogenated Organic Solvents, Vol. 15.05, American Society for Testing Materials, Philadelphia, 1995.

[REF-09/21/95]



REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S
P.O. #: EN170

Date Received: 11/09/95
CHES Lab #: 9511126

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date: Michael J. Murray 11/30/95
Michael J. Murray
Laboratory Manager



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-A,(MW-12)
Sample Type: Water

CHES Lab #: 9511126-01AB
Date Received: 11/09/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 120 %
Toluene-d8: 107 %
p-BFB: 95 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-A, (MW-12)
Sample Type: Water

CHES Lab #: 9511126-01G
Date Received: 11/09/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/15/95
Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 48 %
2-Fluorobiphenyl: 47 %
Terphenyl-d14: 67 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-A, (MW-12)
Sample Type: Water

CHES Lab #: 9511126-01G
Date Received: 11/09/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/15/95
Analysis Date: 11/19/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 31 %
Phenol-d5: 26 %
2,4,6-Tribromophenol: 87 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Appendix H
(cont.)

Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-A, (MW-12)
Sample Type: Water

CHES Lab #: 9511126-01N
Date Received: 11/09/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/17/95
Analysis Date: 11/21/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 36.6%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-A, (MW-12)
Sample Type: Water

CHES Lab #: 9511126-01H
Date Received: 11/09/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-A, (MW-12)
Sample Type: Water

CHES Lab #: 9511126-01M
Date Received: 11/09/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	11/09/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B, (MW-13)
Sample Type: Water

CHES Lab #: 9511126-02AB
Date Received: 11/09/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	43	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 122 %
Toluene-d8: 108 %
p-BFB: 95 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B, (MW-13)
Sample Type: Water

CHES Lab #: 9511126-02G
Date Received: 11/09/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/15/95
Analysis Date: 11/19/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	21	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	52	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	52	ND
Chrysene	10	ND	4-Nitroaniline	52	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	21	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 49 %
2-Fluorobiphenyl: 45 %
Terphenyl-d14: 58 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B, (MW-13)
Sample Type: Water

CHES Lab #: 9511126-02G
Date Received: 11/09/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/15/95
Analysis Date: 11/19/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	52	ND
2,4-Dinitrophenol	52	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	52	ND
Pentachlorophenol	52	ND
Phenol	10	ND
2,4,5-Trichlorophenol	52	ND
2,4,6-Trichlorophenol	52	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 37 %
Phenol-d5: 27 %
2,4,6-Tribromophenol: 74 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B,(MW-13)
Sample Type: Water

CHES Lab #: 9511126-02N
Date Received: 11/09/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 11/17/95
Analysis Date: 11/21/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 52.4%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B,(MW-13)
Sample Type: Water

CHES Lab #: 9511126-02M
Date Received: 11/09/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	0.003	11/09/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/09/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	0.005	11/09/95	11/27/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/09/95	11/15/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B, (MW-13)
Sample Type: Water

CHES Lab #: 9511126-02H
Date Received: 11/09/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: SW-B,(MW-13)
Sample Type: Water

CHES Lab #: 9511126-02M
Date Received: 11/09/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.5	--	11/09/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9511126

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 11/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 118%
Toluene-d8: 103%
p-BFB: 89%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Semi-Volatile Base/Neutral Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/15/95

Analysis Date: 11/16/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 59 %
2-Fluorobiphenyl: 57 %
Terphenyl-d14: 54 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Semi-Volatile Acid Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 11/15/95

Analysis Date: 11/16/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 41 %
Phenol-d5: 31 %
2,4,6-Tribromophenol: 94 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511126

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 608 (ref. f)

Extraction Date: 11/17/95

Analysis Date: 11/21/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 81.4%

34-104%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511126

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	11/09/95	11/21/95	4.1.1/206.2(a)
Cadmium - Dissolved	0.001	ND	11/09/95	11/14/95	4.1.1/213.2(a)
Lead - Dissolved	0.002	ND	11/09/95	11/27/95	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	11/09/95	11/15/95	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9511126

BLANK ANALYSIS

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Total	0.02	ND	mg/l	11/20/95	335.2(a)
Cyanide, Chlorine Amenable	0.02	ND	mg/l	11/20/95	335.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight



