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CORPORATE ENVIRONMENTAL ADVISORS, INC.

April 24, 2006

Department of Environmental Protection
Western Regional Office
436 Dwight Street
Suite 500
Springfield, Massachusetts 01103

DEPT. OF ENV. PROTECTION Rec'd APR 25 2006 WERO

RE: Phase I – Initial Site Investigation
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
DUNS: 0374-5593
MA DEP RTN: 1-15718
CEA File No. 5795-05

To Whom It May Concern:

On behalf of Sunoco, Inc. (R&M), Corporate Environmental Advisors, Inc. (CEA) presents this Phase I - Initial Site Investigation Report (Phase I) for the release identified at 88-90 South Maple Street in Westfield, Massachusetts (site).

This Phase I Report has been prepared following the 72-hour Reportable Condition identified on April 12, 2005 upon obtaining knowledge of tightness test results for dispenser piping associated with an underground storage tank (UST). Based on available information provided by Sunoco, the dispenser lines were placed under pressure for tightness testing on April 12, 2005 and the regular unleaded line failed the tightness test. This Threat of Release condition was verbally reported to the Massachusetts Department of Environmental Protection (MA DEP) at 9:40 a.m. on April 15, 2005 within 72-hours of obtaining knowledge of the reporting condition pursuant to 310 CMR 40.0314(2) of the MCP.

In accordance with 310 CMR 40.0400 of the MCP, this Phase I report has been prepared to document information in order to facilitate the evaluation of impact by oil and/or hazardous materials (OHM) at the site. In addition, the Phase I was prepared to sufficiently meet the requirements of the Numerical Ranking System and Tier Classification process described in 310 CMR 40.0500 of the Massachusetts Contingency Plan (MCP).

If you have any questions or comments, please do not hesitate to contact our office.

Sincerely,
Corporate Environmental Advisors, Inc.

Patrick J. Brown
Environmental Scientist I

Scott E. VanderSea, LSP, LEP
Principal Hydrogeologist

Enclosure: Phase I Report

cc: William J. Brochu, Sunoco, Inc. (R&M), 4 Bellows Rd., P.O. Box 1262, Westborough, MA 01581
Yvonne M. Monti, Sunoco, Inc. (R&M), 350 Eagleview Blvd., Suite 300, Exton, PA 19341

CORPORATE ENVIRONMENTAL ADVISORS, INC.

PROUDLY CELEBRATING 20 YEARS Of Outstanding Service 1985 - 2005

PHASE I -
INITIAL SITE INVESTIGATION

Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
DUNS: 0374-5593
RTN 1-15718

April 24, 2006

Prepared for:
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CEA File #5795-05

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88-90 South Maple Street
Westfield, Massachusetts
DUNS: 0374-5593
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1.0 INTRODUCTION

On behalf of Sunoco, Inc. (R&M), Corporate Environmental Advisors, Inc. (CEA) presents this Phase I - Initial Site Investigation Report (Phase I) for the release identified at 88-90 South Maple Street in Westfield, Massachusetts (site). This Phase I Report has been prepared following the 72-hour Reportable Condition identified on April 12, 2005 upon obtaining knowledge of tightness test results for dispenser piping associated with an underground storage tank (UST). Based on available information provided by Sunoco, the dispenser lines were placed under pressure for tightness testing on April 12, 2005 and the regular unleaded line failed the tightness test. This Threat of Release condition was verbally reported to the Massachusetts Department of Environmental Protection (MA DEP) at 9:40 a.m. on April 15, 2005 within 72-hours of obtaining knowledge of the reporting condition pursuant to 310 CMR 40.0314(2) of the MCP.

In accordance with 310 CMR 40.0400 of the MCP, this Phase I report has been prepared to document information in order to facilitate the evaluation of impact by oil and/or hazardous materials (OHM) at the site. In addition, the Phase I was prepared to sufficiently meet the requirements of the Numerical Ranking System and Tier Classification process described in 310 CMR 40.0500 of the Massachusetts Contingency Plan (MCP).

2.0 RELEVANT CONTACTS

The entity assuming responsibility for evaluating the impact posed by oil and/or hazardous material (OHM) at the disposal site is:

Mr. William Brochu
Sunoco, Inc. (R&M)
4 Bellows Road, P.O. Box 1262
Westborough, Massachusetts 01581
Telephone Number: (800) 777-6444 ext 1357

The Licensed Site Professional (LSP) for the site is:

Mr. Scott E. VanderSea, LEP, LSP #3978
Corporate Environmental Advisors, Inc.
127 Hartwell Street
West Boylston, Massachusetts 01583
Telephone Number: (508) 835-8822

3.0 GENERAL SITE INFORMATION

3.1 Site Description

The site, located on South Maple Street in Westfield, Massachusetts, is occupied by a Sunoco retail gasoline sales station and a car wash. The property is 56,628 square feet and is identified by the Westfield Tax Assessor as Map 39, Lot 3. The site is developed by a 1,728-square foot, one story, concrete cinderblock building, built in 1988 and consisting of convenience store retail sales floor, offices, storage space, and restrooms. Also located to the rear of the site is a 3,120-square foot one story, concrete cinderblock building built in 1985 and consisting of an automated carwash. There are six gasoline dispenser islands at the station, piped to three 10,000-gallon underground storage tanks (USTs), located on the southern portion of the property behind the convenience store building.

Figure 1, Site Locus, illustrates the geographic location of the site relative to the surrounding topography and surface drainage area. **Figure 2, Site Layout with Groundwater Contours, Figure 2A, Site Layout (April 2005 Excavation) and Figure 2B Excavation Enlargement (11-12/2005)**, depicts the approximate locations of existing site structures, and pertinent features.

Overhead telephone utilities enter the Site from South Maple Street. An underground electric line runs from the street to a transformer on the eastern side of the property then to the convenience store building. The station building is heated with natural gas. The Site and surrounding properties are supplied with municipal water and sewer service provided by the City of Westfield. Water service and the sewer line enter the site from South Maple Street. Stormwater runoff is managed through catch basins located in South Maple Street, which discharge to the municipal drain system. Utilities are shown on **Figure 2, Site Layout with Groundwater Contours.**

3.2 Surrounding Land Use and Potential Receptors

The site is located in a commercial and residential area of Westfield. Residential properties abut the site to the east and across South Maple Street to the north and northeast. A wooded area abuts the site to the south. Commercial properties are located along South Maple and Mill Street to the west of the site.

According to the MA DEP Site Scoring Map provided in **Figure 3,** dated Site Scoring Map, the site is not located within an Interim Wellhead Protection Area (IWPA), Approved Zone 2, Zone A of a Class A Surface Water Body, or within a Potential Drinking Water Source Area (PDWSA). No known private drinking water supply wells are located within 500 feet of the site. The site is supplied with municipal water by the City of Westfield.

The closest potential receptor is Little River located within approximately 200-feet south of the site. Protected Open Space is located within approximately 1,000-feet to the south, and within approximately a half-mile to the west and east of the site. The site is located within a FEMA 100-year floodplain, to the south and southeast. Site Photographs are included as **Appendix A.**

4.0 ENVIRONMENTAL RECORD REVIEW SUMMARY

A review of federal and state databases was performed using FirstSearch Technology Corporation's Environmental FirstSearch Report on March 22, 2006. The distances used to report the properties are the approximate minimum search distances established by American Society of Testing Materials (ASTM) guidelines. All sites identified within the corresponding search radii are provided in the FirstSearch report attached as **Appendix B**.

The potential for contamination from listed nearby sites to migrate to the subject property is contingent upon groundwater flow direction, distance, and contaminant characteristics. Inferred groundwater flow direction is south in the immediate vicinity of the property. References to upgradient and/or downgradient in the following sections are based on this groundwater flow determination. However, local groundwater flow direction may vary due to fluctuations in seasonal groundwater levels and site-specific subsurface conditions.

4.1 United States Environmental Protection Agency

4.1.1 National Priorities List

The ASTM guideline recommends a one-mile search radius for National Priorities List (NPL) sites. The NPL is a listing of properties recorded with the MADEP and the U.S. Environmental Protection Agency (EPA) that are believed to pose a significant threat to public health and the environment and warrant remedial action under the Superfund laws. A review of the NPL database did not identify any properties within a one-mile radius.

4.1.2 Comprehensive Environmental Response, Compensation, and Liability Information System

A search radius of one-half mile is recommended for the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). CERCLIS is the EPA's database of current and potential Superfund sites under investigation. A review of the CERCLIS database did not identify any properties within the one-half mile radius of the property.

4.1.3 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted to document hazardous materials during all stages of use, generation, and disposal. All facilities (collectively called "handlers") that treat, generate, dispose of, transport, and/or store specified quantities of hazardous materials must be permitted through the EPA RCRA program. Any violations and/or enforcement actions pertaining to the handlers are also documented in the database. The ASTM guidelines recommend a one-mile search radius for Corrective Actions (CORRACTS) Treatment, Storage and Disposal (TSD) facilities and a one-half mile radius for non-CORRACTS TSD facilities. The RCRA generator database was searched for the subject property and adjoining properties. The RCRA databases did not identify the site or any properties within the recommended search radii as a TSD facility or a CORRACTS facility however the site was identified as a RCRA generator.

4.1.4 Emergency Response Notification System

The Emergency Response Notification System (ERNS) is a database of EPA emergency response actions. Only the subject property is required to be reviewed for ERNS designation. The database did not identify the subject property an ERNS site.

4.2 Massachusetts Department of Environmental Protection

A limited review of MADEP files for surrounding sites was conducted as part of the FirstSearch database search. The lists of Confirmed Disposal Sites, State Spill Sites, and Registered USTs were reviewed for the purposes of this report. The Bureau of Waste Site Cleanup (BWSC) Searchable Site list on the MADEP website was also reviewed for surrounding sites.

4.2.1 State Disposal Sites

ASTM guidelines recommend a one-mile radius for the State Disposal Sites database search. The subject property was identified as a State Disposal Site. Ten previously or currently listed disposal sites were identified within a one-mile radius of the subject property. A summary of the State Disposal Sites within a one-mile radius of the subject property are presented in **Table 1**.

4.2.2 State Spills

ASTM guidelines recommend a one-half mile radius for the State Spill database search. The MADEP Database identified 20 spill sites located within a one-half mile radius of the property. The subject property was also identified as a Spill Site and is associated with RTN-1-0489. All of the sites except for the site are listed with a regulatory closed status.

4.2.3 Registered Underground Storage Tanks

A one-half mile search radius was utilized to research the presence of registered underground storage tanks (USTs) within the vicinity of the subject property. The subject property was identified as a registered UST site. Two additional properties were identified within a one-half mile radius. Pride Convenience Inc. is located at 97 South Maple Street, approximately 0.07 miles northwest (upgradient) to the site. Shell located at 27 Southwick Road, is approximately 0.13 miles southwest (downgradient) of the site.

4.2.4 Solid Waste Landfills

A search radius of one-half mile is recommended for solid waste landfills. No solid waste landfills were identified within a one-half mile of the subject property.

5.0 DISPOSAL SITE HISTORY

5.1 Owner and Operations History

The site is comprised of four parcels (1, 2, 3 and 29). Property ownership from the early 1960's to the present for each parcel is summarized in the tables below.

Property Ownership History

Parcel 1	
Grantor	**Date of Purchase**
Gerald N. Sciarra	8-1-63
Melrose Construction Company, Inc	7-2-64
Burek Oil Company, Inc.	05-24-65
F.L. Roberts Company, Inc.	11-11-74
Sun Company, Inc.	6-24-1993

Parcel 2	
Grantor	**Date of Purchase**
Gerald N. Sciarra	8-1-63
The Stephen Paper Mills, Inc.	3-24-64
Bay Bank Valley Trust Company	1-16-81
Paragon Paper Company, Inc.	1-16-81
F.L. Roberts Company, Inc.	NA
Sun Company, Inc.	6-24-1993

Parcel 3	
Grantor	**Date of Purchase**
F.L. Roberts Company, Inc.	11-11-74
Sun Company, Inc.	6-24-1993

Parcel 29	
Grantor	**Date of Purchase**
The Stephen Paper Mills, Inc.	NA
Robert J. Greeley	12-1-81
F.L. Roberts Company, Inc.	NA
Sun Company, Inc.	6-24-1993

Sanborn Fire Insurance Maps, viewed online at the Boyden Public Library, show the subject property as vacant on maps dated 1910, 1917, 1924 and 1947. Sunoco purchased the property in June 1993. Sanborn Maps are included in **Appendix C**.

5.2 Release History

5.2.1 RTN 1-0489

The DEP issued a *Notice of Responsibility* (NOR) to F.L. Roberts on June 21, 1988 as a result of a PID reading of over 100 ppm in a soil sample collected during UST removal activities in June 1988 . The DEP requested a Phase I – Limited Site Assessment be conducted on the site. The site was first listed as a *Location To Be Investigated* (LTBI) on January 15, 1989. On behalf of F.L. Roberts, Environmental Compliance Services, Inc. (ECS) of Agawam, Massachusetts submitted the Phase I and Class A-2 Response Action Outcome (RAO) for the site, on August 2, 1995.

In the Phase I and RAO, ECS used information from a Site Investigation Report by Handex of New England, Inc of Marlborough, Massachusetts dated April 28, 1993 and a Phase I Limited Site

Investigation conducted by Cold Spring Environmental of Belchertown, Massachusetts on April 27, 1990. No work was performed at the site between April 27, 1990 and April 28, 1993.

5.2.2 RTN 1-15718

On April 12, 2005, tightness testing results performed on the UST piping indicated the regular unleaded UST dispenser line failed when placed under pressure for tightness testing. Therefore, a Threat of Release (TOR requiring DEP notification within 72-hours of obtaining knowledge was identified at approximately 2:30 p.m. on April 12, 2005, in accordance with 310 CMR 40.0314(2) of the MCP. A copy of the April 12, 2005 and April 13, 2005 tightness testing results were previously submitted in the IRA Plan on June 22, 2005.

On April 15, 2005 at 9:40 p.m., verbal notification was provided to the MA DEP-Western Region (WERO) by Sunoco for the 72-hour reportable condition in accordance with 310 CMR 40.0314(2) of the MCP. The DEP issued Release Tracking Number (RTN) 1-15718 and provided verbal authorization to repair the dispenser line, excavate up to 100 yards of petroleum contaminated soils during the repairs, and conduct assessment activities as necessary to determine the extent of release to the environment.

On April 19, 2005, MA DEP issued a *Notice of Responsibility (NOR)* to Sunoco, Inc. (R&M). The NOR established an Interim Deadline that the approved IRA assessment actions must be completed at the subject site within one (1) year (by April 15, 2006) of the notification date.

On June 14, 2005, a Release Notification Form (RNF), Bureau of Waste Site Cleanup Form (BWSC-103) was submitted to MA DEP for RTN 1-15718 on behalf of Sunoco.

5.2.3 120-day Reporting Condition

On December 8, 2005, Polychlorinated biphenyls (PCBs) were detected above reporting category RCS-1 *Reportable Concentrations* in composite soil sample T1 collected onsite during a UST piping project being conducted under an Immediate Response Action (IRA) for RTN 1-15718. The PCB concentration represented a *120-day Reporting Condition.* The DEP was notified in writing of the *120-day Reporting Condition* on February 8, 2006 with the submittal of a Release Notification Form (RNF).

5.3 Oil & Hazardous Material Use and Storage History

Since the inception of the service station in the late-1940's gasoline, motor oil (used), and other automotive supplies have been stored at the site. Currently 8,000, 10,000 and 12,000-gallon gasoline single-walled composite (steel and fiberglass) buffide USTs are located onsite. All other USTs have since been removed. **Table 2** - UST History summarizes the UST history of the site.

5.4 Waste Management History

All hazardous wastes used by the service business were handled as directed under an environmental permit (#MA5000000729) as issued by the Environmental Protection Agency (EPA).

6.0 IRA ACTIVITIES

The following section summarizes the results of IRA Activities that were conducted at the site to obtain the hydrogeologic, soil, and groundwater quality information necessary to characterize current subsurface conditions.

6.1 Elevation Survey

To determine groundwater elevations and establish groundwater flow direction, existing monitoring wells were surveyed on August 1, 2005, using an electronic theodolite accurate to 0.01 foot. An on-site spot elevation using USGS mean sea level (MSL) was selected and assigned an elevation of 100.00 feet above MSL, and referenced as a bench mark. The bench mark elevation is located at the northern corner of the building. The elevations of the existing groundwater monitoring wells, measured to the top of PVC well casing, were surveyed referencing this benchmark.

6.2 Groundwater Gauging

On August 1, 2005, depth to groundwater in existing monitoring wells MW-1, MW-3B, MW-4, MW-5, and MW-6 were gauged using an electronic interface probe accurate to within 0.01 feet. Depth to groundwater ranged from 11.91 feet below surface grade from the top of PVC well casing in monitoring well MW-6 to 12.91 feet below surface grade in MW-5.

On February 7, 2006, depth to groundwater in existing monitoring wells MW-1, MW-3B, MW-5, and MW-6 were gauged using an electronic interface probe accurate to within 0.01 feet. Depth to groundwater ranged from 9.8 feet below surface grade from the top of PVC well casing in monitoring well MW-6 to 10.44 feet below surface grade in MW-3B.

On March 6, 2006, depth to groundwater in monitoring well MW-3B was gauged using an electronic interface probe accurate to within 0.01 feet. Depth to groundwater was 13.25 feet below surface grade in MW-3B.

During each event, no NAPL was detected in any wells gauged. The results of groundwater gauging are summarized in **Appendix D.**

6.3 Groundwater Flow Direction

As previously documented, referring to the historic site plan dated March 30, 1990, groundwater contours indicated groundwater flow was in a southeasterly direction across the site. Groundwater gauging data obtained on August 1, 2005 was used to construct groundwater elevation contours. Based on the August 1, 2005 gauging data, the apparent groundwater flow direction is estimated to be southwesterly across the site. August 1, 2005 groundwater contours are depicted on **Figure 2, Site Layout w/ Groundwater Contours.**

6.4 Groundwater Sampling and Analysis

On August 1, 2005, groundwater samples were collected from existing monitoring wells MW-1, MW-4, MW-5, and MW-6. A groundwater sample was not available from monitoring well MW-3B. On February 7, 2006, groundwater samples were collected from existing monitoring wells MW-1, MW-3B, MW-5, and MW-6. Monitoring well MW-4 was destroyed during product piping upgrades in November 2005.

On March 6, 2006, a groundwater sample was collected from existing monitoring well MW-3B. Monitoring well MW-6 was beneath a snow-bank and was not available for sampling. Monitoring wells MW-1 and MW-5 were not sampled during the event. Prior to sampling, each well was purged of approximately three well volumes to ensure representative groundwater samples were obtained. Groundwater samples were collected using dedicated, disposable, polyethylene bailers. The groundwater samples were placed on ice and transported to Spectrum Analytical of Agawam, Massachusetts

(Spectrum) under Chain of Custody protocol for VPH analysis via the DEP method. On August 1, 2005, monitoring wells were also analyzed for extractable petroleum hydrocarbons (EPH) via the MADEP EPH methodology, RCRA Metals, and volatile organic compounds (VOCs) via EPA Method 8260B.

6.4.1 Groundwater Analytical Results: August 1, 2005

Groundwater analytical results for samples collected on August 1, 2005, reported all concentrations VPH, EPH, VOCs and Metals below laboratory reporting limits (RLs) in all samples, except concentrations of barium, methyl tert-butyl ether (MTBE) and naphthalene. Barium concentrations were reported above laboratory RLs in samples MW-4 and MW-6. MTBE concentrations were reported above laboratory RLs in sample MW-1. Naphthalene concentrations were reported above laboratory RLs in sample MW-6. All concentrations of VPH, EPH, VOCs and Metals were detected below applicable RCGW-2 Reportable Concentrations and applicable Method 1 GW-2 and GW-3 standards. Groundwater analytical results are summarized in **Tables 2, 3, 4 & 5**. A copy of the August 2005 laboratory analytical report is provided in **Appendix E**.

6.4.2 Groundwater Analytical Results: February 7, 2006

Groundwater analytical results for samples collected on February 7, 2006, reported all VPH concentrations below laboratory reporting limits (RLs) in monitoring wells MW-1 and MW-5. Carbon Fractions C_5-C_8 Aliphatics and C_9-C_{12} Aliphatics concentrations were reported above M1RC GW-2 standards in sample MW-3B. All other concentrations of VPH were detected below applicable M1RC GW-2 and GW-3 standards. Groundwater analytical results are summarized in **Tables 2, 3, 4 & 5**. A copy of the February 7, 2006 laboratory analytical report is provided in **Appendix E**.

6.4.3 Groundwater Analytical Results: March 6, 2006

Groundwater analytical results for samples collected on March 7, 2006, reported carbon fractions C_5-C_8 Aliphatics were reported above M1RC GW-2 and C_9-C_{10} aromatics concentrations were reported above M1RC GW-3 standards in sample MW-3B. All other concentrations of VPH were detected below applicable M1RC GW-2 and GW-3 standards. Groundwater analytical results are summarized in **Tables 2, 3, 4 & 5**. A copy of the March 6, 2005 laboratory analytical report is provided in **Appendix E**.

