

**Superfund Records Center**SITE: Wells G&H 002BREAK: 22OTHER: 448686**ADDENDUM TO CORRECTIVE ACTION
INVESTIGATION REPORT
(PART II)****MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS 01801****Prepared for:****Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts 01801****Prepared by:****Clean Harbors Environmental Services, Inc.
1501 Washington Street
Braintree, Massachusetts 02185-0327****December 11, 1998**

**ADDENDUM TO CORRECTIVE ACTION
INVESTIGATION REPORT
(PART II)**

**MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS 01801**

CHES Job No. EN-170

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JULES B. SELDEN
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LAW DEPARTMENT
(781) 849-1800
FAX (781) 356-1375

December 11, 1998

Massachusetts Department of Environmental Protection
Attention: John A. Carrigan
Bureau of Waste Prevention
Business Compliance Division
Compliance Assessment Branch
1 Winter Street
Boston, Massachusetts 02108

Re: Murphy's Waste Oil Service, Inc.

Dear Mr. Carrigan:

Enclosed please find four (4) copies of the report entitled "Addendum to Corrective Action Investigation Report (Part II)" for the Murphy's Waste Oil Service, Inc. site.

If you have any questions, please contact myself or Jay McCreery at (781) 849-1800, extensions 4182 and 1399, respectively.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jules B. Selden".

Jules B. Selden
Senior Counsel

Enclosures



Massachusetts Department of Environmental Protection
Attention: John A. Carrigan
December 11, 1998
Page 2

cc: Charles J. McCreery - CHES (w/o enc)
Stephen Applebaum - CHES (w/o enc)
Dana Simpson - CHES (w/o enc)
Norman Nelhuebel - CHES (w/o enc)
Scott Day - CHES (w/o enc)
Ms. Joan Murphy/Old Oil Realty Trust (enc)
George P. Luker, Esq./Old Oil Realty Trust (w/o enc)
Edward Pawlowski - MA DEP (enc)
Mary Garren - USEPA (3 enc)
Robert Brackett - USEPA (w/o enc)
Woburn Conservation Commission (enc)
James R. Greacen - ReTec (enc)



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INTRODUCTION

Clean Harbors Environmental Services, Inc. (CHES) has prepared this *Addendum to Corrective Action Investigation Report - Part II (CARP Part II Addendum)* for the property located at 252 Salem Street and 252 Rear Salem Street in Woburn, Massachusetts (the site). The site is owned by Old Oil Realty Trust and is leased by Murphy's Waste Oil Service, Inc. (Murphy's), a transfer, storage and disposal facility for waste oil and solvent-contaminated oil.

This *CARP Part II Addendum* was prepared pursuant to the requirements of the RCRA Part B Permit issued by the Massachusetts Department of Environmental Protection (DEP) to Murphy's effective October 19, 1993. Section 10.e of the Part B Permit requires a Corrective Action Investigation of the site if DEP determines that there has been or there is the potential for a release from the facility or if previous subsurface investigations indicate that groundwater has been affected by the facility.

An initial *Hydrogeologic Characterization Report*, dated February 1, 1994, was prepared by CHES and submitted to DEP to document three subsurface investigations which were performed on the site by CHES between December 1987 and February 1989. The *Hydrogeologic Characterization Report* included results of the previous investigations, a summary of the geology and hydrogeology of the site area, and descriptions of pertinent site features. The report also included information on petroleum use, past spills and a Short-Term Remedial Measure which was performed on the site in March and April 1989 to remove 1,100 cubic yards of petroleum-contaminated soil during construction of the waste oil facility building and tank farm.

A *Scope of Work for Subsurface Investigation*, dated June 30, 1994, was subsequently prepared to address requirements of Section 10.b.1 of the RCRA Part B Permit. The *Scope of Work* incorporated information from the report, *Draft Remedial Investigation, Southwest Properties, Wells G&H Superfund Site, Woburn, Massachusetts*, which was

prepared by Remediation Technologies, Inc. (ReTec) for Beatrice Corporation in February 1994. The Murphy's site is located in the southwest corner of the area under investigation for the Central Area Remedial Investigation/Feasibility Study of the Wells G&H Site. An *Addendum I to Hydrogeologic Characterization Report (Addendum)*, dated January 31, 1995, was prepared by CHES and submitted to DEP to summarize findings of the ReTec investigation as they relate to the Murphy's site and to document additional investigation which was performed in accordance with the *Scope of Work*.

In a letter dated May 1, 1995, DEP determined that, based on results of the investigations documented in the *Hydrogeologic Characterization Report* and *Addendum*, soils, surface water, and groundwater at the facility have been impacted by releases from the site, and implementation of a Corrective Action Investigation was required. A Corrective Action Investigation was subsequently implemented during the period of October 1995 through March 1996 (Part I CAI). Results of the investigation were documented in the *Corrective Action Investigation Report (CARP [Part I])*, dated April 15, 1996.

Previous subsurface investigations summarized in the *CARP (Part I)* identified oil-impacted soils in the northern portion of the Murphy's site. Total petroleum hydrocarbons (TPH) were detected at concentrations up to 16,000 mg/kg in the soils. Other contaminants were found in association with oily soils in this area, including polynuclear aromatic hydrocarbon compounds (PAHs) and chlorinated volatile organic compounds (CVOCs).

Analytical data presented in the *CARP (Part I)* indicated the presence of CVOCs in shallow groundwater in the northern portion of the site. Specific compounds detected included 1,2-DCE, TCE, 1,1-DCA and 1,1,1-TCA at total concentrations up to 6,310 ug/l. The CVOC in greatest abundance was 1,2-DCE, which accounted for 84% of the CVOCs detected. The source of the CVOCs in groundwater was not determined.

Based on findings of the *CARP (Part I)*, DEP required that additional assessment be performed to further delineate the extent of contamination in groundwater, soils and surface water at the site. To address this requirement, a Part II Corrective Action Investigation (Part II CAI) was implemented during the period of October 1997 through January 1998, the results of which were documented in the *CARP (Part II)* report, dated March 16, 1998.

The Part II CAI confirmed the presence of TPH- and CVOC-impacted soils in the northern portion of the site and indicated a probable source in the area of the former aboveground storage tanks. CVOCs were detected in soils above the groundwater table in the area of the former tanks and in samples of shallow groundwater from monitoring wells MW-3, MW-16 and MW-19 northeast of the former tanks. No evidence was found during the Part I or II CAIs that CVOCs are migrating in groundwater from the site. However, low concentrations of CVOCs were detected in a water sample from an off-site sewer manhole (SMH-5) which receives flow from the north-adjacent Wildwood property and from a sewer line that crosses the northern portion of the Murphy's site.

As discussed in the *CARP (Part II)* report, the Wildwood property north of the Murphy's site is part of the Wells G&H Site and is currently the subject of soil and groundwater remediation. ReTec has installed a groundwater extraction system on the Wildwood property to address CVOCs present in the groundwater which originated from separate sources on that property. CVOCs have been detected on the Wildwood property at total concentrations up 430,000 ug/l, where TCE accounted for 83% to 92% of the total concentration. As such, a goal of the Scope of Work described below was to evaluate if CVOCs identified in sewer manhole SMH-5 may have originated from the Murphy's site or the Wildwood property.