11/11/14

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184				CHAIN OF CUSTODY RECORD				Sample Custodian — (617) 849-1800				Page 1 of 1	
Client: CHES		Project Name: Murphys		Work Order/P.O. #: EN-120		Date: 11/9/95							
Report To: Jay McCreery		Address: Natick		Phone #: 86327									
Date Samples Collected: 11/9/95		by: SJA		Date Samples Received: 11/9/95									
Airbill/Bill of Lading? ☒ Y ☐ N				NOTE: Samples received unpreserved will be preserved upon arrival at CHAS. Samples were <u>Preserved</u> Unpreserved									
Sample I.D.	Sampling Information				Analysis							# of con.	CHAS Sample #
	Date	Time	Station Location	Sample Matrix	8260	SVOC by HPLC	PCBS	As, Pb, Cd, Zn	Ammonia, CN	pH			
SW-A	11/9	845	MW-12	Water	✓	✓	✓	✓	✓	✓	7	11-9-95 95111266 01AB+B, N, M, H, Q, X Filter As, Pb, Cd, Zn sample	
SW-B	11/9	900	MW-13	"	✓	✓	✓	✓	✓	✓	7	02AB+B, N, M, H, Q, X G	
Relinquished by: Stephen Applebaum Date: 11/9/95 Time: 10:15 AM					VOA Vial ✓							REMARKS/COMMENTS: (Sample storage, nonstandard bottles, cautions, special instructions) BNA 9120 list needed per Jay McCreery, m	
Received by: Robert J. Delaney Date: 11-9-95 Time: 10:15					Glass Bottle ✓ ✓								
Relinquished by: _____ Date: _____ Time: _____					Plastic Bottle ✓ ✓								
Received by: _____ Date: _____ Time: _____					Pres. A D								
					Volume								
					Preservation Key: A — Acidified with HCL B — Filtered, C — Sample chilled, D — NaOH, E — NaThiosulfate, W — Sample Ambient, F — Other								
Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.												Location of samples: R10L4 / R4	
Accelerated turnaround requested: _____												Turnaround: 24 Hrs. 48 Hrs. 1 Week <u>2 Weeks</u> Other: _____	
Confirmed by: _____												Surcharge: _____	

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ENVIRONMENTAL SERVICES, INC.

325 WOOD ROAD, P.O. BOX 327, BRAINTREE, MA 02184-2402

(617) 849-1800

REPORT OF ANALYSIS

Clean Harbors Environmental Services, Inc.
12 Mercer Road
Natick, MA 01760

Project: MURPHY'S WASTE OIL
P.O. #: EN170

Date Received: 12/18/95
CHES Lab #: 9512201

Attn: Mr. Jay McCreery

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# M-MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Michael J. Murray 1/6/96

Michael J. Murray
Laboratory Manager

US EPA ARCHIVE DOCUMENT



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9512201-01AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 99 %
Toluene-d8: 109 %
p-BFB: 102 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9512201-01G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 62 %
2-Fluorobiphenyl: 73 %
Terphenyl-d14: 66 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9512201-01G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 15 %
Phenol-d5: 15 %
2,4,6-Tribromophenol: 37 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9512201-010
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 79.4%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9512201-01E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-1
Sample Type: Water

CHES Lab #: 9512201-01M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.0	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9512201-02AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	28	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 106 %
Toluene-d8: 116 %
p-BFB: 100 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-2

Sample Type: Water

CHES Lab #: 9512201-02G

Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95

Analysis Date: 12/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 62 %
2-Fluorobiphenyl: 71 %
Terphenyl-d14: 55 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9512201-02G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 38 %
Phenol-d5: 29 %
2,4,6-Tribromophenol: 95 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9512201-020
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 88.8%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9512201-02E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-2
Sample Type: Water