6.5 Soil Excavation April 2005

Upon obtaining knowledge of the failed UST line tightness test result on April 12, 2005, Sunoco immediately removed the unleaded dispenser lines and USTs from service. The location of the line leak was identified through helium tracer testing on April 13 and 14, 2005, and the line was excavated and repaired on April 14 and 15, 2005.

On April 14 and 15, 2005, CEA supervised the excavation and repair of the dispenser piping. Soil was excavated from a trench that was approximately nine-feet long and three and a half feet wide. During the excavation of piping, soil samples were collected from the excavation and field screened using the DEP jar-headspace method and an HNU Model PI 101 photo-ionization detector (PID), calibrated to an isobutylene standard for total organic vapor (TOV) concentrations. Soil samples were collected from the limits of excavation to determine if a release of oil and/or hazardous materials (OHM) requiring notification under the MCP had occurred at the property. TOV concentrations measured in soil samples collected from the UST excavation were greater than 100 ppm. Approximately 2-cubic yards of petroleum-impacted soil were temporarily stockpiled on plastic on-site, pending confirmatory laboratory

analysis for off-site recycling. On April 21, 2005, CEA was onsite to supervise additional soil excavation with in the same area excavated on April 14, 2005, however no soil was excavated during the site visit.

On April 27, 2005, the excavation was lengthened and expanded to expose the regular and ultra gasoline dispenser lines, to check for potential leaks and to install cathodic protection. A total of approximately 5 cubic yards of petroleum impacted soil was generated between April 15 and 27, 2005. On April 28, 2005, the trench was backfilled clean material and finished to surface grade with a concrete pad.

6.5.1 Post-Excavation Soil Sampling and Analysis

On April 14 and April 27, 2005, post-excavation composite soil samples were obtained from the excavation limits for confirmatory laboratory analysis. Soil samples Sample-1 through Sample-4 were collected on April 14, 2005. On April 27, 2005, soil represented by Sample-1 and Sample-2 was excavated and soil sample "1 S-B-2'" was collected. Sample-3 was excavated and "2 S-B-2'" was collected. Soil samples 4 S-B-2' and 5 S-COMP-2' were also collected. Soil samples were field preserved, placed on ice and submitted to Accutest Laboratories, Inc. (Accutest) of Marlborough, Massachusetts under Chain of Custody Protocol. All confirmatory soil samples were analyzed for volatile petroleum hydrocarbon (VPH) fractions and target analytes via the DEP Method. Confirmatory soil sample locations are depicted on **Figure 2A, Site Layout (April 2005 Excavation)**. The results of VPH analysis are summarized in **Table 3** and discussed below.

Upon completion of soil excavation and sampling activities on April 28, 2005, the excavation was backfilled with clean fill material, compacted and restored to grade.

6.5.2 Soil analytical Results

Referring to **Table 1**, low detectable VPH concentrations were reported above applicable laboratory Reporting Limits (RL) in soil samples Sample 1, 2, 4, 1 S-B-2', 4 S-B-2' and 5 S-COMP-2'. VPH (C5-C8 aliphatics, C9-C10 aromatics), toluene and total xylenes were detected above Method 1 Risk Characterization (M1RC) S-1/GW-2 & 3 standards in soil samples Sample 3 and 2 S-B-2'. Post-excavation soil sample locations are depicted on **Figure 2A, Site Layout (April 2005 Excavation)**. VPH laboratory analytical results are summarized in **Table 3**. A copy of the soil laboratory analytical report was previously submitted in the IRA Plan.

6.6 Dispenser Piping Removal

Between November 15 and November 18, 2005, the three USTs and dispenser piping were uncovered by Dixon Construction Inc. of Shrewsbury, Massachusetts on behalf of Sunoco to enable UST upgrades, dispenser piping removal and reinstallation.

PID screening results of petroleum-impacted soils revealed TIC concentrations ranging from 65 ppmv to 85 ppmv at a depth of three feet below surface grade (bsg) in the product piping excavation on the right side of the convenience store at the Site.

PID screening results of petroleum-impacted soils revealed TIC concentrations ranging from 55 ppmv at a depth of seven feet bsg to 200 ppmv at a depth of four feet bsg in the initial release area-product piping excavation, located on the left side of the convenience store. In the area of the initial release, the excavation was deepened based on soil PID screening results obtained at a depth of four feet. Petroleum impacted soil was removed and stockpiled on polyethylene sheeting. The excavation in the initial release area was terminated at an approximate depth of seven feet due to the physical constraints of the pump island mat and overhead canopy.

Approximately 10 cubic yards of petroleum-impacted soil were segregated and stored on polyethylene plastic on site. Groundwater was not encountered in the excavation and dewatering was not necessary. The excavations were backfilled with clean fill and re-paved with concrete.

6.7 Post-Excavation Soil Sampling and Analysis

Upon completion of the UST piping upgrade activities, confirmatory post-excavation soil samples were collected from the tank field of the excavation, (composite - Tank field) and the three product piping trenches (composite T1 through T6, and R-7) on November 16, 17, and 18 2005. The "Tank field" composite is comprised of grab soil samples taken at the four risers on each UST. The "T1 through T6" composites are comprised of grab soil samples taken roughly every four linear feet along the bottom of the product piping trenches. During the excavation events, soil samples represented by April 2005 samples "4 S-B-2'" and "5 S-COMP-2'" were excavated and soil sample composite T2 was collected. Sample "2 S-B-2'" was excavated and samples RS-2', RS-3', R-3', R-7' and composite sample T5 were collected. Sample "1 S-B-2'" and "Sample 4" were excavated and composite soil sample T6 was collected. Soil samples were analyzed for VPH.

The soil stockpile was sampled on November 17, 2005 and characterized for offsite disposal. The sample was analyzed for volatile organic compounds (VOCs) via EPA Method 8260B, polychlorinated biphenyls (PCBs) via EPA Method 8082, total metals via EPA Method 200 and 6000/7000 Series Methods, flashpoint, pH, Reactivity (sulfide and cyanide) and total petroleum hydrocarbons (TPH) via EPA Method 8100. The results of PCB analysis indicated a detected concentration of 2.31 ppm, above the reporting category RCS-1 threshold.

On December 19, 2005, additional soil samples were taken in the area of the additional release, (RS-2', RS-3', R-3') and in the trenching around the pump islands on the right side of the convenience store (T1-A, T1-B and T1-C) to evaluate VPH and PCB impacts. Refer to **Figure 2A & 2B** for soil sample locations. Soil samples were submitted to Spectrum Analytical, Inc. of Agawam, Massachusetts under chain of custody protocol for analysis of VPH and/or PCBs.

6.8 Post-Excavation Soil Analytical Results

Laboratory analytical results of the confirmatory post-excavation soil samples collected from the tank field and product piping trenches of the excavation were compared to the most stringent M1RC S-1/GW-2 and GW-3 Soil Standards for unrestricted future site uses. Referring to **Table 6**, VPH carbon fractions (C5-C8 aliphatics, C9-C10 aromatics), and naphthalene concentrations were detected above Method 1 Risk Characterization (M1RC) S-1/GW-2 and GW-3 standards in soil sample R-7'. PCBs were detected above Method 1 Risk Characterization (M1RC) S-1/GW-2 and GW-3 standards in soil samples T1, T1-A, T1-B and T1-C. The remaining soil analytical results were reported below the S-1/GW-2 and GW-3 standards. Soil analytical results for VPH and PCBs are summarized in **Tables 6 & 7**, respectively. The limits of the UST removal area and post-excavation confirmatory soil sample locations are provided on **Figure 2B, Site Layout (11-12/2005 Excavation)**. Copies of the analytical reports are included in **Appendix F**.

The detection of PCBs above the RCS-1 threshold of 2 ppm reported a 120-day reporting condition. A Release Notification Form (RNF) was be submitted to the DEP on February 8, 2006.

Petroleum contaminated soils generated as part of IRA activities conducted for RTN 1-15718 were characterized using laboratory analysis. On August 8, 2005 approximately of 5-cubic yards of petroleum-impacted soil was transported under a Massachusetts BOL to Ted Ondrick Company, LLC. (Ondrick) of

Chicopee, Massachusetts for asphalt batch recycling. The BOL documentation from the recycling facility has been previously submitted to the DEP.

On January 9, 2006, approximately 10-cubic yards of petroleum-impacted soil was transported under a Massachusetts Bill Of Lading (BOL) to Environmental Soil Management Inc. (ESMI) of Loudon, New Hampshire for thermal treatment. The BOL documentation will be forwarded to the DEP upon receipt from the facility and final signature by Sunoco.

7.0 SITE HYDROGEOLOGIC CHARACTERISTICS

7.1 Site Geology

Geology beneath the Site consists of mostly fine to coarse sand and gravel, with varying amounts of silt to approximately 9 feet below grade. Referring to the Bedrock Map of Massachusetts by E–An Zen, 1983, the Site is located in the New Haven Arkose at the site is listed as a part of the Upper Triassic and is composed of red pink and gray coarse-graveled, locally conglometric arkos interbedded with brick-red shaley siltstone and fine-grained arkosic sandstone.

7.2 Groundwater Hydrogeology

Groundwater gauging data obtained on August 1, 2005 was used to construct the groundwater elevation contours shown on **Figure 2**. Referring to **Figure 2**, the apparent groundwater flow direction is southwest, with an average hydraulic gradient of 0.006 feet per foot (ft/ft). Average depth to groundwater at the site is approximately 12.5 feet. The results of groundwater gauging are summarized in **Appendix D**.

8.0 MCP REPORTING & METHOD I RISK CHARACTERIZATION CATEGORIES

8.1 MCP Reporting Categories

For locations where a release of OHM has occurred, the MCP defines reporting requirements for 2-hour, 72-hour and 120-day notifications depending on site specific factors and conditions. A 2-hour notification condition is a sudden, continuous, or intermittent release to the environment as described in 310 CMR 40.0311(1) through (9) or threats of releases as described in 310 CMR 40.0312. A 72-hour notification condition is required when one of the criteria set forth in 310 CMR 40.0313 (1) through (5) is met. The MCP defines OHM-specific concentrations for soil and groundwater which, if identified, require that notification to the MADEP be made within 120 days pursuant to 310 CMR 40.0315 (1) through (3). Two Reporting Categories, one more stringent, have been established for both soil and groundwater. The applicable Reporting Category is dependent upon surrounding land use, potential receptors and the proximity of drinking water resource areas.

8.1.1 Reporting Categories for Soil

According to 310 CMR 40.0361 of the MCP, Reporting Category RCS-1 applies to all soil samples obtained:

- At or within 500 feet of a residential dwelling, residentially-zoned property, school, playground, recreational area or park; or
- Within the geographic boundaries of a Current or Potential Drinking Water Source Area.

Reporting Category RCS-2 shall apply to all other areas not categorized as RCS-1. Since there are residential properties located within 500 feet, Reporting Category RCS-1 Reportable Concentrations apply to the Site.

8.1.2 Reporting Category for Groundwater

According to 310 CMR 40.0362 of the MCP, Reporting Category RCGW-1 applies to all groundwater samples collected within a Current or Potential Drinking Water Source Area. Reporting Category RCGW-2 applies to all other areas outside of RCGW-1.

According to the Site Scoring Map obtained on August 1, 2005, the Site is not located in an Interim Wellhead Protection Area (IWPA), DEP Approved Zone II, Zone A of Class A Surface Water Body (reservoir) or Potentially Productive Aquifer. No public or private drinking water wells are located within 500 feet. Therefore, Reporting Category RCGW-2 applies to the Site.

8.2 Method 1 Risk Characterization Soil And Groundwater Categories

The MCP Method 1 Risk Characterization (M1RC) Soil and Groundwater Categories are considered general indicators of exposure potential in the risk characterization. Soils at the disposal site are categorized based on current and future potential receptors, frequency of use, intensity of activities, and accessibility of the soils. Groundwater is categorized based upon its potential for human consumption, potential to volatilize into indoor air, and its potential to discharge to surface water.

8.2.1 Applicable Method 1 Risk Characterization Soil Categories

Soils at the Site are grouped into three general categories:

1) Accessible soil – surficial soil in unpaved areas and within three (3) feet of the surface;
2) Potentially accessible soil – soil located at a depth of 3 to 15 feet below grade (with or without pavement), or if soil is located less than 3 feet from the surface in an area completely paved; and
3) Isolated subsurface soils – soil beneath the footprint of a building or greater than 15 feet below ground surface.

Since the Site is currently a gasoline sales facility with a convenience store, children are present as frequent visitors. As frequent visitors, children's activities are <u>not</u> expected to include high intensity activities such as digging, gardening, or recreational sports, especially since the Site is mostly paved, except for the unpaved portions behind the station building and UST field to the south. Therefore, a child's presumed activity at the service station property for current Site use is considered high frequency and low intensity as defined by the MCP.

It is assumed adults work at the service station on a continuing basis (8 hour shifts per day) and an employee's frequency of use is characterized as high. As employees, adult activities are also <u>not</u> expected

to include high intensity activities such as digging, gardening, or recreational sports. Therefore, adult (employee) activity at the Site is defined as "high frequency and low intensity".

Given these considerations, soils at the Site have been categorized in accordance with 310 CMR 40.0933 of the MCP as presented below.

Area	Soil Depth	MCP Method 1 Soil Categories
Unpaved areas	0-3 feet	S-2
	3-15 feet	S-3
Beneath paved surfaces	0-15 feet	S-3
Beneath building footprint or soil greater than 15 feet below ground	0-15 feet	S-3
	> 15 feet	S-3

To determine whether the Site will achieve a Condition of No Significant Risk for unrestricted current and future Site uses, or if the implementation of an Activity and Use Limitation (AUL) is necessary, soil categories S-1/GW-2 & 3 are considered.

8.2.2 Applicable Method 1 Risk Characterization Groundwater Categories

M1RC Groundwater Category GW-1 standards apply to groundwater located within a current or potential drinking water area as defined in 310 CMR 40.0006 of the MCP. A Current Drinking Water Source Area is defined as any groundwater located:

a) Within the Zone II for a public drinking water supply;

b) Within the Interim Wellhead protection Area for a public water supply;

c) Within the Zone A of a Class A surface water body used as a public water supply; or

d) Within 500 feet of a private drinking water supply well.

A Potential Drinking Water Source Area is defined as groundwater located:

a) Within 500 feet or more from a public water supply distribution pipeline,

b) Within a area designated by a municipality specifically for the protection of groundwater quality to ensure its availability for use as a source of potable water supply, or

c) Within a Potentially Productive Aquifer that has not been excluded as Non-Potential Drinking Water Source Area

Based upon a review of the August 1, 2005 BWSC Site Scoring Map provided as **Figure 3,** the Site is not located within an area designated as either a Current or Potential Drinking Water Source Area as defined above. Therefore, M1RC groundwater category GW-1 does not apply to the Site.

GW-2 standards consider groundwater as a potential source of vapors of oil and/or hazardous materials to the indoor air. Groundwater located within 30 feet of an occupied structure or a planned structure where the average annual depth to groundwater is less than 15 feet below surface grade is considered GW-2

pursuant to 310 CMR 40.0932(6). Therefore, M1RC groundwater category GW-2 applies to all groundwater located within 30 feet of the on-Site service station building.

The groundwater at the Site (and all of Massachusetts) is considered a potential source of discharge to surface water and, therefore, GW-3 standards also apply.

9.0 NATURE AND EXTENT OF CONTAMINATION

The spatial distribution and type of petroleum impacts present at the site were evaluated through the collection of soil and groundwater samples.

9.1 Extent of OHM in Soil

During the product piping activities soil screened for TICs over 100 ppmv was stored on site. During the November 2005 excavation activities, soil samples were retained from the excavated product piping trenches and the tankfield and were analyzed for VPH. Concentrations of Carbon Fractions C_5-C_8 Aliphatics and C_9-C_{10} Aromatics as well as Xylenes were detected above MIRC soil standards in soil sampled at 7-feet in the area of the initial release (R-7'). All other soil samples were below applicable standards. The extent of the gasoline contaminated soil is located with in the initial release.

The soil stockpile was sampled on November 17, 2005 and characterized for offsite disposal. The sample was analyzed for VOCs, PCBs, total metals and 6000/7000 Series Methods, flashpoint, pH, Reactivity (sulfide and cyanide) and TPH. The results of PCB analysis indicated a detected concentration of 2.31 ppm, above the reporting category RCS-1 threshold.

On December 19, 2005, additional soil samples were taken in the area of the additional release, (RS-2', RS-3', R-3') and in the trenching around the pump islands on the right side of the convenience store (T1-A, T1-B and T1-C) to evaluate VPH and PCB impacts. Refer to Figure 2A & 2B for soil sample locations.

PCBs were detected in soil samples T1-A, T1-B and T1-C and the detection of PCBs above the RCS-1 threshold of 2 ppm is a 120-day reporting condition. A RNF was submitted on February 8, 2006. Further soil sampling is needed to further delineate the PCB contaminated soil at the site.

9.2 Extent of OHM in Groundwater

Groundwater flows in a southwesterly direction based on the August 1, 2005 gauge data. Groundwater Contours generated from the August 1, 2005 groundwater gauging event are illustrated on **Figure 2 – Site Layout.** Groundwater gauge data are summarized in **Appendix D.**

Referring to **Table 2,** VPH analytical results from the August 1, 2005 indicate that VPH impacts are below applicable groundwater standards in monitoring wells MW-1, MW-4, MW-5 and MW-6. Monitoring well MW-3B was not sampled on August 1, 2005.

On February 2, 2006, and March 6, 2006 VPH analytical results indicate carbon fraction concentrations present at groundwater monitoring well MW-3 above applicable M1RC groundwater category GW-2 and/or GW-3 standards. In addition MTBE concentrations in monitoring well MW-6 increased from 1,570 ug/l on August 1, 2005 to 22,900 ug/l on February 7, 2006. Monitoring wells MW-3B and MW-6 are both located south and down-gradient of the existing gasoline USTs near the south east corner of the subject property. All VPH carbon fractions (C_5-C_8 aliphatics, C_9-C_{12} aliphatics and C_9-C_{10} aromatics) and

target analytes, including benzene, toluene, ethylbenzene, xylenes and MTBE) were detected in monitoring well MW-3B on both sampling dates.

Additional groundwater sampling will be conducted to further evaluate groundwater conditions.

10.0 MIGRATION PATHWAYS AND EXPOSURE POTENTIAL

The source of OHM impact appears to be the result of a release(s) from use of the property as a gasoline sales facility. Based on assessment activities conducted at the site, OHM has been detected in soil at the site, which may serve as media through which exposure may occur. Potential migration pathways at the site, including ambient and indoor air, groundwater and soil, were evaluated.

10.1 Soil

OHM released to the subsurface may migrate vertically downward to the water table and become adsorbed to soil particles. Impacted soil can present a direct exposure pathway for receptors. The site is approximately 50 percent asphalt paved. Unpaved areas are located to the south and west of the parking areas and tank fields on the site. The highest potential for human exposure involves individuals and workers associated with subsurface excavation or drilling activities. Therefore, there is little opportunity for direct contact with impacted soil beneath the paved areas for on site employees or visitors to the site.

OHM constituents in soil may also migrate through the environment and impact other media, creating the opportunity for secondary exposures. OHM may enter the groundwater through desorption from impacted soil during groundwater recharge or through dissolution at or below the water table. Groundwater is evaluated separately in **Section 10.2**.

OHM in soil may also be released to utility ways, indoor air, and/or ambient air via volatilization. Subsurface utilities have been identified at the site. Depth to OHM in soil ranges from 2 to 7 feet below grade, similar to the estimated depth of utility trenches (typically 2-8 feet below grade). However, sewer and water utilities both enter the front of the service station from South Maple Street, where no OHM impacts have been documented. OHM impact to utilities through soil is unlikely. Indoor air and/or ambient air are evaluated separately in **Section 10.3**.

10.2 Groundwater and Surface Water

Dissolved-phase OHM has been detected in the groundwater beneath the site. Impacted groundwater can present a direct exposure pathway for receptors. However, the site is serviced by municipal water supplies, and is not located within a present or future drinking water source area. Therefore, no ingestion pathway or exposure exists. Dermal exposure is limited to sampling events by qualified, trained personnel.

OHM constituents in groundwater may also migrate through the environment and impact other media, creating the opportunity for secondary exposures. The potential for groundwater-related OHM to discharge to nearby surface water bodies (and sediment) resulting in impacts could exist at the site. Nearby water bodies include the Little River (approximately 200 feet south) and Crane Pond (approximately 0.5 miles west). Groundwater at the site flows in a southeasterly direction so potential to impact the Little River is present. However, Crane Pond is up-gradient and therefore unlikely to impacted by the site.

OHM in groundwater may also be released to utility ways, indoor air, and/or ambient air via volatilization. Subsurface utilities identified at the site include water and sewer, which enters the Site

from South Maple Street. Depth to groundwater ranges from 10 to 12.5 feet below grade, which is below the estimated depth of utility trenches. Therefore, migration of OHM in groundwater to utilities is not likely. Indoor air and/or ambient air are evaluated below.

10.3 Air

VPH impacts to groundwater above GW-2 standards have been identified in groundwater monitoring well MW-3B. However, monitoring well MW-3B is located down-gradient and greater than 30 feet from the nearest occupied building. However, as a conservative measure, indoor air will be considered a potential migration pathway for current or future use, and will be further evaluated.