SCOPE OF WORK FOR ADDITIONAL INVESTIGATION

In order to satisfy the requirements of the RCRA Part B Permit for the Murphy's facility, additional investigation was proposed by CHES in the *CARP (Part II)* report to evaluate the relationship of CVOCs in shallow groundwater in the northern portion of the site and in water in sewer manhole SMH-5. The scope of work for investigation, which is described below, was approved by the DEP in a letter dated July 13, 1998. A copy of the DEP letter is presented in Appendix A. The scope of work included the following tasks:

- collection of water samples for analysis of VOCs from three sewer manholes on the site and adjacent properties;
- installation of an additional well point in the wetland on the Whitney Barrel property;

- collection of groundwater samples from four monitoring wells on the site and adjacent properties for analysis of VOCs; and
- an evaluation to determine if a Substantial Release Migration from the site exists posing an imminent threat which may require Immediate Response Actions to prevent exposure of human and environmental receptors to site contaminants.

SUBSURFACE INVESTIGATION

Sewer Manhole Sampling and Analytical Results

Based on water level monitoring and determination of sewer invert elevations performed during the Part II CAI (and documented in the *CARP [Part II]*), the City of Woburn sewer line intersects the groundwater table between sewer manholes SMH-3 and SMH-4 on the Murphy's site, and is below the groundwater table at sewer manholes SMH-4 and SMH-5 (Figure 1). Water samples were collected from manholes SMH-3, SMH-4 and SMH-5 during the Part II CAI in December 1997 to evaluate if CVOCs may leak from the site groundwater into the sewer. No CVOCs were detected in either sample from SMH-3 or SMH-4 on the Murphy's site. CVOCs were detected at low concentrations in the sample from manhole SMH-5 on the downgradient Whitney Barrel property, including TCE (19 ug/l) and 1,2-DCE (23 ug/l).

On August 25, 1998, additional sampling of the sewer manholes was performed to evaluate possible sources of CVOCs observed in the sample from SMH-5. Samples were collected from sewer manhole SMH-4 on the Murphy's site, SMH-5 on the Whitney Barrel property, and the next sewer manhole (SMH-6) on the Wildwood property upstream from SMH-5 (Figure 1). At the time of sampling, the flow at manhole SMH-6 was estimated to be approximately five times the flow observed at SMH-4. The manholes were sampled using a remote sampler, which was decontaminated between sample points. The samples were preserved in the field, kept chilled and delivered to SciLab Boston, Inc. in Weymouth, Massachusetts for analysis of VOCs (by EPA Method 8260). A trip blank was prepared in advance by the laboratory which accompanied the samples for quality control.

The analytical results are presented in Appendix B and are summarized in Table 2. Similar to the December 1997 results, TCE and 1,2-DCE were not detected in the sample from SMH-4 on the Murphy's property, however, both of these compounds were detected at low concentrations (3.6 ug/l and 5.8 ug/l, respectively) in the sample from SMH-5 on the Whitney Barrel property. These compounds were also detected at higher concentrations (8.0 ug/l and 8.8 ug/l, respectively) in the sample from SMH-6 on the Wildwood property. Low concentrations of other VOCs were detected in the sewer samples (Table 2), including toluene (6.7 ug/l), 4-isopropyl toluene (13.5 ug/l), acetone (up to 106 ug/l), and chloroform (up to 24.4 ug/l).

Well Point Installation

On August 26, 1998, a new well point (MW-21) was installed in the wetland on the Whitney Barrel property to supplement the shallow monitoring well network and to further delineate the distribution of CVOCs in the shallow groundwater. MW-21 was installed midway between existing well MW-19 and Production Well #2 (shown in Figure 1), and the well was manually-driven in the wetland to a depth of 5.5 feet below grade. The well was constructed of 1¹/₄-inch diameter stainless steel 36-inch long V-slot wire-wound 0.01-inch screen. A section of galvanized steel riser pipe was threaded onto the top of the screen and was fitted with a threaded cap. The Completion Report for well MW-21 is presented in Appendix C. Well MW-21 was developed on September 1, 1998 using a surface pump. Groundwater was purged from the well until clear. A slow pumping rate was used to avoid dewatering the screened interval.

A tape and stadia survey was performed on September 1, 1998 to determine the location and rim elevation of well MW-21. The elevation was determined to the nearest one-hundredth of a foot relative to the site datum (National Geodetic Vertical Datum of 1929). The reference (rim) elevation of the well is listed in Table 1.

Groundwater Sampling and Analytical Results

Four monitoring wells on the site and adjacent properties were sampled on September 1, 1998 to verify previous results and to further delineate the extent of CVOCs in the shallow

groundwater. Water samples were obtained from well MW-19 on the Murphy's site and wells MW-21, MW-4S and BW-3 on the Whitney Barrel property. Water levels in the wells were gauged prior to purging and sampling (Table 1). Water samples were collected from the wells using a surface-mounted peristaltic pump (MW-19 and MW-21) and low-flow submersible pump (MW-4S and BW-3). The wells were purged prior to sampling by removal of at least three casing volumes of groundwater to assure that representative samples were obtained. The samples were preserved in the field, kept chilled and delivered to SciLab Boston, Inc. in Weymouth, Massachusetts for analysis of VOCs (by EPA Method 8260). A trip blank was prepared in advance by the laboratory which accompanied the samples for quality control.

The groundwater analytical results are presented in Appendix D and are summarized in Table 3 with previous data from wells in the northern portion of the site and adjacent off-site properties. As observed previously, elevated CVOC concentrations were detected in the groundwater sample from well MW-19 (total concentration of 1,922 ug/l). 1,2-DCE accounted for approximately 86% of the CVOCs in the sample, as compared to an average of 94.5% in previous samples from the same well. Other CVOCs detected in the sample from MW-19 included 1,1-DCA (107 ug/l), 1,1,1-TCA (73 ug/l), TCE (20 ug/l), and vinyl chloride (61 ug/l). CVOCs were not detected in the groundwater samples from wells MW-4S, BW-3 and MW-21 located on the Whitney Barrel property. Figure 2 shows the distribution of CVOCs in shallow groundwater in the northern portion of the site based on existing groundwater analytical results.

SUMMARY AND DISCUSSION

As discussed in the *CARP (Part II)* report, the source of CVOCs in shallow groundwater on the Murphy's site is likely waste oil-impacted soil buried at depth in the northern portion of the site associated with the former aboveground storage tanks. Waste oil was stored in this portion of the site from the mid-1950s until prior to 1989. During operation of the Riley Production Well #2 (see Page 24 of the *CARP [Part II]*), the cone of depression of the production well extended onto the Murphy's site, and volatile constituents in the waste oil-impacted soils below the groundwater table were likely drawn toward the well. Upon shutdown of the Riley well in 1989, natural hydraulic gradients were restored.