CHES Lab #: 9512201-02M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.9	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9512201-03AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	100	ND	1,2-Dichloropropane	25	ND
Benzene	25	ND	cis-1,3-Dichloropropene	25	ND
Bromodichloromethane	25	ND	trans-1,3-Dichloropropene	25	ND
Bromoform	25	ND	Ethylbenzene	25	ND
Bromomethane	50	ND	2-Hexanone	25	ND
2-Butanone	100	ND	Methylene chloride	100	ND
Carbon disulfide	50	ND	4-Methyl-2-pentanone	25	ND
Carbon tetrachloride	25	ND	Methyl-t-butylether (MTBE)	50	ND
Chlorobenzene	25	ND	Styrene	25	ND
Chloroethane	50	ND	1,1,2,2-Tetrachloroethane	25	ND
2-Chloroethyl vinyl ether	50	ND	Tetrachloroethene	25	ND
Chloroform	25	ND	Toluene	25	ND
Chloromethane	50	ND	1,1,1-Trichloroethane	25	220
Dibromochloromethane	25	ND	1,1,2-Trichloroethane	25	ND
Dibromoethane (EDB)	25	ND	Trichloroethene	25	220
1,1-Dichloroethane	25	170	Trichlorofluoromethane	25	ND
1,2-Dichloroethane	25	ND	Vinyl acetate	50	ND
1,1-Dichloroethene	25	ND	Vinyl chloride	50	ND
trans-1,2-Dichloroethene	25	3,100	Total xylenes	25	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 109 %
Toluene-d8: 117 %
p-BFB: 99 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9512201-03G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 37 %
2-Fluorobiphenyl: 55 %
Terphenyl-d14: 49 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9512201-03G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 20 %
Phenol-d5: 22 %
2,4,6-Tribromophenol: 79 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9512201-030
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 77.5%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9512201-03E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	12/19/95	12/20/95	4.1.1/206.2(a)
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	12/19/95	01/04/96	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3
Sample Type: Water

CHES Lab #: 9512201-03M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.4	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9512201-04AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 105 %
Toluene-d8: 119 %
p-BFB: 103 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9512201-04G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 57 %
2-Fluorobiphenyl: 69 %
Terphenyl-d14: 54 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9512201-04G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 24 %
Phenol-d5: 23 %
2,4,6-Tribromophenol: 50 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9512201-040
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 87.2%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9512201-04E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-3D
Sample Type: Water

CHES Lab #: 9512201-04M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9512201-05AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 91 %
Toluene-d8: 107 %
p-BFB: 104 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9512201-05G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)
.* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 43 %
2-Fluorobiphenyl: 49 %
Terphenyl-d14: 48 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9512201-05G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 28 %
Phenol-d5: 24 %
2,4,6-Tribromophenol: 68 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9512201-050
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 75.3%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9512201-05E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-4
Sample Type: Water

CHES Lab #: 9512201-05M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.8	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9512201-06AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 90 %
Toluene-d8: 112 %
p-BFB: 109 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9512201-06G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95

Analysis Date: 12/26/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 58 %
2-Fluorobiphenyl: 65 %
Terphenyl-d14: 55 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9512201-06G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 33 %
Phenol-d5: 26 %
2,4,6-Tribromophenol: 75 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9512201-060
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 79.2%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9512201-06E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5S
Sample Type: Water

CHES Lab #: 9512201-06M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9512201-07AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 114 %
Toluene-d8: 119 %
p-BFB: 110 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9512201-07G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 72 %
2-Fluorobiphenyl: 70 %
Terphenyl-d14: 58 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9512201-07G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 26 %
Phenol-d5: 23 %
2,4,6-Tribromophenol: 50 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9512201-070
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 89.6%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9512201-07E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	12/19/95	12/20/95	4.1.1/206.2(a)
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-5D
Sample Type: Water

CHES Lab #: 9512201-07M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9512201-08AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 122 %
Toluene-d8: 117 %
p-BFB: 114 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9512201-08G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/27/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 56 %
2-Fluorobiphenyl: 53 %
Terphenyl-d14: 51 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9512201-08G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/27/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 41 %
Phenol-d5: 30 %
2,4,6-Tribromophenol: 76 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9512201-080
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 84.7%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9512201-08E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)
Zinc - Dissolved	0.04	ND	12/19/95	01/04/96	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-6
Sample Type: Water

CHES Lab #: 9512201-08M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.8	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-7
Sample Type: Water

CHES Lab #: 9512201-09AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	100	ND	1,2-Dichloropropane	25	ND
Benzene	25	ND	cis-1,3-Dichloropropene	25	ND
Bromodichloromethane	25	ND	trans-1,3-Dichloropropene	25	ND
Bromoform	25	ND	Ethylbenzene	25	ND
Bromomethane	50	ND	2-Hexanone	25	ND
2-Butanone	100	ND	Methylene chloride	100	ND
Carbon disulfide	50	ND	4-Methyl-2-pentanone	25	ND
Carbon tetrachloride	25	ND	Methyl-t-butylether (MTBE)	50	ND
Chlorobenzene	25	ND	Styrene	25	ND
Chloroethane	50	ND	1,1,2,2-Tetrachloroethane	25	ND
2-Chloroethyl vinyl ether	50	ND	Tetrachloroethene	25	ND
Chloroform	25	ND	Toluene	25	ND
Chloromethane	50	ND	1,1,1-Trichloroethane	25	ND
Dibromochloromethane	25	ND	1,1,2-Trichloroethane	25	ND
Dibromoethane (EDB)	25	ND	Trichloroethene	25	ND
1,1-Dichloroethane	25	ND	Trichlorofluoromethane	25	ND
1,2-Dichloroethane	25	ND	Vinyl acetate	50	ND
1,1-Dichloroethene	25	ND	Vinyl chloride	50	ND
trans-1,2-Dichloroethene	25	ND	Total xylenes	25	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 102 %
Toluene-d8: 108 %
p-BFB: 104 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-7
Sample Type: Water