Subsurface utilities have been identified at the site. Depth to groundwater ranges from 10 to 12 feet below grade, which includes the depth of the utility trenches. Therefore, migration of OHM to utilities is possible.

The entire Site is paved. Therefore, impacts to ambient air, related to soil and/or groundwater impacts, are not likely. In addition, other sources of petroleum-related hydrocarbon impacts to ambient air (i.e. fuel dispensers, engine exhaust) are located at the Site. Migration pathways will be further evaluated during future assessment activities.

11.0 IMMEDIATE RESPONSE ACTION EVALUATION

Pursuant to MCP 310 CMR 40.0483(1)(g), this Phase I report must evaluate the need to conduct an Immediate Response Action (IRA). According to 310 CMR 40.0412, the need to conduct an IRA is based on specific reporting conditions, as outlined below.

11.1 2-Hour and 72-Hour Reportable Conditions

An IRA is required at sites or vessels where 2-hour or 72-hour release notification conditions exist. Sudden, continuous, or intermittent releases to the environment as described in 310 CMR 40.0311(1) through (9), or threats of releases as described in 310 CMR 40.0312 are **2-hour** reportable conditions. As set forth in 310 CMR 40.0313, a release or threat of a release that requires notification within **72-hours** is based on:

a) A release having a measurable thickness of NAPL equal to or greater than ½ inch;

b) A release having measurable headspace readings equal to or greater than 100 ppm within 10 feet of a UST at a depth of greater than two feet and during UST removal or closure activities;

c) A release to the environment identified above reportable concentrations within a Zone I of a public water supply well or 500 feet of a private water supply well;

d) A release to the environment where volatile organic compounds in groundwater are measured equal to or greater than 5 ppm within 30 feet of a school or residence and where the groundwater table is less than 15 feet below grade; or

e) Substantial likelihood of leaks equal to or greater than 0.05 gallons per hour in a single-walled tank or the inner wall of a double walled tank or leaks from the outer wall of a double-walled tank, established via tank testing.

No conditions constituting 2-hour or 72-hour reporting conditions, and thereby an IRA requirement, have been identified at the site.

11.2 Condition of Substantial Release Migration

Pursuant to 310 CMR 40.0412(3), any site where a condition of Substantial Release Migration (SRM) has been identified constitutes a 72-hour reporting condition, requiring the implementation of an IRA. Conditions of SRM include:

a) Releases that have resulted in the discharge of separate phase OHM to surface waters, subsurface structures, or underground utilities or conduits;

b) Releases to ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;

c) Releases to groundwater that have migrated or are expected to migrate more than 200 feet per year;

d) Releases to groundwater that have been or are within one year likely to be detected in a public or private water supply well;

e) 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; or

f) Releases to groundwater that have been or are within one year likely to result in the discharge of vapors into school buildings or occupied residential dwellings.

No conditions of SRM have been identified at the site. The site will continually be evaluated for conditions of SRM.

11.3 Imminent Hazard Conditions

Pursuant to 310 CMR 40.0322 of the MCP, an IRA shall be conducted at any site where an Imminent Hazard is present. Releases or threats of release that pose, or could pose, an Imminent Hazard are listed in 310 CMR 40.0321 of the MCP.

Based on information gathered during this Phase I investigation, no Imminent Hazard conditions have been identified at the site. Therefore, no IRA is required at the disposal site at this time.

12.0 TIER CLASSIFICATION AND PHASE I OUTCOME

In accordance with 301 CMR 40.1500, the Numerical Ranking System (NRS) Scoresheet was prepared for the purposes of Tier Classification under 310 CMR 40.0500. The site received a total score of 288. The site does not meet any DEP Tier I Inclusionary Criteria. Therefore, the site is classified as a Tier II Disposal Site. A copy of the NRS Scoresheet is included as **Appendix G.**

13.0 PUBLIC NOTIFICATION

Public Notification has been sent to the City of Westfield Health Department and the Chief Municipal Officer. The appropriate legal notice will be published in the *The Republican – Metro West Edition.* Copies of the public notification letters and the legal notice are included as **Appendix H.**

14.0 SUMMARY OF FINDINGS

A Phase I - Initial Site Investigation and Tier Classification has been performed for the Sunoco Service Station site located at 88-90 South Maple Street in Westfield, Massachusetts. The following summary of findings is presented below:

- The property is zoned for commercial use and currently operates as a gasoline retail sales facility. Since the mid-1950's, fuel oil, gasoline, motor oil, used oil and other automotive supplies have been stored at the site during service station operation.
- Municipal water and sewer service is provided to the site and surrounding area. The site is not located within a Current or Potential Drinking Water Source Area. Nearby water bodies include the Little River (approximately 75 feet south) and Crane Pond (approximately 0.5 miles west).
- Soil analytical results from the November 2005 post excavation sampling identified C_5-C_8 Aliphatics and C_9-C_{10} Aromatics and xylenes concentrations above Method 1 S-1 & 3/GW 2 & 3 Soil Standards at the site of the initial release.
- Groundwater analytical results from the February and March 2006 sampling events identified C_5-C_8 aliphatics, C_9-C_{12} aliphatics and C_9-C_{10} aromatics above applicable Method 1 groundwater category GW-2 and/or GW-3 standards.
- Based on current site conditions, no 2-hour or 72-hour reporting conditions exist and no IRAs are required.
- The site has been Tier Classified as a Tier II Disposal Site with a Numerical Ranking Score of 288.
- The requirements of a Class A or Class B Response Action Outcome (RAO) have not yet been met. Further response actions are required at the site to achieve a condition of No Significant Risk in accordance with 310 CMR 40.0000.

15.0 PHASE II CONCEPTUAL SCOPE OF WORK

The following conceptual scope of work is presented pursuant to 310 CMR 40.0510(1)(e)2 of the MCP to further assess OHM at the Site, evaluate potential receptors (indoor air, utilities) and determine if Comprehensive Response Actions are necessary to achieve a condition of No Significant Risk.

The Conceptual Scope of Work is as follows:

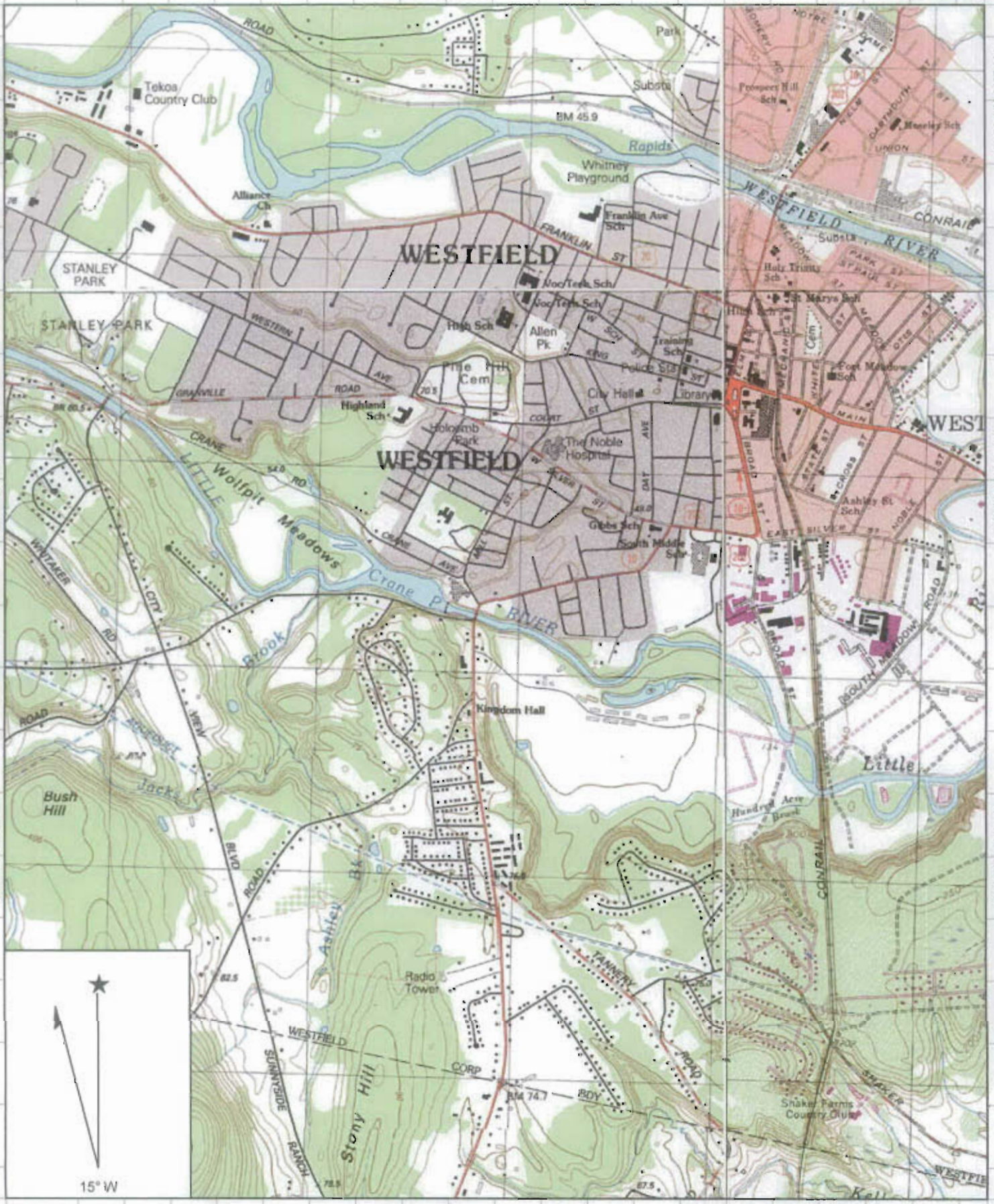
- Install soil borings and additional monitoring wells and retain soil samples to be analyzed for VPH and PCBs to delineate the extent of OHM at the site.
- Periodic gauging and groundwater sampling events will be performed to further evaluate groundwater quality.
- The site will continue to be evaluated for the presence of conditions of Substantial Release Migration (SRM), Imminent Hazards and Critical Exposure Pathways.
- Conduct surface water and sediment sampling of the Little River.
- Evaluate Method 1 GW-2 and GW-3 exceedances using a Method 2 Approach, as outlined in the October 2002 VPH/EPH Approach.

It is expected that this work will be completed within 2 years following Tier Classification.

16.0 REFERENCES

310 CMR 40.0000 Massachusetts Contingency Plan, June 2003
Bedrock Geologic Map of Massachusetts by E-An Zen (1985)
City of Westfield Records
DataMap Technology Corporation Environmental FirstSearch Report (FSTC)
Massachusetts Natural Heritage and Endangered Species Program (NHESP) 2000-2001 Atlas.

FIGURES



Name: SOUTHWICK
Date: 6/17/2005
Scale: 1 inch equals 2000 feet

Location: 042° 06' 40.0" N 072° 45' 49.7" W
Caption: Site Locus
Westfield Sunono
88-90 South Maple Street, Westfield, MA 01085

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LEGEND

◆ – EXISTING GROUNDWATER MONITORING WELL

—UE— – UNDERGROUND ELECTRIC

NOTE: 8/1/05 GAUGING DATA.

WELL NO.	GW ELEV.
MW-1	86.31
MW-3B	85.82
MW-4	85.95
MW-5	86.61
MW-6	85.29

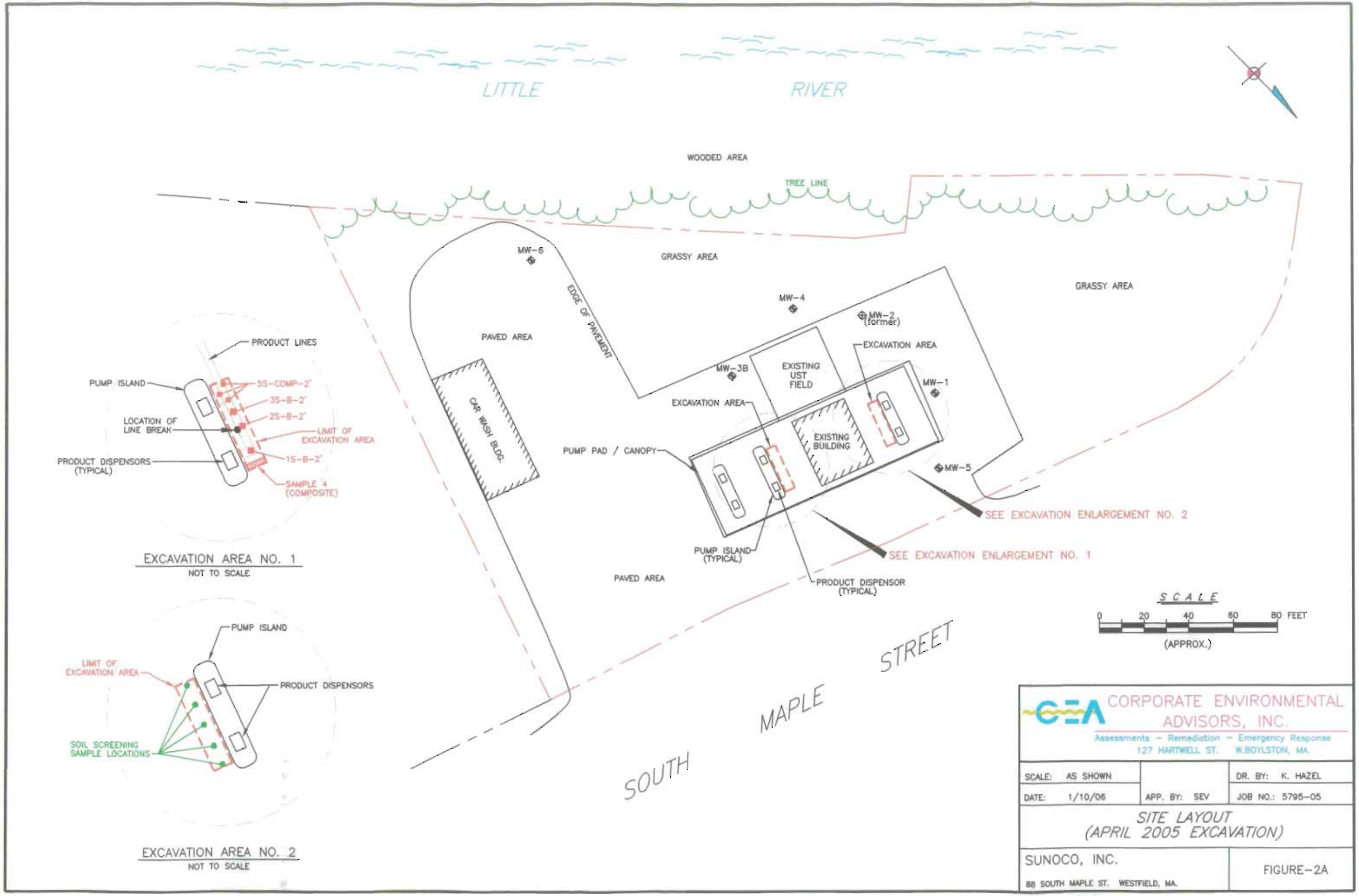
CORPORATE ENVIRONMENTAL ADVISORS, INC.
Assessments – Remediation – Emergency Response
127 HARTWELL ST. W.BOYLSTON, MA.

SCALE: AS SHOWN		DR. BY: K. HAZEL
DATE: 4/18/06	APP. BY: SEV	JOB NO.: 5795-05

SITE LAYOUT W/GROUNDWATER CONTOURS

SUNOCO, INC.
88 SOUTH MAPLE ST. WESTFIELD, MA.

FIGURE-2



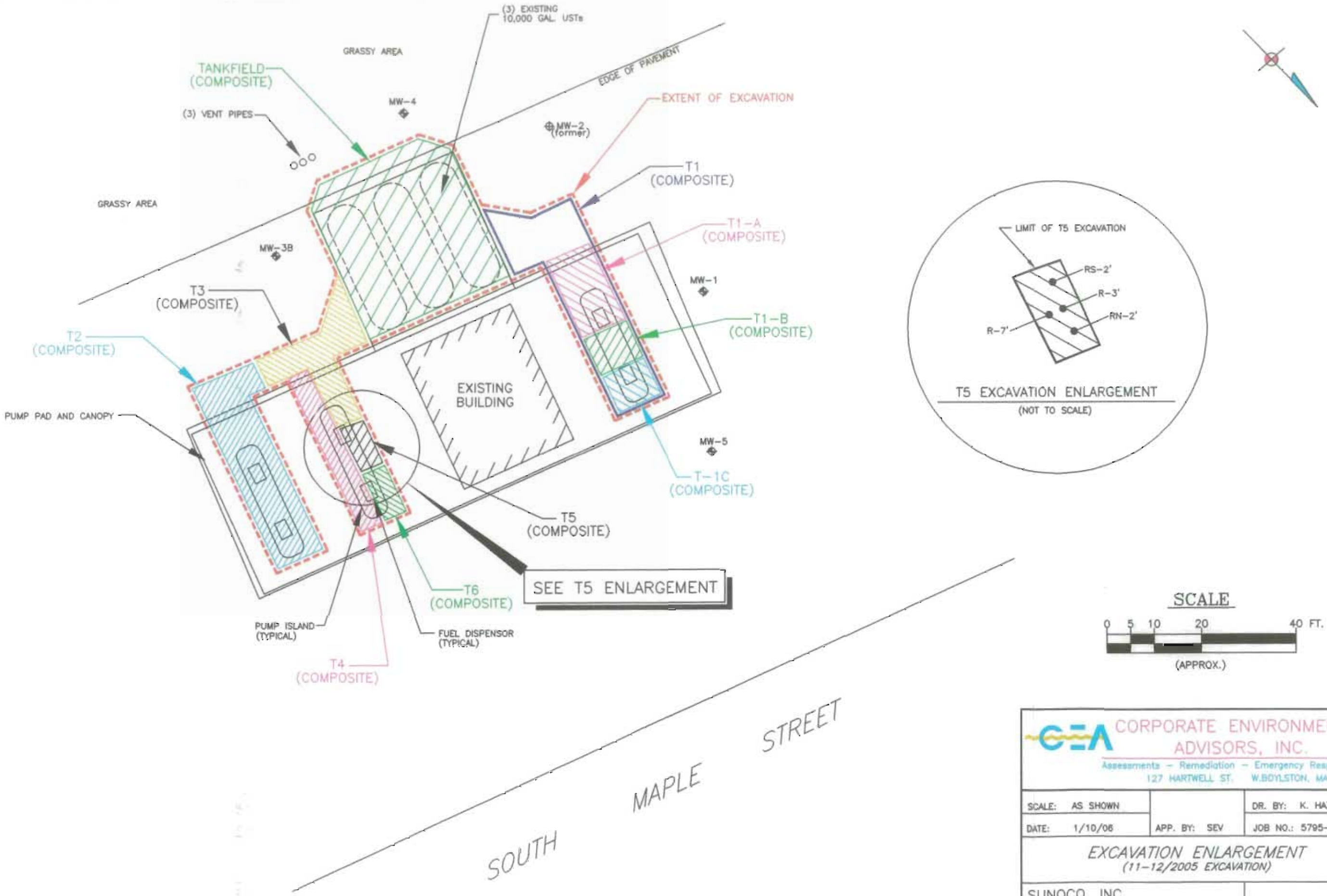
CORPORATE ENVIRONMENTAL ADVISORS, INC.
Assessments – Remediation – Emergency Response
127 HARTWELL ST. W.BOYLSTON, MA.

SCALE: AS SHOWN		DR. BY: K. HAZEL
DATE: 1/10/06	APP. BY: SEV	JOB NO.: 5795-05

SITE LAYOUT
(APRIL 2005 EXCAVATION)

SUNOCO, INC.
88 SOUTH MAPLE ST. WESTFIELD, MA.

FIGURE-2A



CORPORATE ENVIRONMENTAL ADVISORS, INC.
Assessments – Remediation – Emergency Response
127 HARTWELL ST. W.BOYLSTON, MA.

SCALE: AS SHOWN		DR. BY: K. HAZEL
DATE: 1/10/06	APP. BY: SEV	JOB NO.: 5795-05

EXCAVATION ENLARGEMENT
(11-12/2005 EXCAVATION)

SUNOCO, INC.
88 SOUTH MAPLE ST. WESTFIELD, MA.

FIGURE-2B

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:
Westfield Sunoco
88 South Maple Street
WESTFIELD, MA 01085
420640n 724548ew

Site Location

The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.