A groundwater contour plan constructed using shallow well gauging data collected on November 17, 1997 during the Part II CAI is presented in Figure 1. The regional groundwater flow direction in the site area was observed to be to the northeast toward the Aberjona River at a hydraulic gradient of approximately 0.5%. Downward vertical gradients prevail over the northern portion of the site at values ranging from -0.1% to -0.9%.

Based on the groundwater analytical results presented above, the extent of CVOCs in shallow groundwater in the northern portion of the Murphy's site appears to be limited to the narrow plume shown in Figure 2. Groundwater analytical results of a sample collected from well MW-21 in August 1998 indicate that the plume does not extend appreciably past the City of Woburn sewer line. CVOCs have also not been detected in groundwater samples from well MW-4S on the Whitney Barrel property, indicating that contaminants are not migrating to the east along the outside of the sewer line. Downward migration of CVOCs has not been indicated by analyses of samples from deeper on-site wells MW-3D, MW-18D, or downgradient well MW-4M on the Whitney Barrel property.

Low CVOC concentrations have been detected in water samples from sewer manhole SMH-5 which receives flow from the Murphy's site and the Wildwood property. The analytical results of the sample from manhole SMH-6 indicate that the primary source of CVOCs in the sewer is located on the Wildwood property (or points further upstream from the Wildwood property). The analyses revealed higher CVOC concentrations in SMH-6 than SMH-5, indicating a dilutional effect of water entering SMH-5 from the Murphy's site.

EVALUATION OF SUBSTANTIAL RELEASE MIGRATION

As required by Condition 10.f.1.c of the RCRA Part B Permit for the Murphy's facility and Section 40.0113(1)(c) of the MCP, the sewer manhole and groundwater analytical results discussed above were evaluated to determine if a condition of Substantial Release Migration (SRM) exists at the site which could require implementation of an Immediate Response Action. As defined in Section 40.0413(1), a condition of SRM exists at a disposal site where the mechanism, rate or extent of contaminant transport, if not promptly addressed, is likely to substantially exacerbate site conditions or result in the exposure (or

continued exposure) of human or ecological populations to site contaminants. Specific conditions of SRM listed in Section 40.0413(2) which could potentially pertain to CVOCs in shallow groundwater in the northern portion of the Murphy's site include:

- releases to groundwater that have migrated or are expected to migrate more than 200 feet per year;
- releases to groundwater that have been or are within one year likely to be detected in a public or private water supply well;
- releases to groundwater that have or are within one year likely to result in the discharge of vapors into school buildings or occupied residential dwellings; and
- releases to groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir.

The groundwater analytical results to date indicate that the CVOC plume on the Murphy's site is limited in extent vertically and horizontally, and no evidence has been found that the plume is migrating from the site. Furthermore, no indications were found that the City of Woburn sewer line which passes through the northern portion of the Murphy's site is acting as a contaminant migratory pathway. Based on these findings, and because there are no public or private water supply wells or buildings located in the area of the CVOC plume, the first three conditions of SRM listed above do not apply to the site.

The fourth condition of SRM, specifically that of potential discharge of contaminants to surface water in the wetland, was addressed during the CAI Part I and Part II investigations. Surface water samples were collected in three locations in the wetland for analysis of VOCs. The sampling locations, including SW-A, SW-B and SW-3, are shown in Figure 2. SW-A was located adjacent to well MW-12 at the edge of the CVOC plume area. No CVOCs were detected in any of the surface water samples. Based on these analytical data, the age of the plume (greater than 10 years), and results of the CAI Part II which indicated a slight negative (downward) vertical hydraulic gradient, it is considered unlikely that CVOCs in the groundwater would impact surface water.

As stated above, ReTec has installed a groundwater extraction system on the Wildwood property to address CVOCs present in the groundwater which originated from separate sources on that property. The nearest of five extraction wells is located approximately 400 feet from the Murphy's property line. The pumping rate of each extraction well is anticipated to be less than 3 gallons per minute, and the remedial system is not expected to influence groundwater flow on the Murphy's site. As such, natural hydraulic gradients are expected to prevail on the site in the foreseeable future.

No existing conditions of SRM have been identified at the site, and no potential conditions were identified which could potentially exacerbate site conditions. Therefore, Immediate Response Actions are not considered necessary to prevent exposure of human or environmental receptors to site contaminants.

MUNICIPAL NOTIFICATION

Written notification of this *CARP (Part II) Addendum* has been forwarded to the City of Woburn Chief Municipal Officer and Board of Health in accordance with 310 CMR 40.1403. A copy of the letter is attached in Appendix E.

3941/CARP (Part II) Addendum



TABLE 1
WATER LEVEL DATA

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

Sample Date: September 1, 1998

Location	Well Depth <i>(feet)</i>	Purge Volume <i>(gal)</i>	Reference Elevation <i>(feet)</i>	Depth to Water <i>(feet)</i>	Water Elevation <i>(feet)</i>
MW-19	5.3	2	48.47	3.32	45.15
MW-21	5.5	2	47.74	2.17	45.57
MW-4S	11.6	6	46.53	1.28	45.25
BW-3	43.9	22	47.38	2.56	44.82

NOTES:

1. Well reference elevations are PVC rim except MW-19 and MW-21 (top of riser).
2. Wells analyzed for VOCs (8260).

Disk No. 3941

TABLE 2
SEWER MANHOLE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

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

Location	Date	Toluene <i>(ug/l)</i>	4-Isopropyl Toluene <i>(ug/l)</i>	Acetone <i>(ug/l)</i>	TCE <i>(ug/l)</i>	1,2-DCE <i>(ug/l)</i>	Chloroform <i>(ug/l)</i>
SMH-3	12/18/97	ND (25)	---	ND (100)	ND (25)	ND (25)	ND (25)
SMH-4	12/18/97	ND (5)	---	32	ND (5)	ND (5)	ND (5)
	8/25/98	ND (5)	13.5	106	ND (2)	ND (5)	5.1
SMH-5	12/18/97	ND (5)	---	110	19	23	ND (5)
	8/25/98	ND (5)	ND (5)	60.8	3.6	5.8	14.2
SMH -6	8/25/98	6.7	ND (5)	76.0	8.0	8.8	24.4
Trip Blank	8/25/98	ND (5)	ND (5)	ND (50)	ND (2)	ND (5)	ND (2)