CHES Lab #: 9512201-09G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	94	ND	Dimethylphthalate	94	ND
Acenaphthylene	94	ND	Di-n-butylphthalate	94	ND
Anthracene	94	ND	2,4-Dinitrotoluene	94	ND
Benzo(a)anthracene	94	ND	2,6-Dinitrotoluene	94	ND
Benzo(a)pyrene	94	ND	Di-n-octylphthalate	94	ND
Benzo(b)fluoranthene	94	ND	Fluoranthene	94	ND
Benzo(g,h,i)perylene	94	ND	Fluorene	94	ND
Benzo(k)fluoranthene	94	ND	Hexachlorobenzene	94	ND
Bis(2-chloroethoxy)methane	94	ND	Hexachlorobutadiene	94	ND
Bis(2-chloroethyl)ether	94	ND	Hexachlorocyclopentadiene	94	ND
Bis(2-chloroisopropyl)ether	94	ND	Hexachloroethane	94	ND
Bis(2-ethylhexyl)phthalate	190	ND	Indeno(1,2,3-cd)pyrene	94	ND
4-Bromophenyl phenyl ether	94	ND	Isophorone	94	ND
Butylbenzylphthalate	94	ND	2-Methylnaphthalene	94	ND
4-Chloroaniline	94	ND	Naphthalene	94	ND
2-Chloronaphthalene	94	ND	2-Nitroaniline	470	ND
4-Chlorophenyl phenyl ether	94	ND	3-Nitroaniline	470	ND
Chrysene	94	ND	4-Nitroaniline	470	ND
Dibenzo(a,h)anthracene	94	ND	Nitrobenzene	94	ND
Dibenzofuran	94	ND	N-Nitroso-di-n-propylamine	94	ND
1,2-Dichlorobenzene	94	ND	N-Nitrosodiphenylamine	94	ND
1,3-Dichlorobenzene	94	ND	Phenanthrene	94	ND
1,4-Dichlorobenzene	94	ND	Pyrene	94	ND
3,3'-Dichlorobenzidine	190	ND	1,2,4-Trichlorobenzene	94	ND
Diethylphthalate	94	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

NA = Due to dilutions necessary to analyze the sample, the surrogate recoveries were unable to be calculated.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: NA
2-Fluorobiphenyl: NA
Terphenyl-d14: NA

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-7
Sample Type: Water

CHES Lab #: 9512201-09G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	94	ND
2-Chlorophenol	94	ND
2,4-Dichlorophenol	94	ND
2,4-Dimethylphenol	94	ND
4,6-Dinitro-2-methylphenol	470	ND
2,4-Dinitrophenol	470	ND
2-Methylphenol	94	ND
4-Methylphenol	94	ND
2-Nitrophenol	94	ND
4-Nitrophenol	470	ND
Pentachlorophenol	470	ND
Phenol	94	ND
2,4,5-Trichlorophenol	470	ND
2,4,6-Trichlorophenol	470	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

NA = Due to dilutions necessary to analyze the sample, the surrogate recoveries were unable to be calculated.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: NA
Phenol-d5: NA
2,4,6-Tribromophenol: NA

Acceptance Criteria:

Water	Soil
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-7
Sample Type: Water

CHES Lab #: 9512201-090
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 94.1%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-7
Sample Type: Water

CHES Lab #: 9512201-09E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	0.006	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-7
Sample Type: Water

CHES Lab #: 9512201-09M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9512201-10AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	6	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 88 %
Toluene-d8: 104 %
p-BFB: 96 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9512201-10G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 49 %
2-Fluorobiphenyl: 54 %
Terphenyl-d14: 50 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9512201-10G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 37 %
Phenol-d5: 27 %
2,4,6-Tribromophenol: 89 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9512201-100
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 83.4%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9512201-10E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-8
Sample Type: Water