Roads: Limited Access, Divided, Major Road, Connector, Street, Track, Trail
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dams
Potentially Productive Aquifers: Medium,High Yield
Non-Potential Drinking Water Source Area: Medium,High Yield
EPA Sole Source Aquifer; FEMA 100-year floodplain
Public Water Supplies: Ground,Surface,Non Community
Approved Zone2; IWPA; Surface Water Supply Zone A
Hydrography: Water Features,Public Surface Water Supply
Wetlands: Fresh,Salt,NHESP Wetlands Habitat
Protected Open Space; ACEC
DEP Permitted Solid Waste Facilities; Certified Vernal Pools

N W E S

SCALE 1:15000

0 1/2 MILES
0 1/2 KILOMETERS

August 01, 2005

TABLES

Table 1
State Disposal Sites
Sunoco Station
88-90 South Maple Street
Westfield, MA

Site	Distance (miles) and Direction	Site Status	Release Tracking Number	Site Description
Sunoco Service Station 88-90 South Maple Street Westfield, MA	0.00 (Site)	Tier II / Phase I	1-15718	Product Piping Release
Bobs Automotive 97 South Maple Street Westfield, MA	0.07 NW Upgradient	RAO	1-0485	UST release to soil and groundwater
Residence 32 Noble Avenue Westfield, MA	0.58 NE Crossgradient	Tier ID	1-14537	Residential UST
No Location Aid 5-7 High Street Westfield, MA	0.60 NE Crossgradient	Tier IB	1-12355	Residential UST
Day Lumber Company South Broad St. Westfield, MA	0.80 SE Downgradient	RAO	1-0918	Industrial waste oil and virgin product release
Madden Residence 7 Washington Street Westfield, MA	0.84 NE Crossgradient	Tier II	1-14166	Petroleum Based
Terrance Flahive Residence 34 Tekoa Terrace Westfield, MA	0.84 NE Crossgradient	RAO	1-11881	Residential UST
Fire Station 34 Broad Street Westfield, MA	0.91 NE Crossgradient	Tier II	1-12277	Municipal UST
Former Westfield Woodworking 6 Coleman Ave Westfield, MA	0.91 NE Crossgradient	Tier ID	1-15540	TCE, Lead, Ethane
Bay Bank 30 Elm Street Westfield, MA	0.99 NE Crossgradient	Tier II	1-10788	Commercial UST

Table 2
UST
Sunoco Station
88-90 South Maple Street
Westfield, MA

UST Capacity (gallons)	Contents	Tank Construction	Installation Date	Removal Date
85	Waste Oil	Double-Walled Steel	1994	Current
12,000	Gasoline	Single-Walled Composite (steel and fiberglass) Buffide	1988	Current
10,000	Gasoline	Single-Walled Composite (steel and fiberglass) Buffide	1988	Current
8,000	Gasoline	Single-Walled Composite (steel and fiberglass) Buffide	1988	Current
10,000	Gasoline	Single-Walled Steel	1974	1988
10,000	Gasoline	Single-Walled Steel	1974	1988
10,000	Gasoline	Single-Walled Steel	1974	1988
1,000	Gasoline	Single-Walled Steel	Unknown	1988
4,000	Gasoline	Single-Walled Steel	1948	1974
2,000	Gasoline	Single-Walled Steel	1948	1974
2,000	Gasoline	Single Walled Steel	1948	1974

Table 3
Summary of Groundwater Analytical Data - VPH and Target Analytes
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Well ID	Sample Date	C5-C8 Aliphatics (ug/l)	C9-C12 Aliphatics (ug/l)	C9-C10 Aromatics (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)
M1RC Standards GW-2		**1,000**	**1,000**	**5,000**	**2,000**	**8,000**	**30,000**	**9,000**	**1,000**	**50,000**
M1RC Standards GW-3		**4,000**	**20,000**	**4,000**	**10,000**	**4,000**	**4,000**	**500**	**20,000**	**50,000**
RCGW-2		**1,000**	**1,000**	**4,000**	**2,000**	**4,000**	**4,000**	**6,000**	**1,000**	**50,000**
MW-1	08/01/05	<75	<25	<25	<5.0	<5.0	<5.0	<15	5.0	<5.0
	02/07/06	<50	<50	<50	<2.0	<2.0	<2.0	<2.0	<3.0	<2.0
MW-3B	02/07/06	**2,920**	1,070	2,520	252	2,060	676	2,238	95.4	2,320
	03/06/06	**2,100**	478	4,880	77.2	536	585	1,166	103	637
MW-4	08/01/05	<75	<25	<25	<5.0	<5.0	<5.0	<15	<5.0	<5.0
MW-5	08/01/05	<75	<25	<25	<5.0	<5.0	<5.0	<15	<5.0	<5.0
	02/07/06	<50	<50	<50	<2.0	<2.0	<2.0	<2.0	<3.0	<2.0
MW-6	08/01/05	<150	<50	<50	<10	<5.0	<5.0	<15	<5.0	1,570
	02/07/06	<50	<50	<50	446	12.3	<2.0	9.5	6.70	22,900

Notes:
N/A = Not Applicable and/or Not Analyzed
ND = Not detected above laboratory method detection limits.
Bold = Concentration greater than GW-2 Standards
Shaded = Concentration greater than GW-3 Standards

Table 4
Summary of Groundwater Analytical Data - VOCs
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Sample ID Date Collected	MW-4 8/1/05	MW-6 8/1/05	Reportable Concentrations RCGW-2	Method 1 GW-2 Standards	Method 1 GW-3 Standards
Volatile Organic Compounds (ug/l)					
Acetone	<10.0	<50.0	50,000	50,000	50,000
Acrylonitrile	<1.0	<5.0	N/A	N/A	N/A
Benzene	<1.0	<5.0	2,000	2,000	10,000
Bromobenzene	<1.0	<5.0	N/A	N/A	N/A
Bromochloromethane	<1.0	<5.0	N/A	N/A	N/A
Bromodichloromethane	<1.0	<5.0	6	6	50,000
Bromoform	<1.0	<5.0	700	700	50,000
Bromomethane	<2.0	<10.0	2	2	50,000
2-Butanone (MEK)	<10.0	<50.0	N/A	N/A	N/A
n-Butylbenzene	<1.0	<5.0	N/A	N/A	N/A
sec-Butylbenzene	<1.0	<5.0	N/A	N/A	N/A
tert-Butylbenzene	<1.0	<5.0	N/A	N/A	N/A
Carbon Disulfide	<5.0	<25.0	N/A	N/A	N/A
Carbon Tetrachloride	<1.0	<5.0	2	2	5,000
Chlorobenzene	<1.0	<5.0	200	200	1,000
Chloroethane	<2.0	<10.0	N/A	N/A	N/A
Chloroform	<1.0	<5.0	400	400	10,000
Chloromethane	<2.0	<10.0	N/A	N/A	N/A
2-Chlorotoluene	<1.0	<5.0	N/A	N/A	N/A
4-Chlorotoluene	<1.0	<5.0	N/A	N/A	N/A
1,2-Dibromo-3-chloropropane	<2.0	<10.0	N/A	N/A	N/A
Dibromochloromethane	<1.0	<5.0	20	20	50000
1,2-Dibromoethane (EDB)	<1.0	<5.0	20	3	50000
1,2-Dichlorobenzene	<1.0	<5.0	2,000	2,000	2,000
1,3-Dichlorobenzene	<1.0	<5.0	2,000	2,000	50,000
1,4-Dichlorobenzene	<1.0	<5.0	200	200	8,000
Dichlorodifluoromethane	<2.0	<10.0	N/A	N/A	N/A
1,1-Dichloroethane	<1.0	<5.0	1,000	1,000	20,000
1,2-Dichloroethane	<1.0	<5.0	5	5	20,000
1,1-Dichloroethene	<1.0	<5.0	80	80	30,000
cis-1,2-Dichloroethene	<1.0	<5.0	100	100	50,000
trans-1,2-Dichloroethene	<1.0	<5.0	90	90	50,000
1,2-Dichloropropane	<1.0	<5.0	3	3	50,000
1,3-Dichloropropane	<1.0	<5.0	5	5	2000
2,2-Dichloropropane	<1.0	<5.0	N/A	N/A	N/A
1,1-Dichloropropene	<1.0	<5.0	N/A	N/A	N/A
cis-1,3-Dichloropropene	<1.0	<5.0	9	5	2,000
trans-1,3-Dichloropropene	<1.0	<5.0	5	5	2,000
Ethylbenzene	<1.0	<5.0	4,000	30,000	4,000
Hexachlorobutadiene	<1.0	<5.0	1	1	3000
2-Hexanone	<10.0	<50.0	N/A	N/A	N/A
Isopropylbenzene	<1.0	<5.0	N/A	N/A	N/A
4-Isopropyltoluene	<1.0	<5.0	N/A	N/A	N/A
MTBE	1,690	<5.0	50,000	50,000	50,000
4-Methyl-2-Pentanone (MIBK)	<10.0	<50.0	50,000	50,000	50,000
Methylene Chloride	<1.0	<50.0	N/A	N/A	N/A
Napthalene	<1.0	<5.0	1000	1,000	20,000
n-Propylbenzene	<1.0	<5.0	N/A	N/A	N/A
Styrene	<1.0	<5.0	900	100	6,000
1,1,1,2-Tetrachloroethane	<1.0	<5.0	10	10	50,000
1,1,2,2-Tetrachloroethane	<1.0	<5.0	9	9	50,000
Tetrachlorethene	<1.0	<5.0	50	50	30,000
Toluene	<1.0	<5.0	4,000	8,000	40,000
1,2,3-Trichlorobenzene	<1.0	<5.0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	<1.0	<5.0	2,000	2,000	50,000
1,1,1-Trichloroethane	<1.0	<5.0	4,000	4,000	20,000
1,1,2-Trichloroethane	<1.0	<5.0	900	900	50,000
Trichloroethene	<1.0	<5.0	30	30	5,000
Trichlorofluoromethane	<1.0	<5.0	N/A	N/A	N/A
1,2,3-Trichloropropane	<1.0	<5.0	N/A	N/A	N/A
1,2,4-Trimethylbenzene	<1.0	<5.0	N/A	N/A	N/A
1,3,5-Trimethylbenzene	<1.0	<5.0	N/A	N/A	N/A
Vinyl Chloride	<1.0	<5.0	2	2	50,000
Total Xylenes	<3.0	<15.0	500	9,000	500
Tetrahydrofuran	<10.0	<50.0	N/A	N/A	N/A
Ethyl ether	<1.0	<5.0	N/A	N/A	N/A
Tert-amyl methyl ether	<1.0	<5.0	N/A	N/A	N/A
Ethyl tert-buty ether	<1.0	<5.0	N/A	N/A	N/A
Di-isopropyl ether	<1.0	<5.0	N/A	N/A	N/A
butyl alcohol	<10.0	<50.0	N/A	N/A	N/A
1,4-Dioxane	<20.0	<100	N/A	N/A	N/A

Notes:
Bold values indicate concentrations above RC GW-1 Standards.
Shaded values indicate concentrations above RC GW-2 Standards.
NA = Not Available

Table 5
Summary of Grouudwater Analytical Results: EPH
Suuoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Sample ID	Date Sampled	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics
RCGW-1		20	300	2,000	1	0.2	1	300	1	2	0.5	90	300	0.5	10	140	50	20	1,000	14,000	200
RCGW-2		5,000	3,000	3,000	1,000	500	400	3,000	100	3,000	40	200	3,000	100	3,000	1,000	50	20	1,000	50,000	30,000
Upper Concentration Limits		50,000	30,000	30,000	10,000	5,000	4,000	30,000	1,000	30,000	400	2,000	30,000	1,000	100,000	100,000	3,000	800	100,000	100,000	100,000
MW-4	8/1/2005	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<200	<200	<200
MW-6	8/1/2005	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<5.26	<200	<200	<200

Notes:
Bold values indicate concentrations above M1RC GW-3 Standards.
Shaded values indicate concentrations above MCP Reportable Concentrations.
N/A Indicates not applicable
'– = Not analyzed

Table 6
Summary of Groundwater Analytical Results: Metals
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Sample ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
RCGW-2		**900**	**50,000**	**4**	**300**	**10**	**20**	**100**	**7**
GW-2		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
GW-3		**900**	**50,000**	**4**	**300**	**10**	**20**	**100**	**7**
MW-4 *(GW-2 & 3)*	8/1/2005	<4	134	<1.2	<2.5	<3.8	<0.2	<7.5	<5
MW-6 *(GW-2 & 3)*	8/1/2005	<4	109	<1.2	<2.5	<3.8	<0.2	<7.5	<5

Notes:
RCGW-2 = MCP Reportable Concentrations
Bold = Exceeds Method 1 GW-2 Standards
Italicized = Exceeds Method 1 GW-3 Standards
NSVD = Well casing elevation not surveyed
NA = Not applicable

Table 7
Summary of Soil Analytical Data - VPH and Target Analytes
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Sample ID	Sample Date	Sample Depth (feet)	Screening Result (ppmv)	C5-C8 Aliphatics (mg/kg)	C9-C12 Aliphatics (mg/kg)	C9-C10 Aromatics (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	MTBE (mg/kg)
M1RC Standards S-1 / GW-2		—	—	100	1,000	100	30	300	500	300	40	100
M1RC Standards S-1 / GW-3		—	—	100	1,000	100	30	500	500	300	500	100
M1RC Standards S-3 / GW-2		—	—	500	5,000	500	700	300	2,500	300	40	100
M1RC Standards S-3 / GW-3		—	—	500	5,000	500	900	1,000	500	300	3,000	500
Upper Concentration Limits		—	—	5,000	20,000	5,000	9,000	10,000	10,000	10,000	10,000	5,000
Sample 1 **	4/14/2005*	2'	2	4.9	<2.4	<2.4	<0.12	0.64	0.12	0.48	<0.12	3.79
Sample 2 **	4/14/2005*	2'	100	9.7	4.3	8.4	<0.11	0.90	0.30	1.63	<0.11	2.89
Sample 3 **	4/14/2005*	2'	140	3,410	1,300	1,040	28.6	545	124	421	19.9	205
Sample 4 ***	4/14/2005*	2'	10	4.5	2.4	<2.1	<0.11	0.38	<0.11	0.39	<0.11	0.62
1 S-B-2' ***	4/27/2005	2'	104	9.63	<3.1	<3.1	<0.15	0.20	<0.15	0.17	0.17	7.35
2 S-B-2' ***	4/27/2005	2'	144	4,790	2,190	2,380	30.3	1,050	416	1,454	40.1	204
4 S-B-2' ***	4/27/2005	2'	53	8.2	<3.0	<3.0	<0.15	0.8	0.15	0.64	0.17	3.1
5 S-COMP-2' ***	4/27/2005	2'	235	4.75	<3.6	<3.6	<0.18	<0.18	<0.18	0.18	<0.18	0.21
Piping Upgrade												
Tank Field	11/16/2005	1' - 5'	–	41.7	26.6	70.6	0.16	7.52	4.19	21.2	3.62	10.5
R-7'	11/18/2005	7'	55	1,870	935	1,650	5.76	291	132	539	32.9	23.8
T1	11/17/2005	3'	–	8.95	3.45	9.89	0.23	0.75	0.34	1.71	0.72	0.27
T2	11/17/2005	3'	–	3.2	0.61	0.98	0.071	0.24	0.074	0.26	0.1	<0.64
T3	11/18/2005	3'	–	1.23	<0.31	0.48	<0.06	0.134	<0.06	0.16	<0.06	<0.06
T4	11/18/2005	3'	–	2.9	0.96	<0.82	<0.16	<0.16	<0.16	<0.49	<0.16	<0.16
T5	11/18/2005	3'	–	30.1	24.6	58.2	<0.11	3.47	1.92	14.36	1.83	0.53
T6	11/18/2005	3'	–	21.7	27.7	52.9	<0.17	1.24	1.1	8.2	1.05	<0.17
Piping Upgrade - Additional Sampling												
R-3'	12/19/2005	3'	–	36.9	64.4	77.9	<0.161	1.71	0.37	8.34	2.6	<0.161
RS-2'	12/19/2005	2'	–	<1.38	0.65	0.77	0.094	0.13	<0.092	<0.28	<0.092	0.12
RN-2'	12/19/2005	2'	–	1.58	1.48	1.16	<0.07	0.1	<0.07	<0.22	<0.07	<0.07

Notes:
Shaded values indicate concentrations above M1RC S-1 Standards.
Bold values indicate concentrations above M1RC S-3 Standards.
* All Soil Samples taken on 4-14-2005 were not analyzed for % solids
** Soil samples taken on 4-14-2005 were excavated on 4-27-2005
*** Soil samples taken on 4-14-2005 and 4-27-2005 were excavated on 11-18-2005

Table 8
Summary of Soil Analytical Data - PCBs
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Sample ID	Sample Date	Sample Depth (feet)	PCB 1016 (mg/kg)	PCB 1221 (mg/kg)	PCB 1232 (mg/kg)	PCB 1242 (mg/kg)	PCB 1248 (mg/kg)	PCB 1254 (mg/kg)	PCB 1260 (mg/kg)	PCB 1262 (mg/kg)	PCB 1268 (mg/kg)
M1RC Standards S-1		—	2	2	2	2	2	2	2	2	2
M1RC Standards S-2		—	2	2	2	2	2	2	2	2	2
Upper Concentration Limits		—	100	100	100	100	100	100	100	100	100
StockPile	11/17/2005	—	<0.031	<0.031	<0.031	<0.031	2.31	<0.031	<0.031	<0.031	<0.031
Tank Field	11/16/2005	3' - 5'	<0.028	<0.028	<0.028	<0.028	1.32	<0.028	0.046	<0.028	<0.028
T1	11/17/2005	3'	<0.61	<0.61	<0.61	<0.61	31.7	<0.61	0.35	<0.03	<0.03
T2	11/17/2005	3'	<0.031	<0.031	<0.031	<0.031	0.098	<0.031	0.11	<0.031	<0.031
T5	11/18/2005	3'	<0.03	<0.03	<0.03	<0.03	0.07	<0.03	0.065	<0.03	<0.03
T1-A	12/19/2005	2'	<0.03	<0.03	<0.03	<0.03	2.97	<0.03	<0.03	<0.03	<0.03
T1-B	12/19/2005	2'	<0.03	<0.03	<0.03	<0.03	3.42	<0.03	<0.03	<0.03	<0.03
T1-C	12/19/2005	2'	<0.15	<0.15	<0.15	<0.15	8.33	<0.03	<0.03	<0.03	<0.03

Notes:
Bold values indicate concentrations above M1RC S-3 Standards.
Shaded values indicate concentrations above M1RC S-1 Standards.
NA = Not Analyzed

APPENDIX A

Site Photographs

Station facing southwest

Facing west

Facing north

Failed product piping line

Failed product piping line

Facing south

Facing north – Initial Release

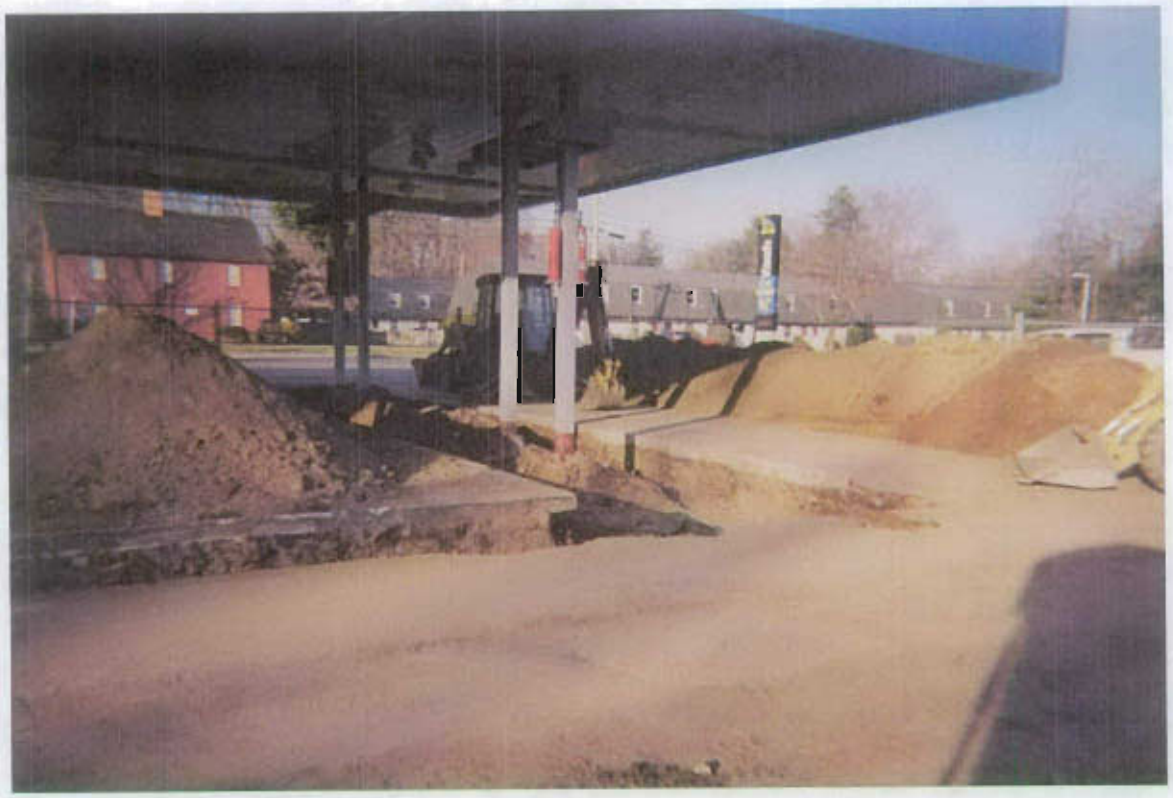
Piping upgrade facing north

Tank field facing northwest

Tank field facing southwest

Facing east

Facing west



Facing northeast

Facing west

Facing north

APPENDIX B

Environmental FirstSearch Report

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

TARGET PROPERTY:

88 SOUTH MAPLE ST

WESTFIELD MA 01085

Job Number: 5795-05

PREPARED FOR:

Corporate Environmental Advisors, Inc.