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

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

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl- benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Acetone (ug/l)	Chloro- ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl- 2-pentanone (ug/l)	2-Butanone (ug/l)
MW-3 (Blind Dup.)	11/9/94	ND (13)	ND (13)	ND (13)	ND (13)	ND (25)	ND (50)	ND (25)	ND (5)	98	44	100	1,100	ND (25)	ND (5)	ND (50)
	11/7/95	ND (130)	ND (130)	ND (130)	ND (130)	ND (250)	ND (500)	ND (250)	ND (130)	ND(130)	160	140	2,200	ND(250)	ND (130)	ND(500)
	12/18/95	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	170	220	220	3,100	ND (50)	ND (25)	ND (100)
	12/18/95	ND (250)	ND (250)	ND (250)	ND (250)	ND (500)	ND (1,000)	ND (500)	ND (250)	250	360	400	5,300	ND (500)	ND (250)	ND (500)
	11/17/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	77	65	110	1,700	ND (100)	ND (50)	ND (200)
MW-3D	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	25	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-12	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	10	ND (5)	ND (5)	96	ND (10)	ND (5)	ND (20)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (20)	ND (40)	ND (20)	ND (10)	15	ND (10)	ND (10)	150	ND (20)	ND (10)	ND (40)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	14	ND (20)	ND (10)	ND (5)	9	ND (5)	ND (5)	60	ND (10)	ND (5)	ND (20)
MW-16	11/17/97	45	130	75	220	ND (10)	57	49	13	280	92	11	620	210	52	26
MW-17	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	6	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-18S	11/17/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	ND (50)	ND (50)	ND (50)	460	ND (100)	ND (50)	ND (200)
MW-18D	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-19	11/18/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	51	ND (50)	ND (50)	1,200	ND (100)	ND (50)	ND (200)
	1/7/98	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	32	ND (25)	ND (25)	450	ND (50)	ND (25)	ND (100)
	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	107	73	20	1,661	61	ND (50)	ND (50)
MW-21	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)
	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
BW-3	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4S	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4M	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4D	12/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	9	ND (5)	ND (10)	ND (5)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)	

TABLE 4
SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

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

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl- benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Acetone (ug/l)	Chloro- ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl- 2-pentanone (ug/l)	2-Butanone (ug/l)
SW-A	11/9/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SW-B	11/9/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	43	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SW-3	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)

Notes for Analytical Data Tables:

1. Laboratory analyses by EPA Method 624 or 8260, data shown in micrograms per liter (ug/l).
2. Practical Quantitation Limit shown in parentheses where compounds not detected (ND) or trace (Tr).
3. Only those compounds detected are shown.
4. Abbreviations are used for the following compounds:
 - 1,1-DCA = 1,1-Dichloroethane
 - 1,1,1-TCA = 1,1,1-Trichloroethane
 - 1,2-DCE = Trans-1,2-Dichloroethene and cis-1,2 -Dichloroethene
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - MTBE = Methyl-t-butyl ether



NOTES:

1. PROPERTY LINE AND FEATURES TAKEN FROM "PLAN OF LAND IN WOBURN, MASSACHUSETTS" BY NORTHEAST SURVEY, INC. 730 BOSTON POST ROAD, SUDBURY, MASSACHUSETTS 01776, SHEET 1 OF 1, JOB NO. 30688, DATED APRIL 1, 1988. WETLAND DELINEATED ON MURPHY'S PROPERTY BY SANFORD ECOLOGICAL SERVICES.

LEGEND

- 55.71
43.87
MW-6
- REFERENCE ELEVATION (TOP OF PVC) (FEET)
GROUNDWATER ELEVATION (FEET)
- EXISTING MONITORING WELL
- PROPERTY LINE
- SEWER LINE
- WATER LINE
- GUARD RAIL
- WOOD RAIL FENCE
- UTILITY POLE
- UTILITY BOX
- E.P.
- EDGE OF PAVEMENT
- HYDRANT
- SEWER MANHOLE
- APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM & WATER SERVICE
- 44.4
- GROUNDWATER CONTOUR

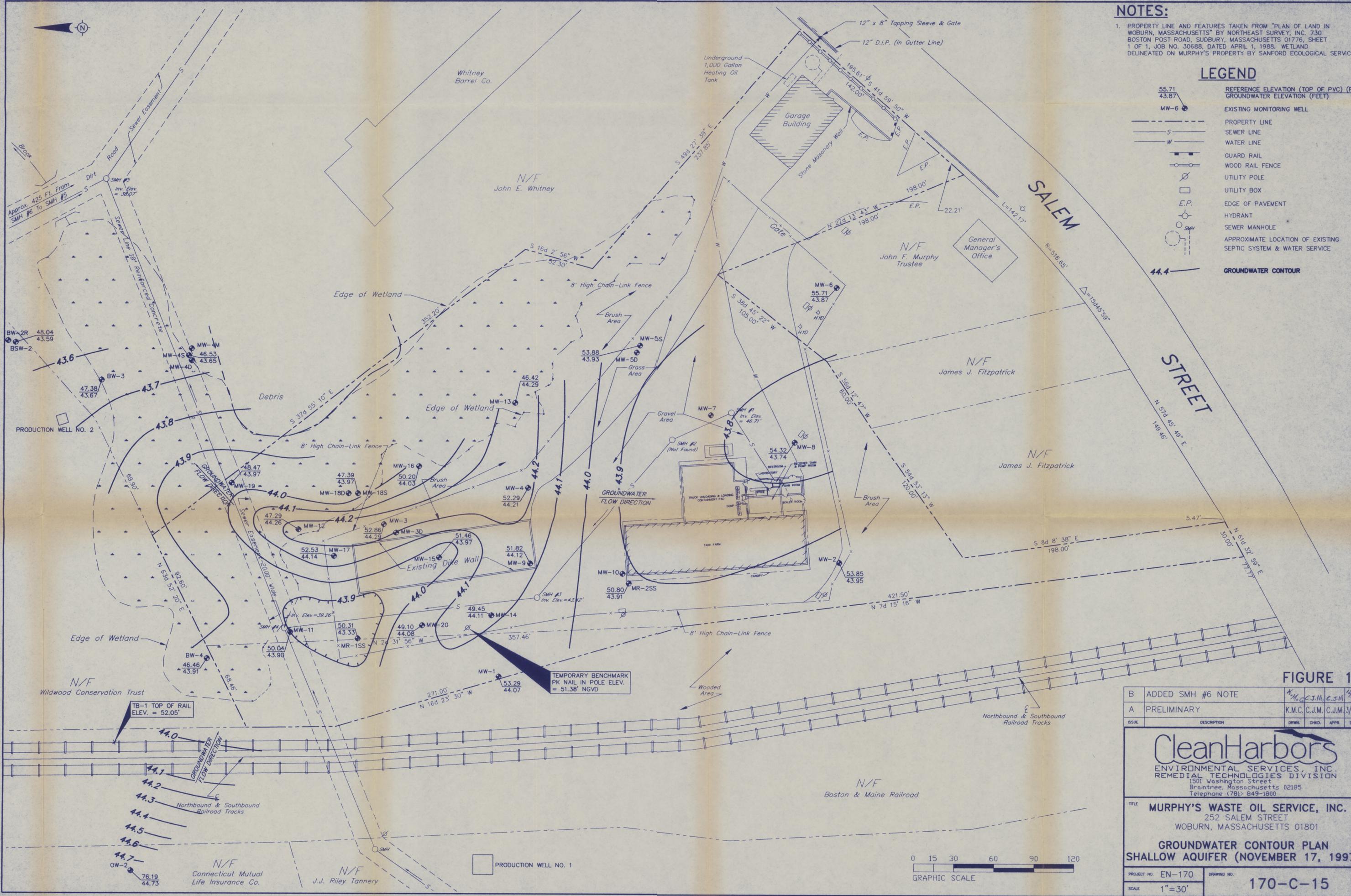


FIGURE 1

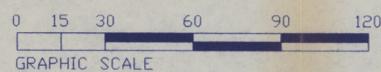
B	ADDED SMH #6 NOTE	K.M.C.	C.J.M.	C.J.M.	12/1/98
A	PRELIMINARY	K.M.C.	C.J.M.	C.J.M.	3/11/98
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE

CleanHarbors
 ENVIRONMENTAL SERVICES, INC.
 REMEDIAL TECHNOLOGIES DIVISION
 1501 Washington Street
 Broomfield, Massachusetts 02185
 Telephone (781) 849-1800

TITLE **MURPHY'S WASTE OIL SERVICE, INC.**
 252 SALEM STREET
 WOBURN, MASSACHUSETTS 01801

**GROUNDWATER CONTOUR PLAN
 SHALLOW AQUIFER (NOVEMBER 17, 1997)**

PROJECT NO. EN-170	DRAWING NO. 170-C-15
SCALE 1"=30'	







COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

ARGEO PAUL CELLUCCI
Governor

TRUDY COXE
Secretary

DAVID B. STRUHS
Commissioner

Certified Mail No. P 338 458 392

July 13, 1998

Jules B. Selden, Esq.
Clean Harbors Environmental Services, Inc.
Law Department
1501 Washington Street
P.O. Box 850327
Braintree, MA 02185- 0327

Re: Murphy's Waste Oil Service, Inc., EPA ID# MAD06658805 -
Additional Investigations - **Approval**

Dear Mr. Selden:

The Massachusetts Department of Environmental Protection, Bureau of Waste Prevention, Business Compliance Division (Department) is in the process of reviewing the report titled "Murphy's Waste Oil Services, Inc., Corrective Action Investigation Report (Part II)" and dated March 16, 1998 (Report). The Report was prepared on behalf of Murphy's Waste Oil Service, Inc. (Murphy's) by Clean Harbors Environmental Services, Inc. (CHES) of Braintree, Massachusetts. The Report is for Murphy's facility located at 252 Salem Street, Woburn, Massachusetts.

The Department has not completed its final review of the Report. However, as a result of our initial review the Department agrees with CHES that the additional assessment activities proposed in the Report should be performed. Therefore, the Department **approves** the proposed assessment activities described in the section of the Report titled Proposed Additional Investigation and Risk Evaluation.

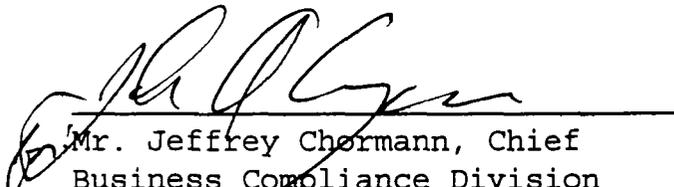
MrphScope.Apv
July 13, 1998

The activities shall be performed in accordance with the proposed schedule set out on page 26 of the Report. The proposed activities include:

- further assessment of the sewer line as a preferential migration pathway;
- installation of an additional shallow monitoring well on the Whitney Barrel property to further assess the distribution of chlorinated VOCs in the shallow groundwater between monitoring well MW-19S and the production well #2; and
- an imminent hazard evaluation to determine whether a condition of Substantial Release Migration exists and additional interim measures to mitigate an imminent threat are required.

Should you have any questions regarding this letter please contact Mr. Ralph Fine at 292-5866 or John Carrigan of my staff at (617) 292-5584.

Sincerely,



Mr. Jeffrey Chormann, Chief
Business Compliance Division
Compliance Assessment Branch

JHC/JAC/RF/rf

cc: Ms. Patricia Donahue
DEP/BWSC/NERO
205A Lowell Street
Wilmington, MA 01887

Ms. Jane Downing
USEPA- Region 1
Office of Ecosystem Protection
JFK Federal Building
Boston, MA 02203-2211

Health Agent
City Hall
Woburn, MA

MrphScope.Apv
July 13, 1998

Mr. Matt Hoagland
USEPA - Region 1
Office of Site Remediation & Restoration
JFK Federal Building
Boston, MA 02203-2211

Anna Mayor
DEP/BWSC
Boston, MA 02108

Ed Pawlowski
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Anna Stern
DEP/BWP/BC
Boston, MA 02108



SCILAB BOSTON, INC.
 25 Mathewson Drive
 Weymouth, Massachusetts 02189
 Telephone (617)337-9334
 Fax (617)337-8237

MA-MA069, CT-PH0119, RI-A45, NH-201196-C, NJ-59744, CA-2050
 SC-88013, NC-496, TN-02901, ME-MA069, NY-10982

L a b o r a t o r y R e p o r t

----- Prepared for -----

Clean Harbors
 1501 Washington St.

Braintree MA 02185
 Jay McCreery

Report Date 9/01/98
 Date Received 8/25/98
 Customer No. 0865-1
 Work Order No. 9808-00382
 Invoice No. LB 24631

Sampled Date 8/25/98
 Sampled Time 00:00
 Permit No.
 Project No. L70011
 Cust. P.O. MURPHY'S OIL

Subject: MURPHY'S OIL

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
001SMH #4							
Volatile Organics 8260	EPA 8260B				ATK	9/01/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloromethane	EPA 8260B	ND	ug/L	20	ATK	9/01/98	
Bromomethane	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrolein	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Acetone	EPA 8260B	106	ug/L	50	ATK	9/01/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Iodomethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
001SMH #4							
Vinyl Acetate	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
cis-1,2-Dichloroethylen	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Chloroform	EPA 8260B	5.1	ug/L	2	ATK	9/01/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Benzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Trichloroethylene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
Toluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	ATK	9/01/98	
Styrene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromoform	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
001SMH #4							
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Isopropyltoluene	EPA 8260B	13.5	ug/L	5	ATK	9/01/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	ATK	9/01/98	
Naphthalene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
DIBROMOFLUOROMETHANE (S		103	%		ATK	9/01/98	
TOLUENE-D8 (SURROGATE)		106	%		ATK	9/01/98	
4-BROMOFLUROBENZENE (S		97	%		ATK	9/01/98	
002SMH #5							
Volatile Organics 8260	EPA 8260B				ATK	9/01/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloromethane	EPA 8260B	ND	ug/L	20	ATK	9/01/98	
Bromomethane	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
002SMH #5							
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrolein	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Acetone	EPA 8260B	60.8	ug/L	50	ATK	9/01/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Iodomethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
cis-1,2-Dichloroethylen	EPA 8260B	5.8	ug/L	5	ATK	9/01/98	
Chloroform	EPA 8260B	14.2	ug/L	2	ATK	9/01/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Benzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Trichloroethylene	EPA 8260B	3.6	ug/L	2	ATK	9/01/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
Toluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
002SMH #5							
2-Hexanone	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	ATK	9/01/98	
Styrene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromoform	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	ATK	9/01/98	
Naphthalene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