CHES Lab #: 9512201-10M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.2	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9512201-11AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	12
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	31
1,1-Dichloroethane	5	5	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 108 %
Toluene-d8: 112 %
p-BFB: 106 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9512201-11G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	51	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	51	ND
Chrysene	10	ND	4-Nitroaniline	51	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 50 %
2-Fluorobiphenyl: 61 %
Terphenyl-d14: 68 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9512201-11G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/26/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	51	ND
2,4-Dinitrophenol	51	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	51	ND
Pentachlorophenol	51	ND
Phenol	10	ND
2,4,5-Trichlorophenol	51	ND
2,4,6-Trichlorophenol	51	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 41 %
Phenol-d5: 31 %
2,4,6-Tribromophenol: 92 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9512201-110
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery

Acceptance Criteria

Hexabromobenzene: 77.7%

34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9512201-11E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	0.006	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-9
Sample Type: Water

CHES Lab #: 9512201-11M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.8	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9512201-12AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 107 %
Toluene-d8: 123 %
p-BFB: 109 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9512201-12G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 65 %
2-Fluorobiphenyl: 62 %
Terphenyl-d14: 48 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9512201-12G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 36 %
Phenol-d5: 29 %
2,4,6-Tribromophenol: 54 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9512201-120
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 78.7%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-10
Sample Type: Water

CHES Lab #: 9512201-12E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.001	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MW-10

Sample Type: Water

CHES Lab #: 9512201-12M

Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.2	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9512201-13AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	100	ND	1,2-Dichloropropane	25	ND
Benzene	25	ND	cis-1,3-Dichloropropene	25	ND
Bromodichloromethane	25	ND	trans-1,3-Dichloropropene	25	ND
Bromoform	25	ND	Ethylbenzene	25	ND
Bromomethane	50	ND	2-Hexanone	25	ND
2-Butanone	100	ND	Methylene chloride	100	ND
Carbon disulfide	50	ND	4-Methyl-2-pentanone	25	ND
Carbon tetrachloride	25	ND	Methyl-t-butylether (MTBE)	50	ND
Chlorobenzene	25	ND	Styrene	25	ND
Chloroethane	50	ND	1,1,2,2-Tetrachloroethane	25	ND
2-Chloroethyl vinyl ether	50	ND	Tetrachloroethene	25	ND
Chloroform	25	ND	Toluene	25	ND
Chloromethane	50	ND	1,1,1-Trichloroethane	25	380
Dibromochloromethane	25	ND	1,1,2-Trichloroethane	25	ND
Dibromoethane (EDB)	25	ND	Trichloroethene	25	ND
1,1-Dichloroethane	25	230	Trichlorofluoromethane	25	ND
1,2-Dichloroethane	25	ND	Vinyl acetate	50	ND
1,1-Dichloroethene	25	ND	Vinyl chloride	50	ND
trans-1,2-Dichloroethene	25	ND	Total xylenes	25	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 98 %
Toluene-d8: 112 %
p-BFB: 97 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9512201-13G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95

Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 41 %
2-Fluorobiphenyl: 39 %
Terphenyl-d14: 87 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9512201-13G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 28 %
Phenol-d5: 23 %
2,4,6-Tribromophenol: 84 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9512201-130
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 74.5%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9512201-13E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	12/19/95	12/20/95	4.1.1/206.2(a)
Lead - Dissolved	0.001	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-11
Sample Type: Water