127 Hartwell Street

West Boylston, MA 01583

03-22-06

Tel: (781) 551-0470 *Fax: (781) 551-0471*

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Environmental FirstSearch
Search Summary Report

Target Site: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	01-13-06	1.00	0	0	0	0	0	0	0
CERCLIS	Y	01-13-06	0.50	0	0	0	0	-	0	0
NFRAP	Y	01-13-06	0.25	0	0	0	-	-	0	0
RCRA TSD	Y	02-16-06	0.50	0	0	0	0	-	0	0
RCRA COR	Y	02-16-06	1.00	0	0	0	0	0	0	0
RCRA GEN	Y	02-16-06	0.25	0	1	0	-	-	0	1
ERNS	Y	12-31-05	0.25	0	0	0	-	-	6	6
State Sites	Y	01-10-06	1.00	0	1	0	1	8	0	10
Spills-1990	Y	01-10-06	0.50	0	3	5	13	-	19	40
SWL	Y	01-01-06	0.50	0	0	0	0	-	2	2
REG UST/AST	Y	01-23-06	0.25	0	2	1	-	-	1	4
- TOTALS -				0	7	6	14	8	28	63

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Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

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Environmental FirstSearch
Site Information Report

Request Date:	03-22-06	**Search Type:**	COORD
Requestor Name:	Patrick Brown	**Job Number:**	5795-05
Standard:	ASTM		

TARGET ADDRESS: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

Demographics

Sites:	63	**Non-Geocoded:**	28	**Population:**	4444
Radon:	0.4 - 6.4 PCI/L				

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-72.76262	-72:45:45	**Easting:**	684981.085
Latitude:	42.111331	42:6:41	**Northing:**	4664346.158
			Zone:	18

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

TOTAL: 63 **GEOCODED:** 35 **NON GEOCODED:** 28 **SELECTED:** 35

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
2	RCRAGN	SUNOCO SERVICE STA MA5000000729/VGN	88-90 MAPLE ST WESTFIELD MA 01085	0.05 SW	1
2	SPILLS	BP STATION 1-0000489/RAO	88 SOUTH MAPLE ST WESTFIELD MA 01085	0.05 SW	2
2	SPILLS	NO LOCATION AID 1-0015718/UNCLSS	88-90 MAPLE ST WESTFIELD MA 01085	0.05 SW	4
2	UST	SUNOCO #0374-5593 0-007892	88-90 MAPLE ST WESTFIELD MA 01085	0.05 SW	5
4	SPILLS	BOBS AUTOMOTIVE 1-0000485/RAO	97 SOUTH MAPLE ST WESTFIELD MA 01085	0.07 NW	7
4	STATE	BOBS AUTOMOTIVE 1-0000485/TIER 2	97 SOUTH MAPLE ST WESTFIELD MA 01085	0.07 NW	9
4	UST	PRIDE CONVENIENCE INC 0-007912	97 S MAPLE ST WESTFIELD MA 01085	0.07 NW	11
17	SPILLS	FORMER TEXACO STATION 1-0015400/RAO	27 SOUTHWICK ST WESTFIELD MA 01085	0.13 SW	13
17	SPILLS	MOBIL GAS 1-0000230/DEPNFA	27 SOUTHWICK RD WESTFIELD MA 01085	0.13 SW	14
17	UST	SHELL 0-007910	27 SOUTHWICK RD WESTFIELD MA 01085	0.13 SW	15
22	SPILLS	THE MILL AT CRANE POND 1-0011455/RAO	77 MILL ST WESTFIELD MA 01085	0.15 NW	18
22	SPILLS	ROCKWELL INDUSTRIES W90-0190	77 MILL STREET WESTFIELD MA 01085	0.15 NW	20
18	SPILLS	GENESIS SPIRITUAL CENTER 1-0011040/RAO	53 MILL ST WESTFIELD MA 01085	0.22 NW	21
19	SPILLS	MOTOR OIL W93-0317	LITTLE RIVER WESTFIELD MA 01085	0.27 SE	22
8	SPILLS	FOWLER FARMS 1-0000650/PENNFA	SOUTHWICK RD WESTFIELD MA	0.30 SW	23
8	STATE	FOWLER FARMS 1-0000650/PENDING NFA	SOUTHWICK RD. WESTFIELD MA 01085	0.30 SW	24
14	SPILLS	CASCO FARMS W92-0147	100 ACRES ROAD WESTFIELD MA 01085	0.33 SE	25
21	SPILLS	RESIDENTIAL UST 1-0015284/RAO	28 MILL ST WESTFIELD MA 01085	0.35 NE	26
13	SPILLS	FORMER BEMBEN GREENHOUSES 1-0015805/UNCLSS	17 BROOKLINE AVE WESTFIELD MA 01085	0.37 NE	27
13	SPILLS	BEMBEN NURSERIES 1-0012768/RAO	17 BROOKLINE AVE WESTFIELD MA 01085	0.37 NE	28
16	SPILLS	FORMER MOORE CONTRACTORS W93-0411	MATHER ST WESTFIELD MA 01085	0.40 NE	30

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

TOTAL: 63 **GEOCODED:** 35 **NON GEOCODED:** 28 **SELECTED:** 35

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
16	SPILLS	FORMER WM. MOORE EXCAVATING W91-0594	MATHER STREET WESTFIELD MA 01085	0.40 NE	31
20	SPILLS	PUNDERSON OIL W90-0193	152 VALLEY VIEW DRIVE WESTFIELD MA 01085	0.41 SW	32
15	SPILLS	CORNER OF MILL AND W. SILVER STREE 1-0014502/RAO	120 WEST SILVER ST WESTFIELD MA	0.47 NE	33
1	SPILLS	NOBLE HOSPITAL W90-0655	115 W. SILVER STREET WESTFIELD MA 01085	0.47 NE	35
1	SPILLS	NOBLE HOSPITAL W90-0066	115 W. SILVER STREET WESTFIELD MA 01085	0.47 NE	36
1	SPILLS	NOBLE HOSPITAL LAB W92-0027	115 WEST SILVER STREET WESTFIELD MA 01085	0.47 NE	37
11	STATE	RESIDENCE 1-0014537/TIER1D	32 NOBLE AVE WESTFIELD MA	0.58 NE	38
10	STATE	NO LOCATION AID 1-0012355/DEF TIER 1B	5 TO 7 HIGH ST WESTFIELD MA 01085	0.60 NE	39
5	STATE	DAY LUMBER COMPANY 1-0000918/RAO	SOUTH BROAD ST PO BOX 9 WESTFIELD MA 01085	0.80 SE	40
9	STATE	MADDEN RESIDENCE 1-0014166/TIERII	7 WASHINGTON ST WESTFIELD MA 01085	0.84 NE	41
12	STATE	TERRANCE FLAHIVE RESIDENCE 1-0011881/RAO	34 TEKOA TER WESTFIELD MA 01085	0.87 NW	43
6	STATE	FIRE STATION 1-0012277/TIERII	34 BROAD ST WESTFIELD MA 01085	0.91 NE	45
7	STATE	FORMER WESTFIELD WOODWORKING 1-0015540/TIER1D	6 COLEMAN AVE WESTFIELD MA 01085	0.91 NE	47
3	STATE	BAYBANK 1-0010788/TIERII	30 ELM ST WESTFIELD MA 01085	0.99 NE	48

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

TOTAL: 63 **GEOCODED:** 35 **NON GEOCODED:** 28 **SELECTED:** 35

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
	ERNS	CROSS STREET PLAYGROUND / LITTLE L NRC-527526/FIXED	CROSS STREET PLAYGROUND WESTFIELD MA 01085	NON GC	N/A
	ERNS	D31131/UNKNOWN	WESTFIELD MA 01085	NON GC	N/A
	ERNS	WESTFIELD WATER DEPT. 424330/FIXED FACILITY	MUNICIPAL WELL NUMBER 4 WESTFIELD MA 01085	NON GC	N/A
	ERNS	SONS TRANSPORTATION CO 255785/HIGHWAY RELATED	MASS TURNPIKE RTE 90 WESTFIELD MA	NON GC	N/A
	ERNS	SLADERS TRANSPORTATION, CO. 166108/FIXED FACILITY	PO BOX 8013 WESTFIELD MA	NON GC	N/A
	ERNS	S20580/HIGHWAY	66 ATLAS STREET WESTFIELD MA 01085	NON GC	N/A
	SPILLS	W90-0180	BROAD STREET WESTFIELD MA 01085	NON GC	N/A
	SPILLS	INTERSECTION WITH DEEP WOODS DRIVE 1-0014417/RAO	HOLYOKE RD WESTFIELD MA	NON GC	N/A
	SPILLS	MILE MARKER 43.5 1-0013224/RAO	MASSACHUSETTS TPKE WESTFIELD MA 01085	NON GC	N/A
	SPILLS	W90-0615	NECK ROAD WESTFIELD MA 01085	NON GC	N/A
	SPILLS	MM 41 EASTBOUND 1-0014692/RAO	MASSACHUSETTS TPKE WESTFIELD MA	NON GC	N/A
	SPILLS	MILE MARKER 33 1-0015091/RAO	MASSPIKE WESTBOUND WESTFIELD MA	NON GC	N/A
	SPILLS	BUILDING WASTE DUMPING W92-0603	EAST MAIN ST WESTFIELD MA 01085	NON GC	N/A
	SPILLS	POLE #13/17- RESERVOIR W92-0152	TEKOA ROAD MONTGOMERY MA 01085	NON GC	N/A
	SPILLS	POLE 5/150 1-0015269/RAO	MAIN RD MONTGOMERY MA 01085	NON GC	N/A
	SPILLS	POLE 592 W91-0173	RUSSELL ROAD WESTFIELD MA 01085	NON GC	N/A
	SPILLS	INTERCHANGE 3 1-0012565/RAO	RTE 90 WESTFIELD MA 01085	NON GC	N/A
	SPILLS	ONE MILE WEST OF WEST ROAD W92-0098	RESERVOIR ROAD WESTFIELD MA 01085	NON GC	N/A
	SPILLS	RESIDENTIAL 1-0014539/RAO	BETWEEN 58 AND 64 DEBORAH L WESTFIELD MA	NON GC	N/A
	SPILLS	WESTIFELD GAS & ELECTRIC W90-0149	POLE #50, UNION STREET WESTFIELD MA 01085	NON GC	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

TOTAL: 63 **GEOCODED:** 35 **NON GEOCODED:** 28 **SELECTED:** 35

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
	SPILLS	COLUMBIA MANUFACTURING 1-0013432/ADQREG	SOUTH MEADOW RD WESTFIELD MA	NON GC	N/A
	SPILLS	CROSS STREET PLAYGROUND 1-0013417/RAO	22 ASHLEY ST WESTFIELD MA	NON GC	N/A
	SPILLS	DETENTION BASIN 1-0012094/RAO	TANK DESTROYER BLVD WESTFIELD MA 01085	NON GC	N/A
	SPILLS	FLIGHT LINE BAKER 3 1-0014105/RAO	1759 FALCON DR WESTFIELD MA	NON GC	N/A
	SPILLS	POOLE TRANSPORT W93-0047	RTE 20 WESTFIELD MA 01085	NON GC	N/A
	SWL	GREEN WING CONSTRUCTION COMPOST CO0329.010/ACTIVE	NORTH RD WESTFIELD MA	NON GC	N/A
	SWL	WESTERN MA HOSPITAL DUMP SL0329.008/CLOSED	31 EAST MOUNTAIN RD WESTFIELD MA	NON GC	N/A
	UST	SNOW REMOVAL BUILDING 0-004510	SOUTHAMPTON RD WESTFIELD MA 01085	NON GC	N/A

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

RCRA GENERATOR SITE

SEARCH ID: 1 **DIST/DIR:** 0.05 SW **MAP ID:** 2

NAME: SUNOCO SERVICE STA
ADDRESS: 88-90 MAPLE ST
WESTFIELD MA 01085
CONTACT: DIANNE ROBINSON

REV: 6/13/05
ID1: MA5000000729
ID2:
STATUS: VGN
PHONE: 2152468577

SITE INFORMATION

CONTACT INFORMATION: DIANNE ROBINSON
1801 MARKET ST
PHILADELPHIA PA 191031699

PHONE: 2152468577

UNIVERSE INFORMATION:

SNC: N - NO
BOYSNC: N - NO
GPRA PERMIT: N - NO
GPRA POSTCLOSURE: N - NO
GPRA CA: N - NO
GPRA CME: N - NO
PERM PROG: ----
PREM WR
NAIC INFORMATION

HANDLER INFORMATION:

SECOND ID:
ACCESSIBILITY:
FED WSTE GEN OWNER: HQ
STATE WSTE GEN OWNER:

OFF SITE RECEIPT: U - UNKNOWN
COUNTY OWNER:
FED WASTE GEN: 3
STATE WSTE GEN:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

Benzene
Ignitable waste

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 14 **DIST/DIR:** 0.05 SW **MAP ID:** 2

NAME: BP STATION
ADDRESS: 88 SOUTH MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0000489
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LTBI: 1/15/1989
DELETED:
CONFIRMED:
REMOVED:

LOCATION TYPE:
SOURCE:
SITE DESCRIPTION:

CHEMICALS

UNKNOWN CHEMICAL OF UNKNOWN TYPE

SITE ACTIONS

TS DATE: 8/9/1995
AUL RESTRICTION:
LSP: KEVIN SHEEHAN
RA STATUS:
RAS TYPE: LSP-RAOEQ
RAO CLASS:

TS DATE: 8/9/1995
AUL RESTRICTION:
LSP: KEVIN SHEEHAN
RA STATUS: COMPLETION STATEMENT RECEIVED
RAS TYPE: PHASE 1
RAO CLASS:

ACT DATE: 6/21/1988
ACT USE LIMITATION:
LSP:
ACT STATUS: VALID TRANSITION SITE
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 8/9/1995
ACT USE LIMITATION:
LSP:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1
RAO CLASS:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 14 **DIST/DIR:** 0.05 SW **MAP ID:** 2

NAME: BP STATION
ADDRESS: 88 SOUTH MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0000489
ID2:
STATUS: RAO
PHONE:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 25 **DIST/DIR:** 0.05 SW **MAP ID:** 2

NAME: NO LOCATION AID
ADDRESS: 88-90 MAPLE ST
WESTFIELD MA

CONTACT:

REV: 01/10/06
ID1: 1-0015718
ID2:
STATUS: UNCLSS
PHONE:

SITE INFORMATION

STATUS: UNCLASSIFIED - A release that has not reached its Tier Classification deadline (usually one year after it was reported), and where an RAO Statement, DPS Submittal, or Tier Classification Submittal has not been received by DEP.

LOCATION TYPE:
SOURCE: PIPE;
SITE DESCRIPTION:

CHEMICALS

GASOLINE 150 PPM

SITE ACTIONS

ACT DATE: 6/14/2005
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 4/15/2005
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 8/16/2005
ACT USE LIMITATION:
LSP: SCOTT VANDER
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 35 **DIST/DIR:** 0.05 SW **MAP ID:** 2

NAME: SUNOCO #0374-5593
ADDRESS: 88-90 MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007892
ID2: 13329
STATUS:
PHONE:

TOTAL NUMBER OF TANKS: 4

OWNER INFORMATION
OWNER NAME: SUNOCO INC (R & M)
OWNER ADDRESS: 1735 MARKET ST, 12TH FL
PHILADELPHIA PA 19103

FACILITY TYPE: GAS STATION
WORK PHONE: (215) 246-8513

TANK INFORMATION

TANK NUMBER: 1
TANK STATUS: IN USE
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 8000
CONTENTS: GASOLINE
USE: MV
TANK MATERIAL: CATHODIC
TANK TYPE: 2 WALLS
LEAK DETECTION: Interstitial Monitoring

PIPE MATERIAL: CATHODIC
PIPE TYPE: 1 WALL
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 2
TANK STATUS: IN USE
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE
USE: MV
TANK MATERIAL: CATHODIC
TANK TYPE: 2 WALLS
LEAK DETECTION: Interstitial Monitoring

PIPE MATERIAL: CATHODIC
PIPE TYPE: 1 WALL
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 3
TANK STATUS: IN USE
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 12000
CONTENTS: GASOLINE

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 35 **DIST/DIR:** 0.05 SW **MAP ID:** 2

NAME: SUNOCO #0374-5593
ADDRESS: 88-90 MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007892
ID2: 13329
STATUS:
PHONE:

USE: MV
TANK MATERIAL: CATHODIC
TANK TYPE: 2 WALLS
LEAK DETECTION: Interstitial Monitoring

PIPE MATERIAL: CATHODIC
PIPE TYPE: 1 WALL
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 4
TANK STATUS: IN USE
SERIAL NUMBER:
ABOVE GROUND: Y
CAPACITY(GAL): 85
CONTENTS: WASTE OIL
USE:
TANK MATERIAL: STEEL
TANK TYPE: 2 WALLS
LEAK DETECTION:

PIPE MATERIAL:
PIPE TYPE:
LEAK DETECTION:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 13 **DIST/DIR:** 0.07 NW **MAP ID:** 4

NAME: BOBS AUTOMOTIVE
ADDRESS: 97 SOUTH MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0000485
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LTBI: 1/15/1989 **CONFIRMED:** 10/1/1993
DELETED: **REMOVED:**

LOCATION TYPE: GASSTATION,
SOURCE: UST;
SITE DESCRIPTION: GAS STATION; RELEASE TO SOIL; CONTAINED IN A LUST; GROUNDWATER RELEASE; GASOLINE PRESENT;

OTHER CONTAMINATION:
OTHER RELEASES:
OTHER PROBLEMS:
OTHER TYPE OF SITE:

CHEMICALS

UNKNOWN CHEMICAL OF UNKNOWN TYPE

SITE ACTIONS

TS DATE: 10/23/1995
AUL RESTRICTION: NON
LSP: STEVEN MIGRIDICHIAN
RA STATUS:
RAS TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 6/20/1988
ACT USE LIMITATION:
LSP:
ACT STATUS: VALID TRANSITION SITE
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 10/23/1995
ACT USE LIMITATION: NONE
LSP:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 13 **DIST/DIR:** 0.07 NW **MAP ID:** 4

NAME: BOBS AUTOMOTIVE
ADDRESS: 97 SOUTH MAPLE ST
WESTFIELD MA 01085

CONTACT:

REV: 01/10/06
ID1: 1-0000485
ID2:
STATUS: RAO
PHONE:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 3 **DIST/DIR:** 0.07 NW **MAP ID:** 4

NAME: BOBS AUTOMOTIVE
ADDRESS: 97 SOUTH MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 1/16/02
ID1: 1-0000485
ID2:
STATUS: TIER 2
PHONE:

SITE INFORMATION

LTBI: 1/15/89
DELETED:
CONFIRMED: 10/1/93
REMOVED:

CATEGORY: NONE
DATE: 6/20/88
PHASE:
21E STATUS: TIER 2
21E DATE: 10/23/95
HAZMAT TYPE:

RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

LOCATION TYPE: GASSTATION,
SOURCE: UST;
SITE DESCRIPTION: RELEASE TO SOIL; GROUNDWATER RELEASE; GAS STATION; CONTAINED IN A LUST; GASOLINE PRESENT;

OTHER CONTAMINATION:
OTHER RELEASES:
OTHER PROBLEMS:
OTHER TYPE OF SITE:

CHEMICALS

UNKNOWN CHEMICAL OF UNKNOWN TYPE

SITE ACTIONS

TS DATE: 10/23/1995
AUL RESTRICTION: NON
LSP: STEVEN MIGRIDICHIAN
RA STATUS:
RAS TYPE: RAO: RESPONSE ACTION OUTCOME
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 10/23/1995
ACT USE LIMITATION: NONE
LSP:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RAO: RESPONSE ACTION OUTCOME
RAO TYPE: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 06/20/1988
ACT USE LIMITATION:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 3 **DIST/DIR:** 0.07 NW **MAP ID:** 4

NAME: BOBS AUTOMOTIVE
ADDRESS: 97 SOUTH MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 1/16/02
ID1: 1-0000485
ID2:
STATUS: TIER 2
PHONE:

LSP:
ACT STATUS: TCTRNS
ACT TYPE: REL
RAO TYPE:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 33 **DIST/DIR:** 0.07 NW **MAP ID:** 4

NAME: PRIDE CONVENIENCE INC
ADDRESS: 97 S MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007912
ID2: 13329
STATUS:
PHONE:

TOTAL NUMBER OF TANKS: 4

OWNER INFORMATION
OWNER NAME: PRIDE CONVENIENCE INC
OWNER ADDRESS: 246 COTTAGE ST
SPRINGFIELD MA 01104

FACILITY TYPE: GAS STATION
WORK PHONE: (413) 737-6992

TANK INFORMATION

TANK NUMBER: 1
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE
USE:
TANK MATERIAL: REINFORCED
TANK TYPE:
LEAK DETECTION: Inventory Record-Keeping

PIPE MATERIAL: REINFORCED
PIPE TYPE:
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 2
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE
USE:
TANK MATERIAL: REINFORCED
TANK TYPE:
LEAK DETECTION: Inventory Record-Keeping

PIPE MATERIAL: REINFORCED
PIPE TYPE:
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 3
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 33 **DIST/DIR:** 0.07 NW **MAP ID:** 4

NAME: PRIDE CONVENIENCE INC
ADDRESS: 97 S MAPLE ST
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007912
ID2: 13329
STATUS:
PHONE:

USE:
TANK MATERIAL: REINFORCED
TANK TYPE:
LEAK DETECTION: Inventory Record-Keeping

PIPE MATERIAL: REINFORCED
PIPE TYPE:
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 4
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: DIESEL
USE:
TANK MATERIAL: REINFORCED
TANK TYPE:
LEAK DETECTION: Inventory Record-Keeping

PIPE MATERIAL: REINFORCED
PIPE TYPE:
LEAK DETECTION: Product Line Leak Detector

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 19 **DIST/DIR:** 0.13 SW **MAP ID:** 17

NAME: FORMER TEXACO STATION
ADDRESS: 27 SOUTHWICK ST
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0015400
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE: COMMERCIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

GASOLINE 350 PPM

SITE ACTIONS

ACT DATE: 8/5/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 2/17/2005
ACT USE LIMITATION: NONE
LSP: DEBORAH WOJC
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 12/10/2004
ACT USE LIMITATION:
LSP: DEBORAH WOJC
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 10/8/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 23 **DIST/DIR:** 0.13 SW **MAP ID:** 17

NAME: MOBIL GAS
ADDRESS: 27 SOUTHWICK RD
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0000230
ID2:
STATUS: DEPNFA
PHONE:

SITE INFORMATION

STATUS: DEPNFA - DEP No Further Action means that response actions were conducted and DEP determined that no further action was needed to the site.