L a b o r a t o r y R e p o r t

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
002SMH #5							
DIBROMOFLUOROMETHANE (S		103	%		ATK	9/01/98	
TOLUENE-D8 (SURROGATE)		108	%		ATK	9/01/98	
4-BROMOFLUOROBENZENE (S		99	%		ATK	9/01/98	
003SMH #6							
Volatile Organics 8260	EPA 8260B				ATK	9/01/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloromethane	EPA 8260B	ND	ug/L	20	ATK	9/01/98	
Bromomethane	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrolein	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Acetone	EPA 8260B	76.0	ug/L	50	ATK	9/01/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Iodomethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
cis-1,2-Dichloroethylen	EPA 8260B	8.8	ug/L	5	ATK	9/01/98	
Chloroform	EPA 8260B	24.4	ug/L	2	ATK	9/01/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
003SMH #6							
Benzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Trichloroethylene	EPA 8260B	8.0	ug/L	2	ATK	9/01/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
Toluene	EPA 8260B	6.7	ug/L	5	ATK	9/01/98	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	ATK	9/01/98	
Styrene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromoform	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
003SMH #6							
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	ATK	9/01/98	
Naphthalene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
DIBROMOFLUOROMETHANE (S		102	%		ATK	9/01/98	
TOLUENE-D8 (SURROGATE)		106	%		ATK	9/01/98	
4-BROMOFLUOROBENZENE (S		97	%		ATK	9/01/98	
004TRIP BLANK							
Volatile Organics 8260	EPA 8260B				ATK	9/01/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloromethane	EPA 8260B	ND	ug/L	20	ATK	9/01/98	
Bromomethane	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Chloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Acrolein	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Acetone	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Iodomethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Methylene Chloride	EPA 8260B	8.7	ug/L	5	ATK	9/01/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
004TRIP BLANK							
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
cis-1,2-Dichloroethylen	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Chloroform	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Benzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Trichloroethylene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
Toluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	ATK	9/01/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	ATK	9/01/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	ATK	9/01/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	ATK	9/01/98	
Styrene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
004TRIP BLANK							
Bromoform	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	ATK	9/01/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	ATK	9/01/98	
Naphthalene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	ATK	9/01/98	
DIBROMOFLUOROMETHANE (S		102	%		ATK	9/01/98	
TOLUENE-D8 (SURROGATE)		106	%		ATK	9/01/98	
4-BROMOFLUOROBENZENE (S		98	%		ATK	9/01/98	

To the best of my knowledge this report is true and accurate.

---- Continued on Next Page ----

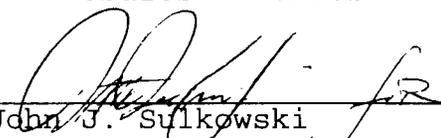
L a b o r a t o r y R e p o r t

Clean Harbors

Work Order No. 9808-00382

Report Date 9/01/98

Test Performed	Method	Results	Units	MDL	Tech	Analy.	Date	Qualifier
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Authorized by: 

John J. Sulkowski
Manager, Laboratory Services

CHAIN OF CUSTODY RECORD



SCILAB BOSTON, INC.

WORK ORDER NO. 98-08-38

8 School Street Weymouth, MA 02189-8951
781 337-9334 / FAX 781 337-7642

DUE DATE ~~8-30-98~~
9-1-98

COMPANY: CLEAN HARBORS
1501 WASHINGTON ST.
BRAINTREE

PHONE: (781) 844-1800 FAX #: (781) 741-1260

P.O.#: _____

CLIENT CONTACT: JAM MCCROERY

PROJECT #: MURPHY'S OIL

- SAMPLE TYPE**
- | | |
|-----------|-----------------|
| 1. WATER | 6. WIPES |
| 2. SOIL | 7. AIR CASSETTE |
| 3. SLUDGE | 8. OTHER |
| 4. OIL | |
| 5. CHIPS | |

- CONTAINER TYPE**
- P - PLASTIC
G - GLASS
V - VOA

VOCs BY 8260

Sample pH at Login

SCILAB SAMPLE #	CLIENT SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER			SAMPLING INFORMATION			PRESERVATIVES
			SIZE	TYPE	#	DATE	TIME	TECH	
1	SMH # 4	1		G	2	8/25	AM	TWN	HCL
2	SMH # 5	↓		↓	↓	↓	↓	↓	↓
3	SMH # 6	↓		↓	↓	↓	↓	↓	↓
4	TRIP BLANK	↓		↓	↓	↓	↓	↓	↓

REPORT PACKAGES

MWRA

NJPDES

RDR

MA. DEP

NJDEP (AIR)

COMPLIANCE

OTHER

* NOTES:
- SEPTIC SAMPLES

SAMPLED BY <u>Todd [Signature]</u>	DATE: <u>8/25/98</u>	RECEIVED BY <u>Chris Perot</u>	DATE: <u>8/25/98</u>
	TIME: <u>4am</u>		TIME: <u>6:45</u>
RELINQUISHED BY: <u>Todd [Signature]</u>	DATE: <u>8/25/98</u>	RECEIVED BY:	DATE:
	TIME: <u>1:45 PM</u>		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

Temperature upon receipt _____

SPECIAL INSTRUCTIONS

RUSH DATE REQUIRED
(ADDITIONAL COST MAY APPLY)

REGULAR **UST-TAT**
(10 BUSINESS DAYS) (5 DAY VERBAL)

Shade areas for Laboratory use only
Blue copy - Originator Retains
Submit White and Yellow copies to the Laboratory.