CHES Lab #: 9512201-13M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.6	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9512201-14AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	40	ND	1,2-Dichloropropane	10	ND
Benzene	10	ND	cis-1,3-Dichloropropene	10	ND
Bromodichloromethane	10	ND	trans-1,3-Dichloropropene	10	ND
Bromoform	10	ND	Ethylbenzene	10	ND
Bromomethane	20	ND	2-Hexanone	10	ND
2-Butanone	40	ND	Methylene chloride	40	ND
Carbon disulfide	20	ND	4-Methyl-2-pentanone	10	ND
Carbon tetrachloride	10	ND	Methyl-t-butylether (MTBE)	20	ND
Chlorobenzene	10	ND	Styrene	10	ND
Chloroethane	20	ND	1,1,2,2-Tetrachloroethane	10	ND
2-Chloroethyl vinyl ether	20	ND	Tetrachloroethene	10	ND
Chloroform	10	ND	Toluene	10	ND
Chloromethane	20	ND	1,1,1-Trichloroethane	10	ND
Dibromochloromethane	10	ND	1,1,2-Trichloroethane	10	ND
Dibromoethane (EDB)	10	ND	Trichloroethene	10	ND
1,1-Dichloroethane	10	15	Trichlorofluoromethane	10	ND
1,2-Dichloroethane	10	ND	Vinyl acetate	20	ND
1,1-Dichloroethene	10	ND	Vinyl chloride	20	ND
trans-1,2-Dichloroethene	10	150	Total xylenes	10	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 98 %
Toluene-d8: 109 %
p-BFB: 95 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9512201-14G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	23	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 60 %
2-Fluorobiphenyl: 59 %
Terphenyl-d14: 57 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9512201-14G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 45 %
Phenol-d5: 35 %
2,4,6-Tribromophenol: 87 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9512201-140
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 65.3%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9512201-14E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Arsenic - Dissolved	0.002	ND	12/19/95	12/20/95	4.1.1/206.2(a)
Lead - Dissolved	0.001	ND	12/19/95	01/02/96	4.1.1/239.2(a)
Zinc - Dissolved	0.04	2.0	12/19/95	01/04/96	4.1.1/200.7(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-12
Sample Type: Water

CHES Lab #: 9512201-14M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.5	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9512201-15AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/31/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 101 %
Toluene-d8: 115 %
p-BFB: 97 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9512201-15G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	19	ND	Dimethylphthalate	19	ND
Acenaphthylene	19	ND	Di-n-butylphthalate	19	ND
Anthracene	19	ND	2,4-Dinitrotoluene	19	ND
Benzo(a)anthracene	19	ND	2,6-Dinitrotoluene	19	ND
Benzo(a)pyrene	19	ND	Di-n-octylphthalate	19	ND
Benzo(b)fluoranthene	19	ND	Fluoranthene	19	ND
Benzo(g,h,i)perylene	19	ND	Fluorene	19	ND
Benzo(k)fluoranthene	19	ND	Hexachlorobenzene	19	ND
Bis(2-chloroethoxy)methane	19	ND	Hexachlorobutadiene	19	ND
Bis(2-chloroethyl)ether	19	ND	Hexachlorocyclopentadiene	19	ND
Bis(2-chloroisopropyl)ether	19	ND	Hexachloroethane	19	ND
Bis(2-ethylhexyl)phthalate	38	ND	Indeno(1,2,3-cd)pyrene	19	ND
4-Bromophenyl phenyl ether	19	ND	Isophorone	19	ND
Butylbenzylphthalate	19	ND	2-Methylnaphthalene	19	ND
4-Chloroaniline	19	ND	Naphthalene	19	ND
2-Chloronaphthalene	19	ND	2-Nitroaniline	94	ND
4-Chlorophenyl phenyl ether	19	ND	3-Nitroaniline	94	ND
Chrysene	19	ND	4-Nitroaniline	94	ND
Dibenzo(a,h)anthracene	19	ND	Nitrobenzene	19	ND
Dibenzofuran	19	ND	N-Nitroso-di-n-propylamine	19	ND
1,2-Dichlorobenzene	19	ND	N-Nitrosodiphenylamine	19	ND
1,3-Dichlorobenzene	19	ND	Phenanthrene	19	ND
1,4-Dichlorobenzene	19	ND	Pyrene	19	ND
3,3'-Dichlorobenzidine	38	ND	1,2,4-Trichlorobenzene	19	ND
Diethylphthalate	19	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 67 %
2-Fluorobiphenyl: 76 %
Terphenyl-d14: 62 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9512201-15G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	19	ND
2-Chlorophenol	19	ND
2,4-Dichlorophenol	19	ND
2,4-Dimethylphenol	19	ND
4,6-Dinitro-2-methylphenol	94	ND
2,4-Dinitrophenol	94	ND
2-Methylphenol	19	ND
4-Methylphenol	19	ND
2-Nitrophenol	19	ND
4-Nitrophenol	94	ND
Pentachlorophenol	94	ND
Phenol	19	ND
2,4,5-Trichlorophenol	94	ND
2,4,6-Trichlorophenol	94	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Additional compounds observed in sample.

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 48 %
Phenol-d5: 41 %
2,4,6-Tribromophenol: 102 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9512201-150
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	3.8	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 88.5%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9512201-15E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.001	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MW-13
Sample Type: Water

CHES Lab #: 9512201-15M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.3	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9512201-16AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 101 %
Toluene-d8: 118 %
p-BFB: 101 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.