LTBI:
DELETED:

CONFIRMED: 1/15/1987
REMOVED: 10/15/1987

LOCATION TYPE: GASSTATION,
SOURCE: UST;
SITE DESCRIPTION: GAS STATION; GROUNDWATER RELEASE; CONTAINED IN A LUST; RELEASE TO SOIL;

OTHER CONTAMINATION:
OTHER RELEASES:
OTHER PROBLEMS:
OTHER TYPE OF SITE:

CHEMICALS

UNKNOWN CHEMICAL OF UNKNOWN TYPE

SITE ACTIONS

ACT DATE: 1/15/1987
ACT USE LIMITATION:
LSP:
ACT STATUS: VALID TRANSITION SITE
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 34 **DIST/DIR:** 0.13 SW **MAP ID:** 17

NAME: SHELL
ADDRESS: 27 SOUTHWICK RD
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007910
ID2: 13329
STATUS:
PHONE:

TOTAL NUMBER OF TANKS: 8

OWNER INFORMATION
OWNER NAME: MHEID-KOBEISSI INC
OWNER ADDRESS: 43 NANIGIAN RD
PAXTON MA 01612

FACILITY TYPE: GAS STATION
WORK PHONE: (508) 868-2909

TANK INFORMATION

TANK NUMBER: 1
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 4000
CONTENTS: GASOLINE
USE:
TANK MATERIAL: STEEL
TANK TYPE:
LEAK DETECTION:

PIPE MATERIAL: STEEL
PIPE TYPE:
LEAK DETECTION:

TANK NUMBER: 2
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 5000
CONTENTS: GASOLINE
USE:
TANK MATERIAL: STEEL
TANK TYPE:
LEAK DETECTION:

PIPE MATERIAL: STEEL
PIPE TYPE:
LEAK DETECTION:

TANK NUMBER: 3
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 5000
CONTENTS: GASOLINE

- Continued on next page -

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 34 **DIST/DIR:** 0.13 SW **MAP ID:** 17

NAME: SHELL
ADDRESS: 27 SOUTHWICK RD
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007910
ID2: 13329
STATUS:
PHONE:

USE: OTHER
TANK MATERIAL: STEEL
TANK TYPE:
LEAK DETECTION:

PIPE MATERIAL: STEEL
PIPE TYPE:
LEAK DETECTION:

TANK NUMBER: 4
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE
USE:
TANK MATERIAL: CATHODIC
TANK TYPE: 1 WALL
LEAK DETECTION: Approved In-Tank Monitor

PIPE MATERIAL: REINFORCED
PIPE TYPE: 1 WALL
LEAK DETECTION: Interstitial Space Monitor

TANK NUMBER: 5
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE
USE:
TANK MATERIAL: CATHODIC
TANK TYPE: 1 WALL
LEAK DETECTION: Approved In-Tank Monitor

PIPE MATERIAL: REINFORCED
PIPE TYPE: 1 WALL
LEAK DETECTION: Interstitial Space Monitor

TANK NUMBER: 6
TANK STATUS: REMOVED
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 10000
CONTENTS: GASOLINE
USE: MV
TANK MATERIAL: REINFORCED
TANK TYPE: 2 WALLS
LEAK DETECTION: Interstitial Monitoring

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 34 **DIST/DIR:** 0.13 SW **MAP ID:** 17

NAME: SHELL
ADDRESS: 27 SOUTHWICK RD
WESTFIELD MA 01085
CONTACT:

REV: 01/13/06
ID1: 0-007910
ID2: 13329
STATUS:
PHONE:

PIPE MATERIAL: REINFORCED
PIPE TYPE: 1 WALL
LEAK DETECTION: Interstitial Space Monitor

TANK NUMBER: 7
TANK STATUS: IN USE
SERIAL NUMBER:
ABOVE GROUND: N
CAPACITY(GAL): 15000
CONTENTS: GASOLINE
USE: MV
TANK MATERIAL: REINFORCED
TANK TYPE: 2 WALLS
LEAK DETECTION: Interstitial Monitoring

PIPE MATERIAL: FLEXIBLE
PIPE TYPE: 2 WALLS
LEAK DETECTION: Product Line Leak Detector

TANK NUMBER: 8
TANK STATUS: IN USE
SERIAL NUMBER: Split 10K/5K
ABOVE GROUND: N
CAPACITY(GAL): 15000
CONTENTS: GASOLINE/D
USE: MV
TANK MATERIAL: REINFORCED
TANK TYPE: 2 WALLS
LEAK DETECTION: Interstitial Monitoring

PIPE MATERIAL: FLEXIBLE
PIPE TYPE: 2 WALLS
LEAK DETECTION: Product Line Leak Detector

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 32 **DIST/DIR:** 0.15 NW **MAP ID:** 22

NAME: THE MILL AT CRANE POND
ADDRESS: 77 MILL ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0011455
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE: INDUSTRIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #6
FUEL OIL #4

SITE ACTIONS

ACT DATE: 12/20/1996
ACT USE LIMITATION:
LSP: ALAN WEISS
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 8/6/1997
ACT USE LIMITATION: NOTICE
LSP: ALAN WEISS
ACT STATUS: FEE RECEIVED-FMCRA USE ONLY
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 7/30/1996
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 10/8/1996
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 4/6/2004

- Continued on next page -

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 32 **DIST/DIR:** 0.15 NW **MAP ID:** 22

NAME: THE MILL AT CRANE POND
ADDRESS: 77 MILL ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0011455
ID2:
STATUS: RAO
PHONE:

ACT USE LIMITATION:
LSP: ALAN WEISS
ACT STATUS: AMENDMENT RECEIVED
ACT TYPE: ACTIVITY AND USE LIMITATION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 31 **DIST/DIR:** 0.15 NW **MAP ID:** 22

NAME:	ROCKWELL INDUSTRIES	**REV:**	
ADDRESS:	77 MILL STREET	**ID1:**	W90-0190
	WESTFIELD MA 01085	**ID2:**	0000
	HAMPDEN	**STATUS:**	
CONTACT:	TERENZI, R	**PHONE:**	

CASE CLOSED?	YES		
SPILL DATE:	19900328	**SPILL TIME:**	
DATE REPORTED:	19900329	**REPORT TIME:**	11:00AM
SPILL NOTIFIER:	RON CRAIG, GEN. MANAGER	**NOTIFIER PHONE:**	

SPILL DESCRIPTION:

INCIDENT:	SPILL		
MATERIAL SPILLED:	DIESEL FUEL		
AMT RPTD SPILLED:	1-10 GALLONS	**ACTUAL AMT SPILLED:**	1-10 GALLONS
SOURCE OF SPILL:	VEH. FUEL TANK		
PET/HAZ:	PETROLEUM	**VIR/WASTE:**	VIRGIN
PCB LEVEL:	NONE		

ENVIRONMENTAL IMPACT:

LUST?:	NO	**SOIL CONTAMINATED?:**	
CONTRACTOR:	NOT USED	**PREPARE REPORT:**	
DAYS/CLOSE:	1		

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 22 **DIST/DIR:** 0.22 NW **MAP ID:** 18

NAME: GENESIS SPIRITUAL CENTER
ADDRESS: 53 MILL ST
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0011040
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE: COMMERCIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2 100 PPM

SITE ACTIONS

ACT DATE: 10/5/1995
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 1/10/1996
ACT USE LIMITATION:
LSP:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 1/10/1996
ACT USE LIMITATION:
LSP:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 9/13/1995
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 24 **DIST/DIR:** 0.27 SE **MAP ID:** 19

NAME:	MOTOR OIL	**REV:**	
ADDRESS:	LITTLE RIVER	**ID1:**	W93-0317
	WESTFIELD MA 01085	**ID2:**	0000
	HAMPDEN	**STATUS:**	
CONTACT:	GIVENS, C	**PHONE:**	

CASE CLOSED?	YES		
SPILL DATE:	19930620	**SPILL TIME:**	08:00AM
DATE REPORTED:	19930620	**REPORT TIME:**	10:45AM
SPILL NOTIFIER:	TED GILLIGAN/CITIZEN	**NOTIFIER PHONE:**	

SPILL DESCRIPTION:

INCIDENT:	DUMPING		
MATERIAL SPILLED:	OTHER MATERIAL -->		
AMT RPTD SPILLED:	1-10 GALLONS	**ACTUAL AMT SPILLED:**	UNKNOWN ———
SOURCE OF SPILL:	———		
PET/HAZ:	BOTH	**VIR/WASTE:**	WASTE
PCB LEVEL:	NONE		

ENVIRONMENTAL IMPACT:

LUST?:	NO	**SOIL CONTAMINATED?:**	
CONTRACTOR:	NOT USED	**PREPARE REPORT:**	
DAYS/CLOSE:	0		

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 21 **DIST/DIR:** 0.30 SW **MAP ID:** 8

NAME: FOWLER FARMS
ADDRESS: SOUTHWICK RD
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0000650
ID2:
STATUS: PENNFA
PHONE:

SITE INFORMATION

STATUS: PENNFA - Pending No Further Action means a document was submitted to DEP asserting that a site assessment had determined that no further action was required. These submittals are considered pending until DEP audits them.

LTBI: 1/15/1990
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE:
SOURCE:
SITE DESCRIPTION:

CHEMICALS

UNKNOWN CHEMICAL OF UNKNOWN TYPE

SITE ACTIONS

TS DATE: 3/22/1996
AUL RESTRICTION:
LSP: PHILIP WARNER
RA STATUS:
RAS TYPE: CON-NFA
RAO CLASS:

ACT DATE: 1/15/1990
ACT USE LIMITATION:
LSP:
ACT STATUS: VALID TRANSITION SITE
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 7 **DIST/DIR:** 0.30 SW **MAP ID:** 8

NAME: FOWLER FARMS
ADDRESS: SOUTHWICK RD.
WESTFIELD MA
CONTACT:

REV: 1/29/01
ID1: 1-0000650
ID2:
STATUS: PENDING NFA
PHONE:

SITE INFORMATION

LTBI: 1/15/90
DELETED:

CONFIRMED:
REMOVED:

CATEGORY:
DATE: 1/15/90
PHASE: NO PHASE

21E STATUS: PENDING NFA
21E DATE: 3/22/96
HAZMAT TYPE:

RAO CLASS:

LOCATION TYPE:
SOURCE:
SITE DESCRIPTION:

SITE ACTIONS

TS DATE: 19960322 00:00:00
AUL RESTRICTION:
LSP: PHILIP WARNER
RA STATUS:
RAS TYPE: CON-NFA
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 15 **DIST/DIR:** 0.33 SE **MAP ID:** 14

NAME:	CASCO FARMS	**REV:**	
ADDRESS:	100 ACRES ROAD	**ID1:**	W92-0147
	WESTFIELD MA 01085	**ID2:**	0000
	HAMPDEN	**STATUS:**	
CONTACT:	FISH, B	**PHONE:**	

CASE CLOSED?	YES		
SPILL DATE:	19920402	**SPILL TIME:**	
DATE REPORTED:	19920402	**REPORT TIME:**	11:40AM
SPILL NOTIFIER:	WILLIAM PHELON- WESTFIELD FIRE		**NOTIFIER PHONE:**

SPILL DESCRIPTION:

INCIDENT:	TANK REMOVAL		
MATERIAL SPILLED:	GASOLINE		
AMT RPTD SPILLED:	UNKNOWN GALLONS	**ACTUAL AMT SPILLED:**	UNKNOWN GALLONS
SOURCE OF SPILL:	U.S.T.		
PET/HAZ:	PETROLEUM	**VIR/WASTE:**	VIRGIN
PCB LEVEL:	NONE		

ENVIRONMENTAL IMPACT: SOIL

LUST?:	YES	**SOIL CONTAMINATED?:**	
CONTRACTOR:	NOT USED	**PREPARE REPORT:**	
DAYS/CLOSE:	0		

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 30 **DIST/DIR:** 0.35 NE **MAP ID:** 21

NAME: RESIDENTIAL UST
ADDRESS: 28 MILL ST
WESTFIELD MA

CONTACT:

REV: 01/10/06
ID1: 1-0015284
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE: RESIDNTIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2 175 PPM

SITE ACTIONS

ACT DATE: 7/27/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 5/12/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 7/16/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 5/12/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 17 **DIST/DIR:** 0.37 NE **MAP ID:** 13

NAME: FORMER BEMBEN GREENHOUSES
ADDRESS: 17 BROOKLINE AVE
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0015805
ID2:
STATUS: UNCLSS
PHONE:

SITE INFORMATION

STATUS: UNCLASSIFIED - A release that has not reached its Tier Classification deadline (usually one year after it was reported), and where an RAO Statement, DPS Submittal, or Tier Classification Submittal has not been received by DEP.

LOCATION TYPE:
SOURCE:
SITE DESCRIPTION:

CHEMICALS

ARSENIC 39 MG/KG
LEAD 450 MG/KG
UNKNOWN CHEMICAL OF UNKNOWN TYPE 1800 MG/KG
UNKNOWN CHEMICAL OF UNKNOWN TYPE 4000 MG/KG

SITE ACTIONS

ACT DATE: 6/23/2005
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 10/25/2005
ACT USE LIMITATION:
LSP:
ACT STATUS: STATUS REPORT RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 12 **DIST/DIR:** 0.37 NE **MAP ID:** 13

NAME: BEMBEN NURSERIES
ADDRESS: 17 BROOKLINE AVE
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0012768
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE: COMMERCIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2 125 PPM

SITE ACTIONS

ACT DATE: 1/29/1999
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 1/29/1999
ACT USE LIMITATION:
LSP:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 12/29/1998
ACT USE LIMITATION:
LSP:
ACT STATUS: LESS
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 2/8/1999
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 6/4/1999
ACT USE LIMITATION:
LSP:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 12 **DIST/DIR:** 0.37 NE **MAP ID:** 13

NAME: BEMBEN NURSERIES
ADDRESS: 17 BROOKLINE AVE
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0012768
ID2:
STATUS: RAO
PHONE:

ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 18 **DIST/DIR:** 0.40 NE **MAP ID:** 16

NAME: FORMER MOORE CONTRACTORS
ADDRESS: MATHER ST
WESTFIELD MA 01085
CONTACT: SLOWICK, D

REV:
ID1: W93-0411
ID2: 0000
STATUS:
PHONE:

CASE CLOSED? YES
SPILL DATE:
SPILL TIME:
DATE REPORTED: 19930728
REPORT TIME:
SPILL NOTIFIER: KARL KUEHNER/SOUTHAMPTON SANITARY
NOTIFIER PHONE:

SPILL DESCRIPTION:

INCIDENT: LEAK
MATERIAL SPILLED: MISCELLANEOUS OIL
AMT RPTD SPILLED: UNKNOWN GALLONS
ACTUAL AMT SPILLED: ——— ———
SOURCE OF SPILL: ———
PET/HAZ: PETROLEUM
VIR/WASTE: VIRGIN
PCB LEVEL: NONE

ENVIRONMENTAL IMPACT: SOIL

LUST?: NO
SOIL CONTAMINATED?:
CONTRACTOR: NOT USED
PREPARE REPORT:
DAYS/CLOSE: 0

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 20 **DIST/DIR:** 0.40 NE **MAP ID:** 16

NAME:	FORMER WM. MOORE EXCAVATING	**REV:**	
ADDRESS:	MATHER STREET	**ID1:**	W91-0594
	WESTFIELD MA 01085	**ID2:**	0000
	HAMPDEN	**STATUS:**	
CONTACT:	SLOWICK, D	**PHONE:**	

CASE CLOSED?	YES		
SPILL DATE:	19911022	**SPILL TIME:**	
DATE REPORTED:	19911022	**REPORT TIME:**	01:15PM
SPILL NOTIFIER:	DEPUTY CHIEF TOM KANE- WESTFIELD FIRE		**NOTIFIER PHONE:**

SPILL DESCRIPTION:

INCIDENT:	LEAK		
MATERIAL SPILLED:	DIESEL FUEL		
AMT RPTD SPILLED:	UNKNOWN GALLONS	**ACTUAL AMT SPILLED:**	UNKNOWN GALLONS
SOURCE OF SPILL:	U.S.T.		
PET/HAZ:	PETROLEUM	**VIR/WASTE:**	VIRGIN
PCB LEVEL:	NONE		

ENVIRONMENTAL IMPACT: SOIL

LUST?:	YES	**SOIL CONTAMINATED?:**	
CONTRACTOR:	NOT USED	**PREPARE REPORT:**	
DAYS/CLOSE:	87		

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 29 **DIST/DIR:** 0.41 SW **MAP ID:** 20

NAME:	PUNDERSON OIL	**REV:**	
ADDRESS:	152 VALLEY VIEW DRIVE	**ID1:**	W90-0193
	WESTFIELD MA 01085	**ID2:**	0000
	HAMPDEN	**STATUS:**	
CONTACT:	FISH, B	**PHONE:**	

CASE CLOSED?	YES		
SPILL DATE:	19900402	**SPILL TIME:**	09:45AM
DATE REPORTED:	19900331	**REPORT TIME:**	11:00AM
SPILL NOTIFIER:	ROB PAQUETTE	**NOTIFIER PHONE:**	

SPILL DESCRIPTION:

INCIDENT:	RUPTURE		
MATERIAL SPILLED:	#2 FUEL OIL		
AMT RPTD SPILLED:	LESS THAN 1 GALLONS	**ACTUAL AMT SPILLED:**	1-10 GALLONS
SOURCE OF SPILL:	TANKER TRUCK		
PET/HAZ:	PETROLEUM	**VIR/WASTE:**	VIRGIN
PCB LEVEL:	NONE		

ENVIRONMENTAL IMPACT: SOIL

LUST?:	--	**SOIL CONTAMINATED?:**	
CONTRACTOR:	NOT USED	**PREPARE REPORT:**	
DAYS/CLOSE:	1		

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 16 **DIST/DIR:** 0.47 NE **MAP ID:** 15

NAME: CORNER OF MILL AND W. SILVER STREET
ADDRESS: 120 WEST SILVER ST
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0014502
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE: RESIDNTIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2 69 PPMV

SITE ACTIONS

ACT DATE: 12/12/2002
ACT USE LIMITATION:
LSP:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 7/25/2002
ACT USE LIMITATION:
LSP:
ACT STATUS: LESS
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 3/20/2003
ACT USE LIMITATION: NONE
LSP: KEVIN SHEEHA
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 11/25/2002
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 9/18/2002
ACT USE LIMITATION:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 16 **DIST/DIR:** 0.47 NE **MAP ID:** 15

NAME: CORNER OF MILL AND W. SILVER STREET
ADDRESS: 120 WEST SILVER ST
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0014502
ID2:
STATUS: RAO
PHONE:

LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 27 **DIST/DIR:** 0.47 NE **MAP ID:** 1

NAME: NOBLE HOSPITAL
ADDRESS: 115 W. SILVER STREET
WESTFIELD MA 01085
HAMPDEN
CONTACT: SLOWICK, D

REV:
ID1: W90-0655
ID2: 0000
STATUS:
PHONE:

CASE CLOSED? YES
SPILL DATE: 19901018 **SPILL TIME:**
DATE REPORTED: 19901018 **REPORT TIME:** 10:30AM
SPILL NOTIFIER: BILL PHELON, WESTFIELD FIRE DEPT. **NOTIFIER PHONE:**

SPILL DESCRIPTION:

INCIDENT: LEAK
MATERIAL SPILLED: DIESEL FUEL
AMT RPTD SPILLED: UNKNOWN ——— **ACTUAL AMT SPILLED:** 10-50 GALLONS
SOURCE OF SPILL: U.S.T.
PET/HAZ: PETROLEUM **VIR/WASTE:** VIRGIN
PCB LEVEL: NONE

ENVIRONMENTAL IMPACT: SOIL

LUST?: YES **SOIL CONTAMINATED?:**
CONTRACTOR: NOT USED **PREPARE REPORT:**
DAYS/CLOSE: 46

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 26 **DIST/DIR:** 0.47 NE **MAP ID:** 1

NAME:	NOBLE HOSPITAL	**REV:**	
ADDRESS:	115 W. SILVER STREET	**ID1:**	W90-0066
	WESTFIELD MA 01085	**ID2:**	0000
	HAMPDEN	**STATUS:**	
CONTACT:	CARPENTER, C	**PHONE:**	

CASE CLOSED?	YES		
SPILL DATE:	19900207	**SPILL TIME:**	09:00AM
DATE REPORTED:	19900207	**REPORT TIME:**	09:45AM
SPILL NOTIFIER:	FRANCIS MURREY - ENG.	**NOTIFIER PHONE:**	

SPILL DESCRIPTION:

INCIDENT:	LEAK		
MATERIAL SPILLED:	DIESEL FUEL		
AMT RPTD SPILLED:	——— ———	**ACTUAL AMT SPILLED:**	——— ———
SOURCE OF SPILL:	U.S.T.		
PET/HAZ:	PETROLEUM	**VIR/WASTE:**	VIRGIN
PCB LEVEL:	NONE		

ENVIRONMENTAL IMPACT:

LUST?:	NO	**SOIL CONTAMINATED?:**	
CONTRACTOR:	NOT USED	**PREPARE REPORT:**	
DAYS/CLOSE:	-1		

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SPILLS SITE

SEARCH ID: 28 **DIST/DIR:** 0.47 NE **MAP ID:** 1

NAME: NOBLE HOSPITAL LAB
ADDRESS: 115 WEST SILVER STREET
WESTFIELD MA 01085
HAMPDEN
CONTACT: SLOWICK, D

REV:
ID1: W92-0027
ID2: 0000
STATUS:
PHONE:

CASE CLOSED? YES
SPILL DATE: 19920121
SPILL TIME:
DATE REPORTED: 19920121
REPORT TIME: 01:00PM
SPILL NOTIFIER: BILL VERDONE -EPA/KATHY POTTER- NOBLE
NOTIFIER PHONE:

SPILL DESCRIPTION:

INCIDENT: LEAK
MATERIAL SPILLED: OTHER MATERIAL –>
AMT RPTD SPILLED: 1-10 GALLONS
ACTUAL AMT SPILLED: 1-10 GALLONS
SOURCE OF SPILL: OTHER SOURCE > SMALL CONTAINER
PET/HAZ: HAZARDOUS
VIR/WASTE: VIRGIN
PCB LEVEL: NONE

ENVIRONMENTAL IMPACT:

LUST?: NO
SOIL CONTAMINATED?:
CONTRACTOR: NOT USED
PREPARE REPORT:
DAYS/CLOSE: 1

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 10 **DIST/DIR:** 0.58 NE **MAP ID:** 11

NAME: RESIDENCE
ADDRESS: 32 NOBLE AVE
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0014537
ID2:
STATUS: TIER1D
PHONE:

SITE INFORMATION

STATUS: - Tier1D, a release where the responsible party fails to provide a required submittal to DEP by a specified deadline.