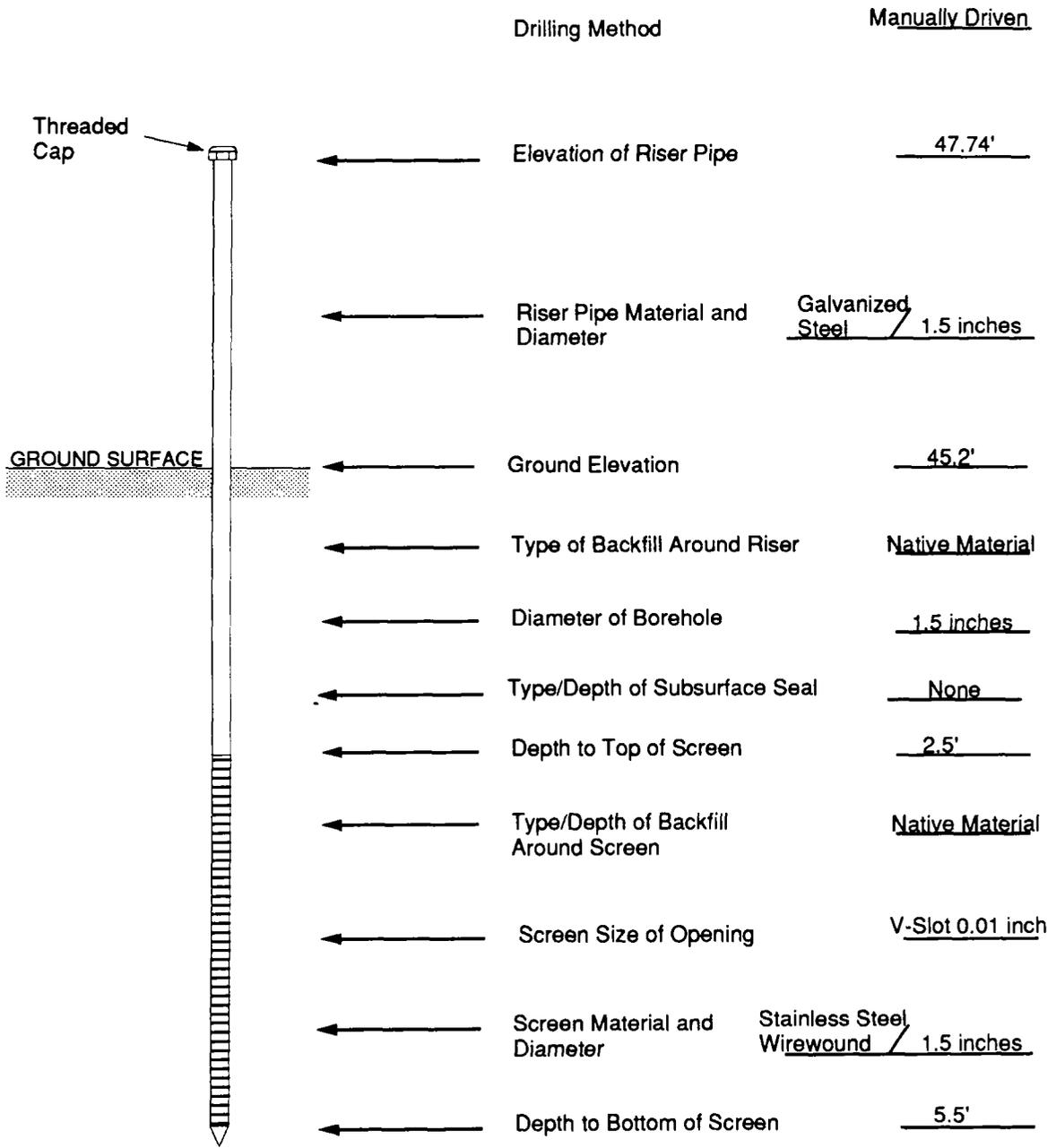
**Environmental Services, Inc.
Remedial Technologies Division**

1501 WASHINGTON STREET
BRAINTREE, MASSACHUSETTS 02185-0327
(781) 849-1800

Well Completion Report

Well No: MW-21

Project Name:	Murphy's Waste Oil Service, Inc.	
Project Location:	252 Salem Street, Woburn, MA	
CHES Job #:	EN-170	Inspector: T. Nickerson
Contractor:	None	
Driller:	T. Nickerson	Installation Date: 8/26/98





SCILAB BOSTON, INC.
 25 Mathewson Drive
 Weymouth, Massachusetts 02189
 Telephone (617)337-9334
 Fax (617)337-8237

MA-MA069, CT-PH0119, RI-A45, NH-201196-C, NJ-59744, CA-2050
 SC-88013, NC-496, TN-02901, ME-MA069, NY-10982

L a b o r a t o r y R e p o r t

----- Prepared for -----

Clean Harbors
 1501 Washington St.

Braintree MA 02185
 Mr. Jay McCreery

Report Date 9/09/98
 Date Received 9/01/98
 Customer No. 0865-1
 Work Order No. 9809-00017
 Invoice No. LB 24707

Sampled Date 9/01/98
 Sampled Time 00:00
 Permit No.
 Project No. L70011
 Cust. P.O.

Subject: MURPHY'S OIL

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
001MW-19							
Volatile Organics 8260	EPA 8260B				DPD	9/04/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Chloride	EPA 8260B	61	ug/L	1	DPD	9/04/98	
Chloromethane	EPA 8260B	ND	ug/L	20	DPD	9/04/98	
Bromomethane	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrolein	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Acetone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,1-Dichloroethylene	EPA 8260B	6	ug/L	1	DPD	9/04/98	
Iodomethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,2-Dichloroethyl	EPA 8260B	51	ug/L	5	DPD	9/04/98	
1,1-Dichloroethane	EPA 8260B	107	ug/L	5	DPD	9/04/98	

---- Continued on Next Page ----

Laboratory Report

Clean Harbors

Work Order No. 9809-00017

Report Date 9/09/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
001MW-19							
Vinyl Acetate	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
cis-1,2-Dichloroethylen	EPA 8260B	1610	ug/L	5	DPD	9/09/98	E
Chloroform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,1-Trichloroethane	EPA 8260B	73	ug/L	5	DPD	9/04/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Benzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Trichloroethylene	EPA 8260B	20	ug/L	2	DPD	9/04/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
Toluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	DPD	9/04/98	
Styrene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromoform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	

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Work Order No. 9809-00017

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
001MW-19							
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	DPD	9/04/98	
Naphthalene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
DIBROMOFLUOROMETHANE (S		99	%		DPD	9/04/98	
TOLUENE-D8 (SURROGATE)		106	%		DPD	9/04/98	
4-BROMOFLUROBENZENE (S		95	%		DPD	9/04/98	
002MW-21							
Volatile Organics 8260	EPA 8260B				DPD	9/04/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloromethane	EPA 8260B	ND	ug/L	20	DPD	9/04/98	
Bromomethane	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
002MW-21							
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrolein	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Acetone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Iodomethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
cis-1,2-Dichloroethylen	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Chloroform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Benzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Trichloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
Toluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
002MW-21							
2-Hexanone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	DPD	9/04/98	
Styrene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromoform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	DPD	9/04/98	
Naphthalene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
002MW-21							
DIBROMOFLUOROMETHANE (S		108	%		DPD	9/04/98	
TOLUENE-D8 (SURROGATE)		108	%		DPD	9/04/98	
4-BROMOFLUROBENZENE (S		101	%		DPD	9/04/98	
003MW-4S							
Volatile Organics 8260	EPA 8260B				DPD	9/04/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloromethane	EPA 8260B	ND	ug/L	20	DPD	9/04/98	
Bromomethane	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrolein	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Acetone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Iodomethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
cis-1,2-Dichloroethylen	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Chloroform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	DPD	9/04/98	

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
003MW-4S							
Benzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Trichloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
Toluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	DPD	9/04/98	
Styrene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromoform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
sec-Butlybenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	

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L a b o r a t o r y R e p o r t