Sample I.D.: MR-1SS

Sample Type: Water

CHES Lab #: 9512201-16G

Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95

Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 66 %
2-Fluorobiphenyl: 61 %
Terphenyl-d14: 44 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9512201-16G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 51 %
Phenol-d5: 39 %
2,4,6-Tribromophenol: 75 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9512201-160
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 62.6%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9512201-16E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.001	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-1SS
Sample Type: Water

CHES Lab #: 9512201-16M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.1	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9512201-17AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	5	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	12
trans-1,2-Dichloroethene	5	140	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 104 %
Toluene-d8: 115 %
p-BFB: 103 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9512201-17G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	19	ND	Dimethylphthalate	19	ND
Acenaphthylene	19	ND	Di-n-butylphthalate	19	ND
Anthracene	19	ND	2,4-Dinitrotoluene	19	ND
Benzo(a)anthracene	19	ND	2,6-Dinitrotoluene	19	ND
Benzo(a)pyrene	19	ND	Di-n-octylphthalate	19	ND
Benzo(b)fluoranthene	19	ND	Fluoranthene	19	ND
Benzo(g,h,i)perylene	19	ND	Fluorene	19	ND
Benzo(k)fluoranthene	19	ND	Hexachlorobenzene	19	ND
Bis(2-chloroethoxy)methane	19	ND	Hexachlorobutadiene	19	ND
Bis(2-chloroethyl)ether	19	ND	Hexachlorocyclopentadiene	19	ND
Bis(2-chloroisopropyl)ether	19	ND	Hexachloroethane	19	ND
Bis(2-ethylhexyl)phthalate	38	ND	Indeno(1,2,3-cd)pyrene	19	ND
4-Bromophenyl phenyl ether	19	ND	Isophorone	19	ND
Butylbenzylphthalate	19	ND	2-Methylnaphthalene	19	ND
4-Chloroaniline	19	ND	Naphthalene	19	ND
2-Chloronaphthalene	19	ND	2-Nitroaniline	94	ND
4-Chlorophenyl phenyl ether	19	ND	3-Nitroaniline	94	ND
Chrysene	19	ND	4-Nitroaniline	94	ND
Dibenzo(a,h)anthracene	19	ND	Nitrobenzene	19	ND
Dibenzofuran	19	ND	N-Nitroso-di-n-propylamine	19	ND
1,2-Dichlorobenzene	19	ND	N-Nitrosodiphenylamine	19	ND
1,3-Dichlorobenzene	19	ND	Phenanthrene	19	ND
1,4-Dichlorobenzene	19	ND	Pyrene	19	ND
3,3'-Dichlorobenzidine	38	ND	1,2,4-Trichlorobenzene	19	ND
Diethylphthalate	19	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 72 %
2-Fluorobiphenyl: 78 %
Terphenyl-d14: 66 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9512201-17G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	19	ND
2-Chlorophenol	19	ND
2,4-Dichlorophenol	19	ND
2,4-Dimethylphenol	19	ND
4,6-Dinitro-2-methylphenol	94	ND
2,4-Dinitrophenol	94	ND
2-Methylphenol	19	ND
4-Methylphenol	19	ND
2-Nitrophenol	19	ND
4-Nitrophenol	94	ND
Pentachlorophenol	94	ND
Phenol	19	ND
2,4,5-Trichlorophenol	94	ND
2,4,6-Trichlorophenol	94	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 49 %
Phenol-d5: 39 %
2,4,6-Tribromophenol: 99 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9512201-170
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 74.8%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9512201-17E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	0.009	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: MR-2SS
Sample Type: Water

CHES Lab #: 9512201-17M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	6.0	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-3)
Sample Type: Water