LOCATION TYPE: RESIDNTIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2 1000 PPMV

SITE ACTIONS

ACT DATE: 8/19/2002
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 10/18/2002
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 8/30/2002
ACT USE LIMITATION:
LSP: PAUL HATCH
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 9 **DIST/DIR:** 0.60 NE **MAP ID:** 10

NAME: NO LOCATION AID
ADDRESS: 5 TO 7 HIGH ST
WESTFIELD MA 01085
CONTACT:

REV: 5/10/01
ID1: 1-0012355
ID2:
STATUS: DEF TIER 1B
PHONE:

SITE INFORMATION

CATEGORY: 72 HR
DATE: 5/21/98
PHASE: NO PHASE

21E STATUS: DEF TIER 1B
21E DATE: 5/28/99
HAZMAT TYPE: OIL

RAO CLASS:

LOCATION TYPE: RESIDNTIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2

SITE ACTIONS

ACT DATE: 11/30/1998
ACT USE LIMITATION:
LSP: BRUCE NICKELSEN
ACT STATUS: STATUS REPORT RECEIVED
ACT TYPE: IRA: IMMEDIATE RESPONSE ACTION
RAO TYPE:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 4 **DIST/DIR:** 0.80 SE **MAP ID:** 5

NAME: DAY LUMBER COMPANY
ADDRESS: SOUTH BROAD ST PO BOX 9
WESTFIELD MA
CONTACT:

REV: 1/29/01
ID1: 1-0000918
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

LTBI: 7/15/93
DELETED:
CONFIRMED:
REMOVED:

CATEGORY:
DATE: 7/15/93
PHASE: PHASE II
21E STATUS: RAO
21E DATE: 11/16/95
HAZMAT TYPE: OIL

RAO CLASS:

LOCATION TYPE:
SOURCE:
SITE DESCRIPTION: INDUSTRIAL SITE; GROUNDWATER RELEASE; VIRGIN OIL PRESENT; CONTAINED IN A LUST; RELEASE TO SOIL; PETROLEUM PRESENT; WASTE OIL PRESENT;

OTHER CONTAMINATION:
OTHER RELEASES:
OTHER PROBLEMS:
OTHER TYPE OF SITE:

SITE ACTIONS

TS DATE: 19951116 00:00:00
AUL RESTRICTION:
LSP: KEVIN SHEEHAN
RA STATUS:
RAS TYPE: LSP-RAOEQ
RAO CLASS:

TS DATE: 19951116 00:00:00
AUL RESTRICTION:
LSP: KEVIN SHEEHAN
RA STATUS: COMPLETION STATEMENT RECEIVED
RAS TYPE: PHASEI: PHASE I
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 8 **DIST/DIR:** 0.84 NE **MAP ID:** 9

NAME: MADDEN RESIDENCE
ADDRESS: 7 WASHINGTON ST
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0014166
ID2:
STATUS: TIERII
PHONE:

SITE INFORMATION

STATUS: TIER 2 - A site/release receiving a total NRS score less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (CMR 40.0520(2)(a)). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categoricallyTier 2 sites.

LOCATION TYPE: RESIDNTIAL,
SOURCE: AST;
SITE DESCRIPTION:

CHEMICALS

PETROLEUM BASED OIL

SITE ACTIONS

ACT DATE: 10/30/2001
ACT USE LIMITATION:
LSP:
ACT STATUS: LESS
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 8/13/2003
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 2/23/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 8/20/2004
ACT USE LIMITATION:
LSP: KEVIN SHEEHA
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 10/27/2005
ACT USE LIMITATION:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 8 **DIST/DIR:** 0.84 NE **MAP ID:** 9

NAME: MADDEN RESIDENCE
ADDRESS: 7 WASHINGTON ST
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0014166
ID2:
STATUS: TIERII
PHONE:

LSP: KEVIN SHEEHA
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 8/20/2004
ACT USE LIMITATION:
LSP: KEVIN SHEEHA
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1
RAO CLASS:

ACT DATE: 4/29/2005
ACT USE LIMITATION:
LSP: KEVIN SHEEHA
ACT STATUS: SCOPE OF WORK RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 11 **DIST/DIR:** 0.87 NW **MAP ID:** 12

NAME: TERRANCE FLAHIVE RESIDENCE
ADDRESS: 34 TEKOA TER
WESTFIELD MA 01085
CONTACT:

REV: 1/29/01
ID1: 1-0011881
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

LTBI:
DELETED:
CONFIRMED:
REMOVED:

CATEGORY: 72 HR
DATE: 6/16/97
PHASE: PHASE II
21E STATUS: RAO
21E DATE: 1/4/99
HAZMAT TYPE: OIL

RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

LOCATION TYPE: RESIDNTIAL,
SOURCE: UST;
SITE DESCRIPTION:

SITE ACTIONS

TS DATE: 19980623 00:00:00
AUL RESTRICTION:
LSP: KEVIN SHEEHAN
RA STATUS: RELATED TO A TRANSITION SITE (NOT TIER CLASSIFIED)
RAS TYPE: FEND
RAO CLASS:

ACT DATE: 06/23/1998
ACT USE LIMITATION:
LSP: KEVIN SHEEHAN
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TCLASS: TIER CLASSIFICATION
RAO TYPE:

ACT DATE: 06/23/1998
ACT USE LIMITATION:
LSP: KEVIN SHEEHAN
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASEI: PHASE I
RAO TYPE:

ACT DATE: 01/04/1999
ACT USE LIMITATION:
LSP: KEVIN SHEEHAN
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IRA: IMMEDIATE RESPONSE ACTION
RAO TYPE:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 11 **DIST/DIR:** 0.87 NW **MAP ID:** 12

NAME: TERRANCE FLAHIVE RESIDENCE
ADDRESS: 34 TEKOA TER
WESTFIELD MA 01085
CONTACT:

REV: 1/29/01
ID1: 1-0011881
ID2:
STATUS: RAO
PHONE:

ACT DATE: 01/04/1999
ACT USE LIMITATION:
LSP: KEVIN SHEEHAN
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RAO: RESPONSE ACTION OUTCOME
RAO TYPE: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 5 **DIST/DIR:** 0.91 NE **MAP ID:** 6

NAME: FIRE STATION
ADDRESS: 34 BROAD ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0012277
ID2:
STATUS: TIERII
PHONE:

SITE INFORMATION

STATUS: TIER 2 - A site/release receiving a total NRS score less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (CMR 40.0520(2)(a)). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categoricallyTier 2 sites.

LOCATION TYPE: MUNICIPAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

PETROLEUM BASED OIL

SITE ACTIONS

ACT DATE: 12/22/2000
ACT USE LIMITATION:
LSP: EVAN JOHNSON
ACT STATUS: MODIFIED REVISED OR UPDATED PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 11/1/2001
ACT USE LIMITATION:
LSP: EVAN JOHNSON
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 5/12/1998
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 3/16/2005
ACT USE LIMITATION:
LSP: 4589
ACT STATUS: TIER 2 EXTENSION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 12/2/2005
ACT USE LIMITATION:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 5 **DIST/DIR:** 0.91 NE **MAP ID:** 6

NAME: FIRE STATION
ADDRESS: 34 BROAD ST
WESTFIELD MA 01085
CONTACT:

REV: 01/10/06
ID1: 1-0012277
ID2:
STATUS: TIERII
PHONE:

LSP: EVAN JOHNSON
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 11/1/2001
ACT USE LIMITATION:
LSP: EVAN JOHNSON
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 3
RAO CLASS:

ACT DATE: 4/6/1998
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 4/6/1999
ACT USE LIMITATION:
LSP: EVAN JOHNSON
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1
RAO CLASS:

ACT DATE: 12/30/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: PHASE 4
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 6 **DIST/DIR:** 0.91 NE **MAP ID:** 7

NAME: FORMER WESTFIELD WOODWORKING
ADDRESS: 6 COLEMAN AVE
WESTFIELD MA
CONTACT:

REV: 01/10/06
ID1: 1-0015540
ID2:
STATUS: TIER1D
PHONE:

SITE INFORMATION

STATUS: - Tier1D, a release where the responsible party fails to provide a required submittal to DEP by a specified deadline.

LOCATION TYPE:
SOURCE:
SITE DESCRIPTION:

CHEMICALS

ETHENE, TRICHLORO- 590 PPB
LEAD 1200 PPM
ETHANE, 1,1-DICHLORO- 710 PPB

SITE ACTIONS

ACT DATE: 11/16/2004
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 2 **DIST/DIR:** 0.99 NE **MAP ID:** 3

NAME: BAYBANK
ADDRESS: 30 ELM ST
WESTFIELD MA 01085
CONTACT:

REV: 6/10/04
ID1: 1-0010788
ID2:
STATUS: TIERII
PHONE:

SITE INFORMATION

STATUS: TIER 2 - A site/release receiving a total NRS score less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (CMR 40.0520(2)(a)). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categoricallyTier 2 sites.

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: COMMERCIAL,
SOURCE: UST;
SITE DESCRIPTION:

CHEMICALS

FUEL OIL #2 1000 PPMV
FUEL OIL #2

SITE ACTIONS

TS DATE: 3/14/1997
AUL RESTRICTION:
LSP:
RA STATUS: LINKED TO A TRANSITION SITE - OBSOLETE STATUS
RAS TYPE: FEND
RAO CLASS:

ACT DATE: 4/3/2001
ACT USE LIMITATION:
LSP: KEVIN OREILL
ACT STATUS: AS-BUILT CONSTRUCTION REPORT RECEIVED
ACT TYPE: PHASE 4
RAO CLASS:

ACT DATE: 9/13/2000
ACT USE LIMITATION:
LSP: KEVIN OREILL
ACT STATUS: TIER 2 TRANSFER
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 4/3/1996
ACT USE LIMITATION:
LSP: KEVIN OREILL
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 2 **DIST/DIR:** 0.99 NE **MAP ID:** 3

NAME: BAYBANK
ADDRESS: 30 ELM ST
WESTFIELD MA 01085
CONTACT:

REV: 6/10/04
ID1: 1-0010788
ID2:
STATUS: TIERII
PHONE:

RAO CLASS:

ACT DATE: 5/25/1995
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 5/5/1999
ACT USE LIMITATION:
LSP: KEVIN OREILL
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 11/7/2003
ACT USE LIMITATION:
LSP: KEVIN OREILL
ACT STATUS: IMRCD
ACT TYPE: PHASE 5
RAO CLASS:

ACT DATE: 8/21/1995
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 3/28/1995
ACT USE LIMITATION:
LSP:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 5/5/1999
ACT USE LIMITATION:
LSP:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 3
RAO CLASS:

ACT DATE: 4/3/2001
ACT USE LIMITATION:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

STATE SITE

SEARCH ID: 2 **DIST/DIR:** 0.99 NE **MAP ID:** 3

NAME: BAYBANK
ADDRESS: 30 ELM ST
WESTFIELD MA 01085
CONTACT:

REV: 6/10/04
ID1: 1-0010788
ID2:
STATUS: TIERII
PHONE:

LSP: KEVIN OREILL
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

TARGET SITE: 88 SOUTH MAPLE ST
WESTFIELD MA 01085

JOB: 5795-05

Street Name	Dist/Dir	Street Name	Dist/Dir
Alice St	0.19 SE		
Benham St	0.17 NE		
City View Rd	0.10 SW		
Crane Ave	0.13 NW		
Dewey Ave	0.12 NE		
Fairview St	0.11 NE		
Hundred Acres Rd	0.17 SW		
Lois St	0.17 NE		
Maplewood Ave	0.22 NE		
Margerie St	0.24 NE		
Mill St	0.06 NW		
Oak Ave	0.22 NE		
Oak St	0.16 NE		
Paper St	0.11 NE		
S Ashley St	0.20 SE		
S Maple St	0.03 NW		
SOUTH Ashley St	0.20 SE		
SOUTH Maple St	0.03 NW		
Southwick Rd	0.06 NW		
Vadnais St	0.16 NW		

Environmental FirstSearch

1 Mile Radius

ASTM Map: NPL, RCRACOR, STATE Sites

88 SOUTH MAPLE ST, WESTFIELD MA 01085

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 42.111331 Longitude: -72.76262) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM Map: CERCLIS, RCRATSD, SPILLS90, SWL

88 SOUTH MAPLE ST, WESTFIELD MA 01085

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 42.111331 Longitude: -72.76262) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM Map: RCRAGEN, ERNS, UST

88 SOUTH MAPLE ST, WESTFIELD MA 01085

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 42.111331 Longitude: -72.76262) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM AAI Map: Brownfield

88 SOUTH MAPLE ST, WESTFIELD MA 01085

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 42.111331 Longitude: -72.76262) .....

Brownfield.....

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM AAI Map: Federal Land Use Sites

88 SOUTH MAPLE ST, WESTFIELD MA 01085

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 42.111331 Longitude: -72.76262) .....

Fed. Land Use: Wilderness Areas, Wildlife Preserves .....

Fed. Land Use: Amer. Indian Sacred Sites, End. Species' Habitats...

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

Non-ASTM Map: No Sites Found

88 SOUTH MAPLE ST, WESTFIELD MA 01085

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 42.111331 Longitude: -72.76262) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

National Historic Sites and Landmark Sites .....

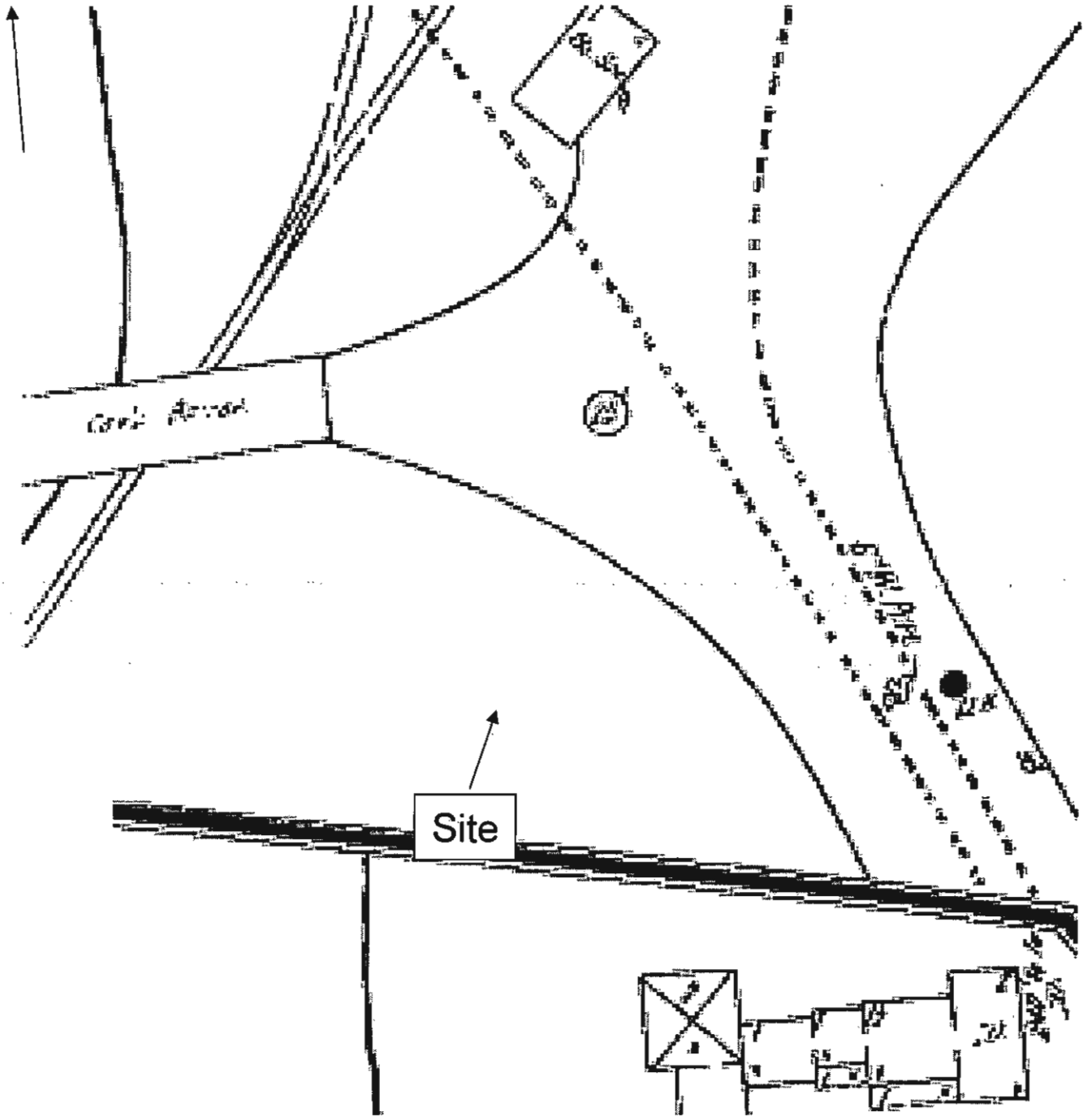
Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