Clean Harbors

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
003MW-4S							
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	DPD	9/04/98	
Naphthalene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
DIBROMOFLUOROMETHANE (S		109	%		DPD	9/04/98	
TOLUENE-D8 (SURROGATE)		111	%		DPD	9/04/98	
4-BROMOFLUROBENZENE (S		101	%		DPD	9/04/98	
004BW-3							
Volatile Organics 8260	EPA 8260B				DPD	9/04/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloromethane	EPA 8260B	ND	ug/L	20	DPD	9/04/98	
Bromomethane	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrolein	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Acetone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Iodomethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Methylene Chloride	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrylonitrile	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	DPD	9/04/98	

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
004BW-3							
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2-Butanone- (MEK)	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
cis-1,2-Dichloroethylen	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Chloroform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Benzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Trichloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
Toluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	DPD	9/04/98	
Styrene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	

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Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
004BW-3							
Bromoform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	DPD	9/04/98	
Naphthalene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
DIBROMOFLUOROMETHANE (S		104	%		DPD	9/04/98	
TOLUENE-D8 (SURROGATE)		108	%		DPD	9/04/98	
4-BROMOFLUROBENZENE (S		98	%		DPD	9/04/98	
005TRIP BLANK							
Volatile Organics 8260	EPA 8260B				DPD	9/04/98	
Dichlorodifluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Chloride	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloromethane	EPA 8260B	ND	ug/L	20	DPD	9/04/98	

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Laboratory Report

Clean Harbors

Work Order No. 9809-00017

Report Date 9/09/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
005TRIP BLANK							
Bromomethane	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Chloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Trichlorofluoromethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Acrolein	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Acetone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,1-Dichloroethylene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Iodomethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Carbon Disulfide	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Methylene Chloride	EPA 8260B	6	ug/L	5	DPD	9/04/98	B
Acrylonitrile	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,2-Dichloroethyl	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Vinyl Acetate	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2-Butanone-(MEK)	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
2,2-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
cis-1,2-Dichloroethylen	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Chloroform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Bromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1-Dichloropropene	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Carbon Tetrachloride	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Benzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Trichloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dichloropropane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
4-Methyl-2-Pentanone (M	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
Toluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
trans-1,3-Dichloroprope	EPA 8260B	ND	ug/L	1	DPD	9/04/98	
Bromodichloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	

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Laboratory Report

Clean Harbors

Work Order No. 9809-00017

Report Date 9/09/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
005TRIP BLANK							
1,1,2-Trichloroethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2-Dibromoethane	EPA 8260B	ND	ug/L	0.5	DPD	9/04/98	
2-Hexanone	EPA 8260B	ND	ug/L	50	DPD	9/04/98	
1,3-Dichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Tetrachloroethylene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Dibromochloromethane	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Chlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,1,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Ethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Total Xylenes	EPA 8260B	ND	ug/L	10	DPD	9/04/98	
Styrene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromoform	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
Isopropylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,1,2,2-Tetrachloroetha	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
n-Propylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Bromobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
2-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Chlorotoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
tert-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
sec-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
4-Isopropyltoluene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/L	2	DPD	9/04/98	
n-Butylbenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2-Dibromo-3-Chloropro	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
Hexachlorobutadiene	EPA 8260B	ND	ug/L	3	DPD	9/04/98	

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L a b o r a t o r y R e p o r t

Clean Harbors

Work Order No. 9809-00017

Report Date 9/09/98

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Qualifier
005TRIP BLANK							
Naphthalene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/L	5	DPD	9/04/98	
DIBROMOFLUOROMETHANE (S		97	%		DPD	9/04/98	
TOLUENE-D8 (SURROGATE)		106	%		DPD	9/04/98	
4-BROMOFLUROBENZENE (S		96	%		DPD	9/04/98	

To the best of my knowledge this report is true and accurate.

Authorized by:


 John J. Sulkowski
 Manager, Laboratory Services

CHAIN OF CUSTODY RECORD



SCILAB BOSTON, INC.

WORK ORDER NO. 98-09-017

8 School Street Weymouth, MA 02189-8951
781 337-9334 / FAX 781 337-7642

DUE DATE 9-9-98

COMPANY: CLEAN HARBORS

PHONE: (701) 549-1800 FAX #: ()

P.O.#: _____

CLIENT CONTACT: JAY McCREERY

PROJECT #: MURPHY'S OIL

- SAMPLE TYPE**
- 1. WATER
 - 2. SOIL
 - 3. SLUDGE
 - 4. OIL
 - 5. CHIPS
 - 6. WIPES
 - 7. AIR CASSETTE
 - 8. OTHER

- CONTAINER TYPE**
- P - PLASTIC
 - G - GLASS
 - V - VOA

PRESERVATIVES

8260

Sample pH at Login

SCILAB SAMPLE #	CLIENT SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER			SAMPLING INFORMATION			PRESERVATIVES	TECH	MCL	X
			SIZE	TYPE	#	DATE	TIME	TECH				
1	MW-19	1		G	2	9/1	am	TWW				
2	MW-21	↓		↓	↓	↓	pm	↓				
3	MW-45	↓		↓	↓	↓	pm	↓				
4	BW-3	↓		↓	↓	↓	am	↓				
5	TRIP BLANK	↓		↓	1	↓		↓				

REPORT PACKAGES

- MWRA
- NJPDES
- RDR
- MA. DEP
- NJDEP (AIR)
- COMPLIANCE
- OTHER

SAMPLED BY: 	DATE: <u>9/1/98</u>	RECEIVED BY:	DATE:
	TIME: <u>4:30</u>		TIME:
RELINQUISHED BY: 	DATE: <u>9/1/98</u>	RECEIVED BY: 	DATE: <u>9-1-98</u>
	TIME: <u>4:30</u>		TIME: <u>16:30</u>
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
	TIME:		TIME:

Temperature upon receipt 6°C

SPECIAL INSTRUCTIONS

RUSH DATE REQUIRED
(ADDITIONAL COST MAY APPLY)

REGULAR **UST-TAT**
(10 BUSINESS DAYS) (5 DAY VERBAL)

5

Shade areas for laboratory use only
Blue copy - Originator Retains
Red copy - Museum Retains
Submit White and Yellow copies to the Laboratory





ENVIRONMENTAL SERVICES, INC.

1501 Washington Street, P.O. Box 850327 • Braintree, MA 02185-0327

(781) 849-1800

Visit our Website at www.cleanharbors.com

December 11, 1998

Mayor Robert M. Dever
Woburn City Hall
10 Common Street
Woburn, MA 01801

Re: Availability of Corrective Action Investigation Report Addendum
Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts
CHES File No. EN-170

Dear Mayor Dever:

This letter has been prepared in accordance with regulations at 310 CMR 40.1403, which require public notification of the availability of site investigation reports which are subject to provisions in the Massachusetts Contingency Plan (MCP). An *Addendum to Corrective Action Investigation Report (Part II)* has been submitted to the Massachusetts Department of Environmental Protection to document assessment activities performed at 252 Salem Street in Woburn, Massachusetts.

A copy of the report has been forwarded to Ms. Theresa Murphy at the Woburn Conservation Commission.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles J. McCreery".

Charles J. McCreery
Senior Geologist

cc: Woburn Board of Health
CHES Job File No. EN-170

Disk 3941