CHES Lab #: 9512201-18AB
Date Received: 12/18/95

Volatile Organics - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	1000	ND	1,2-Dichloropropane	250	ND
Benzene	250	ND	cis-1,3-Dichloropropene	250	ND
Bromodichloromethane	250	ND	trans-1,3-Dichloropropene	250	ND
Bromoform	250	ND	Ethylbenzene	250	ND
Bromomethane	500	ND	2-Hexanone	250	ND
2-Butanone	1000	ND	Methylene chloride	1000	ND
Carbon disulfide	500	ND	4-Methyl-2-pentanone	250	ND
Carbon tetrachloride	250	ND	Methyl-t-butylether (MTBE)	500	ND
Chlorobenzene	250	ND	Styrene	250	ND
Chloroethane	500	ND	1,1,2,2-Tetrachloroethane	250	ND
2-Chloroethyl vinyl ether	500	ND	Tetrachloroethene	250	ND
Chloroform	250	ND	Toluene	250	ND
Chloromethane	500	ND	1,1,1-Trichloroethane	250	360
Dibromochloromethane	250	ND	1,1,2-Trichloroethane	250	ND
Dibromoethane (EDB)	250	ND	Trichloroethene	250	400
1,1-Dichloroethane	250	250	Trichlorofluoromethane	250	ND
1,2-Dichloroethane	250	ND	Vinyl acetate	500	ND
1,1-Dichloroethene	250	ND	Vinyl chloride	500	ND
trans-1,2-Dichloroethene	250	5,300	Total xylenes	250	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 109 %
Toluene-d8: 121 %
p-BFB: 106 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-3)
Sample Type: Water

CHES Lab #: 9512201-18G
Date Received: 12/18/95

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 63 %
2-Fluorobiphenyl: 63 %
Terphenyl-d14: 56 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-3)
Sample Type: Water

CHES Lab #: 9512201-18G
Date Received: 12/18/95

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 44 %
Phenol-d5: 36 %
2,4,6-Tribromophenol: 85 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-3)
Sample Type: Water

CHES Lab #: 9512201-180
Date Received: 12/18/95

Polychlorinated Biphenyls (PCBs)
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95
Analysis Date: 12/28/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 67.1%	34-104%



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-3)
Sample Type: Water

CHES Lab #: 9512201-18E
Date Received: 12/18/95

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	0.013	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: BLIND DUPLICATE (MW-3)
Sample Type: Water

CHES Lab #: 9512201-18M
Date Received: 12/18/95

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
pH	--	5.5	--	12/19/95	150.1(a)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.



Client: Clean Harbors Environmental Services, Inc.
Sample I.D.: TRIP BLANK
Sample Type: Water

CHES Lab #: 9512201-19AB
Date Received: 12/18/95

Volatile Organics - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 101 %
Toluene-d8: 108 %
p-BFB: 104 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9512201

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/30/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 105%
Toluene-d8: 117%
p-BFB: 100%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 98%
Toluene-d8: 115%
p-BFB: 100%

Acceptance Criteria:

Water	Soil
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System D
by EPA Method 624 (ref. f)

Analysis Date: 12/29/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 100%
Toluene-d8: 109%
p-BFB: 107%

Acceptance Criteria:

Water	Soil
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Volatile Organics Blank - System E
by EPA Method 624 (ref. f)

Analysis Date: 12/31/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 103%
Toluene-d8: 117%
p-BFB: 101%

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
72-122%	70-121%
86-123%	84-138%
83-123%	59-113%



Semi-Volatile Base/Neutral Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95
Analysis Date: 12/22/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 60 %
2-Fluorobiphenyl: 62 %
Terphenyl-d14: 57 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Semi-Volatile Acid Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/21/95

Analysis Date: 12/22/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 22 %
Phenol-d5: 25 %
2,4,6-Tribromophenol: 64 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Semi-Volatile Base/Neutral Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95

Analysis Date: 12/28/95

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 62 %
2-Fluorobiphenyl: 63 %
Terphenyl-d14: 55 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%



Semi-Volatile Acid Extractable Organics Blank - System A
by EPA Method 625 (ref. f)

Extraction Date: 12/22/95

Analysis Date: 12/28/95

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)

* = ug/l

QA/QC

Surrogate Recoveries:

2-Fluorophenol: 43 %
Phenol-d5: 37 %
2,4,6-Tribromophenol: 69 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
21-100%	25-121%
10-94%	24-113%
10-123%	19-122%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9512201

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 608 (ref. f)

Extraction Date: 12/22/95

Analysis Date: 12/27/95

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery	Acceptance Criteria
Hexabromobenzene: 73.4%	34-104%



Client: Clean Harbors Environmental Services, Inc.

CHES Lab #: 9512201

BLANK ANALYSIS

METALS

Parameter	PQL*	Result*	Filtration Date	Analysis Date	Method Number and Reference
Lead - Dissolved	0.005	ND	12/19/95	01/02/96	4.1.1/239.2(a)

Notes: ND = Below practical quantitation limit (PQL)

* = mg/l

Soil/solid samples based on sample dry weight