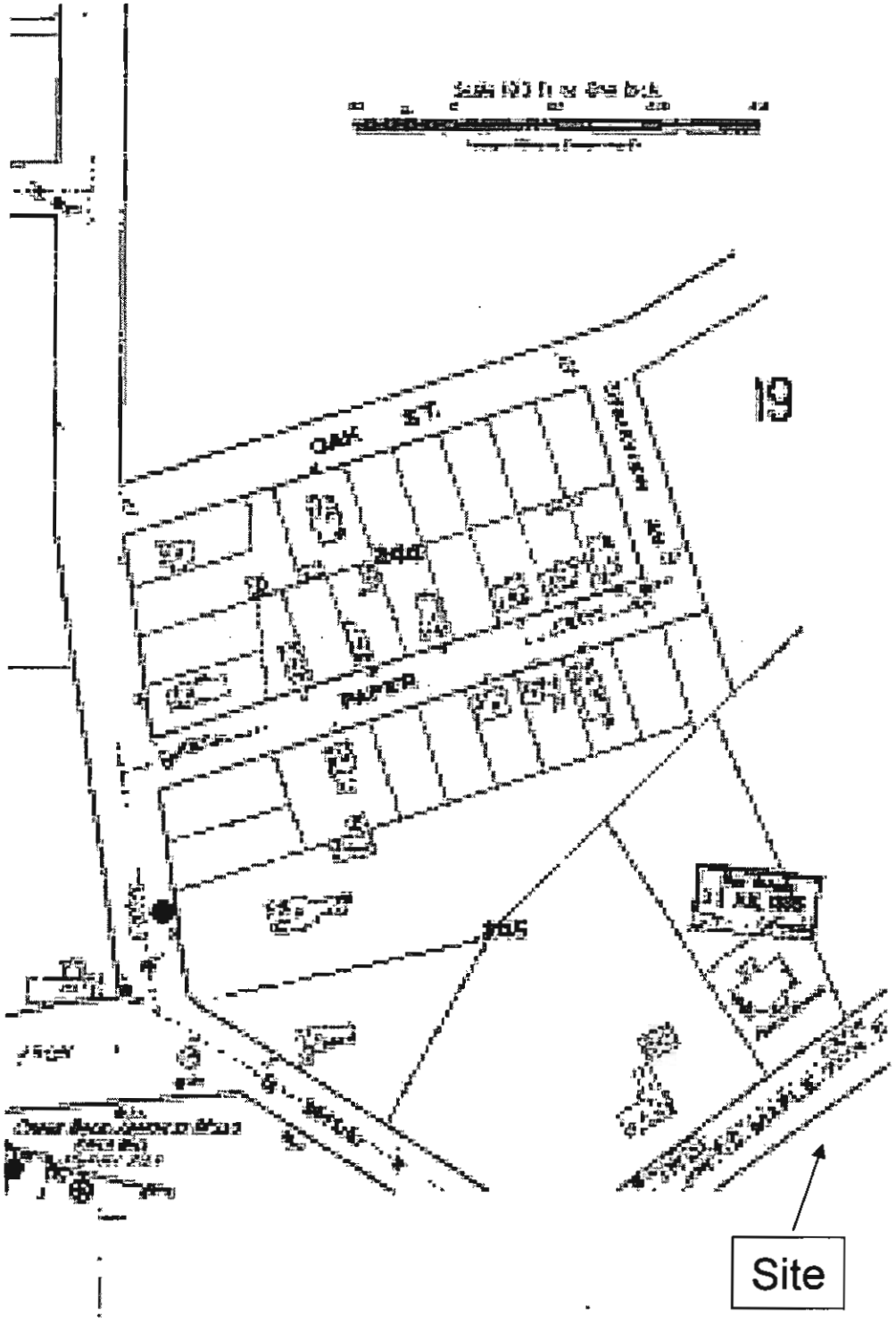
APPENDIX C

Sanborn Fire Insurance Maps

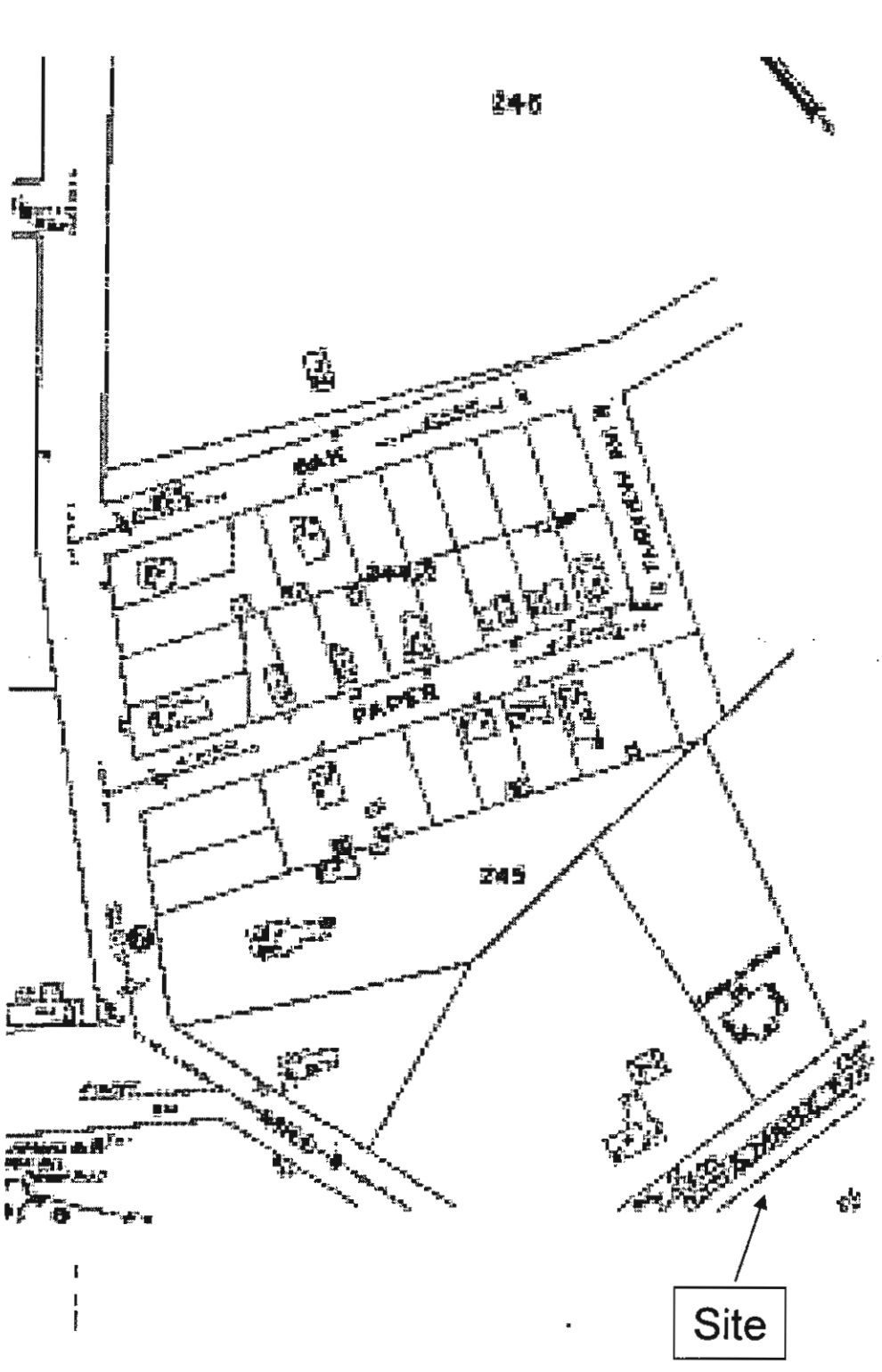
Sanborn Historical Maps
1910



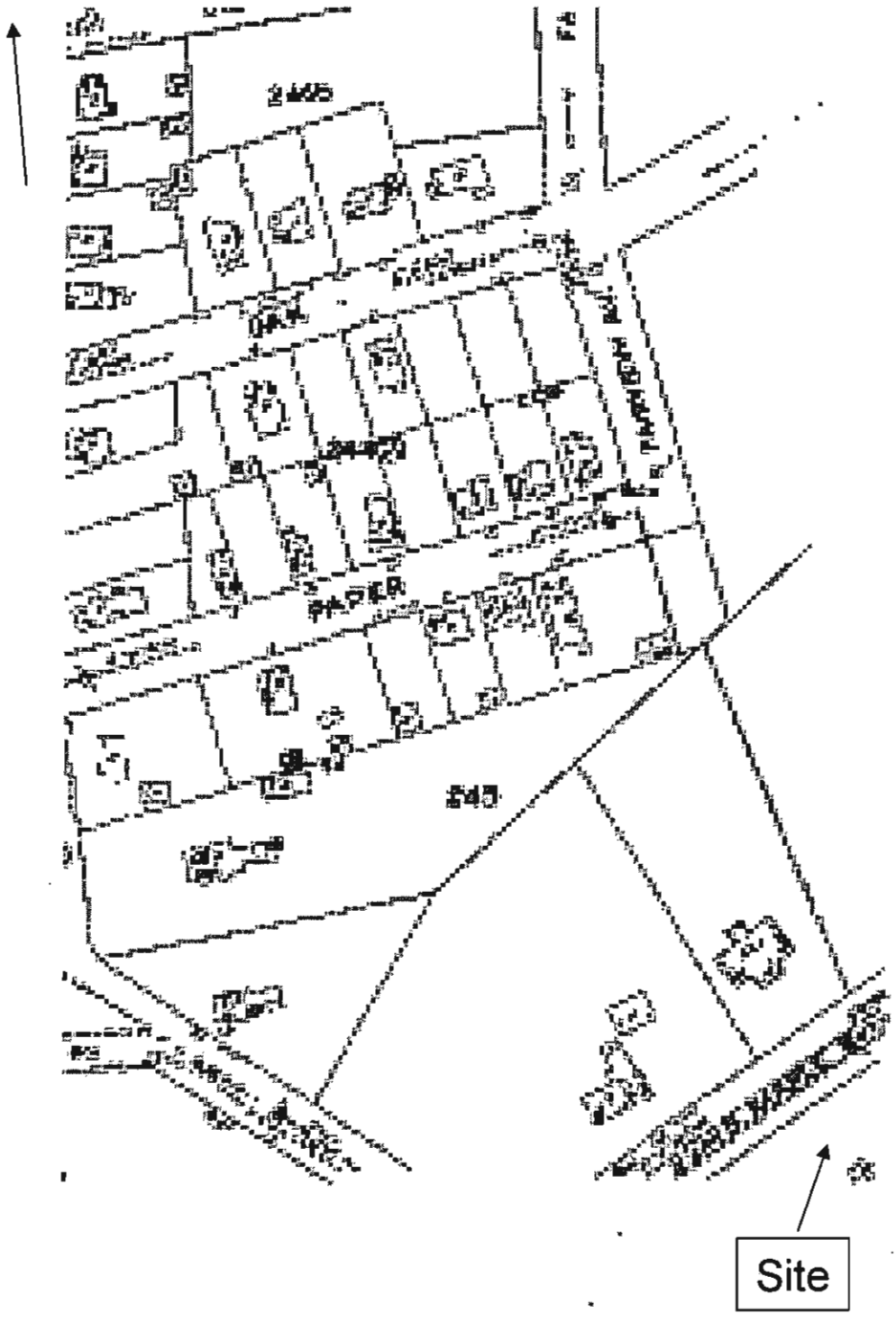
Sanborn Historical Maps
1917



Sanborn Historical Maps
1924



Sanborn Historical Maps
1947



APPENDIX D

Groundwater Gauging Data

Groundwater Gauging Data
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
RTN 1-15718

Well ID	Monitoring Date	Casing Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Groundwater Elevation (feet)
MW-1	08/01/05	98.86	12.55	---	86.31
	02/07/06		10.25	---	88.61
MW-3B	08/01/05	98.72	12.90	---	85.82
	02/07/06		10.44	---	88.28
	03/06/06		13.25		85.47
MW-4	08/01/05	98.46	12.51	---	85.95
MW-5	08/01/05	99.02	12.41	---	86.61
	02/07/06		10.15	---	88.87
MW-6	08/01/05	97.20	11.91	---	85.29
	02/07/06		9.80	---	87.40

Notes:

Benchmark is white mark at southwest corner and is assigned an elevation of 100'.

NM = Not Measured.

DRY = No measureable amount of water in well.

APPENDIX E

Groundwater Analytical Reports

Report Date:
05-Aug-05 15:32

☑ Final Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

CEA, Inc.
127 Hartwell Street
West Boylston, MA 01583
Attn: Scott Vandersea

Project: Sunoco Inc (M&M)-88 S. Maple St-Westfield
Project #: CEA#5795-05-02

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA31813-01	MW-1	Ground Water	01-Aug-05 11:15	02-Aug-05 16:46
SA31813-02	MW-4	Ground Water	01-Aug-05 11:45	02-Aug-05 16:46
SA31813-03	MW-5	Ground Water	01-Aug-05 11:30	02-Aug-05 16:46
SA31813-04	MW-6	Ground Water	01-Aug-05 12:00	02-Aug-05 16:46

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 23 pages of analytical data including Chain of Custody document(s).
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Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

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CASE NARRATIVE:

The data set for work order SA31813 complies with internal QC criteria for the methods performed. The samples were received @ 4.0 degrees Celsius. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2004 Rev.4, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although recovery may still be within the recommended 70%-130% range, the analytical range has been set based on historical control limits. Please refer to "Notes and Definitions" for all sample/analyte qualifiers. Qualifiers will note any exceedanee levels and items specific to sample analysis/matrix.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SA31813-01	CEA#5795-05-02	Ground Water	01-Aug-05 11:15	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
VPH Aliphatic/Aromatic Carbon Ranges			Prepared by method	VPH						
	C5-C8 Aliphatic Hydrocarbons	BRL	0.0750 mg/l	1	+MADEP 5/2004 Rev. 1.1	04-Aug-05	04-Aug-05	5080318	KS	
	C9-C12 Aliphatic Hydrocarbons	BRL	0.0250 mg/l	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	BRL	0.0250 mg/l	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL	0.0750 mg/l	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL	0.0250 mg/l	1	"	"	"	"	"	
VPH Target Analytes			Prepared by method	VPH						
71-43-2	Benzene	BRL	5.0 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	5.0 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL	5.0 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	5.0	5.0 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	5.0 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	10.0 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	5.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
615-59-8	*2,5-Dibromotoluene (FID)*	*105*	*70-130 %*		"	"	"	"	"	
615-59-8	*2,5-Dibromotoluene (PID)*	*98.4*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-4 SA31813-02	CEA#5795-05-02	Ground Water	01-Aug-05 11:45	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
Volatile Organic Compounds			Prepared by method	Volatiles						
67-64-1	Acetone	BRL	10.0 µg/l	1	SW 846 8260B	03-Aug-05	03-Aug-05	5080209	tim	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	1.0 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	1.0 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	1.0 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	1.0 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	2.0 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	5.0 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	1.0 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	2.0 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	1.0 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	2.0 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	1.0 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	1.0 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	2.0 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	1.0 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	1.0 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	1.0 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	2.0 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	1.0 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	1.0 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	1.0 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	1.0 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	1.0 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	1.0 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	1.0 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	1.0 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	1.0 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	1.0 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	1.0 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	1.0 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	1.0 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL	1.0 µg/l	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-4 SA31813-02	CEA#5795-05-02	Ground Water	01-Aug-05 11:45	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
Volatile Organic Compounds			Prepared by method	Volatiles						
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	SW 846 8260B	03-Aug-05	03-Aug-05	5080209	tim	
75-09-2	Methylene chloride	BRL	10.0 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	1.0 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	1.0 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	1.0 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	1.0 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	1.0 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	1.0 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	1.0 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	1.0 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	1.0 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	1.0 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	1.0 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	1.0 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	1.0 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	2.0 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	1.0 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
60-29-7	Ethyl ether	BRL	1.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	1.0 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	1.0 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	1.0 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	BRL	20.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*98.0*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*96.6*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*108*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*	*70-130 %*		"	"	"	"	"	
VPH Aliphatic/Aromatic Carbon Ranges			Prepared by method	VPH						
	C5-C8 Aliphatic Hydrocarbons	BRL	0.0750 mg/l	5	+MADEP 5/2004 Rev. 1.1	04-Aug-05	04-Aug-05	5080318	KS	
	C9-C12 Aliphatic Hydrocarbons	BRL	0.0250 mg/l	5	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	BRL	0.0250 mg/l	5	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL	0.0750 mg/l	5	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL	0.0250 mg/l	5	"	"	"	"	"	
VPH Target Analytes			Prepared by method	VPH						
71-43-2	Benzene	BRL	5.0 µg/l	5	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-4	CEA#5795-05-02	Ground Water	01-Aug-05 11:45	02-Aug-05
SA31813-02				

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
VPH Target Analytes			Prepared by method	VPH						
100-41-4	Ethylbenzene	BRL	5.0 µg/l	5	+MADEP 5/2004 Rev. 1.1	04-Aug-05	04-Aug-05	5080318	KS	
1634-04-4	Methyl tert-butyl ether	BRL	5.0 µg/l	5	"	"	"	"	"	
91-20-3	Naphthalene	BRL	5.0 µg/l	5	"	"	"	"	"	
108-88-3	Toluene	BRL	5.0 µg/l	5	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	10.0 µg/l	5	"	"	"	"	"	
95-47-6	o-Xylene	BRL	5.0 µg/l	5	"	"	"	"	"	
Surrogate recoveries:										
615-59-8	*2,5-Dibromotoluene (FID)*	*93.6*	*70-130 %*		"	"	"	"	"	
615-59-8	*2,5-Dibromotoluene (PID)*	*87.2*	*70-130 %*		"	"	"	"	"	
Soluble Metals by EPA 6000/7000 Series Methods										
7440-22-4	Silver	BRL	0.0050 mg/l	1	SW846 6010B	03-Aug-05	04-Aug-05	5080281	RE	
7440-38-2	Arsenic	BRL	0.0040 mg/l	1	"	"	"	"	"	
7440-39-3	Barium	0.134	0.0025 mg/l	1	"	"	"	"	"	
7440-43-9	Cadmium	BRL	0.0012 mg/l	1	"	"	"	"	"	
7440-47-3	Chromium	BRL	0.0025 mg/l	1	"	"	"	"	"	
7439-92-1	Lead	BRL	0.0038 mg/l	1	"	"	"	"	"	
7782-49-2	Selenium	BRL	0.0075 mg/l	1	"	"	"	"	"	
Soluble Metals by EPA 200 Series Methods										
	Filtration	Lab Filtered	N/A	1	EPA 200.7/3005A	03-Aug-05	03-Aug-05	5080244	YP	
7439-97-6	Mercury	BRL	0.00020 mg/l	1	EPA 245.2/7470A	04-Aug-05	04-Aug-05	5080282	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5 SA31813-03	CEA#5795-05-02	Ground Water	01-Aug-05 11:30	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
VPH Aliphatic/Aromatic Carbon Ranges			Prepared by method	VPH						
	C5-C8 Aliphatic Hydrocarbons	BRL	0.0750 mg/l	1	+MADEP 5/2004 Rev. 1.1	04-Aug-05	04-Aug-05	5080318	KS	
	C9-C12 Aliphatic Hydrocarbons	BRL	0.0250 mg/l	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	BRL	0.0250 mg/l	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL	0.0750 mg/l	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL	0.0250 mg/l	1	"	"	"	"	"	
VPH Target Analytes			Prepared by method	VPH						
71-43-2	Benzene	BRL	5.0 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	5.0 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL	5.0 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	5.0 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	5.0 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	10.0 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	5.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
615-59-8	*2,5-Dibromotoluene (FID)*	*89.6*	*70-130 %*		"	"	"	"	"	
615-59-8	*2,5-Dibromotoluene (PID)*	*82.4*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6 SA31813-04	CEA#5795-05-02	Ground Water	01-Aug-05 12:00	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
Volatile Organic Compounds			Prepared by method	Volatiles						
67-64-1	Acetone	BRL	50.0 µg/l	5	SW 846 8260B	03-Aug-05	03-Aug-05	5080209	tim	
107-13-1	Acrylonitrile	BRL	5.0 µg/l	5	"	"	"	"	"	
71-43-2	Benzene	BRL	5.0 µg/l	5	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	5.0 µg/l	5	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	5.0 µg/l	5	"	"	"	"	"	
75-25-2	Bromoform	BRL	5.0 µg/l	5	"	"	"	"	"	
74-83-9	Bromomethane	BRL	10.0 µg/l	5	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	50.0 µg/l	5	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	25.0 µg/l	5	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	5.0 µg/l	5	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
75-00-3	Chloroethane	BRL	10.0 µg/l	5	"	"	"	"	"	
67-66-3	Chloroform	BRL	5.0 µg/l	5	"	"	"	"	"	
74-87-3	Chloromethane	BRL	10.0 µg/l	5	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	5.0 µg/l	5	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	5.0 µg/l	5	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	10.0 µg/l	5	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	5.0 µg/l	5	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	5.0 µg/l	5	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	5.0 µg/l	5	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	10.0 µg/l	5	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	5.0 µg/l	5	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	5.0 µg/l	5	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	5.0 µg/l	5	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	5.0 µg/l	5	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	5.0 µg/l	5	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	5.0 µg/l	5	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	5.0 µg/l	5	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	5.0 µg/l	5	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	5.0 µg/l	5	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	5.0 µg/l	5	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	5.0 µg/l	5	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	5.0 µg/l	5	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	50.0 µg/l	5	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	5.0 µg/l	5	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	1,690	5.0 µg/l	5	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6 SA31813-04	CEA#5795-05-02	Ground Water	01-Aug-05 12:00	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
Volatile Organic Compounds			Prepared by method	Volatiles						
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	50.0 µg/l	5	SW 846 8260B	03-Aug-05	03-Aug-05	5080209	tim	
75-09-2	Methylene chloride	BRL	50.0 µg/l	5	"	"	"	"	"	
91-20-3	Naphthalene	BRL	5.0 µg/l	5	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
100-42-5	Styrene	BRL	5.0 µg/l	5	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	5.0 µg/l	5	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	5.0 µg/l	5	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	5.0 µg/l	5	"	"	"	"	"	
108-88-3	Toluene	BRL	5.0 µg/l	5	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	5.0 µg/l	5	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	5.0 µg/l	5	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	5.0 µg/l	5	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	5.0 µg/l	5	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	5.0 µg/l	5	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	5.0 µg/l	5	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	5.0 µg/l	5	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	10.0 µg/l	5	"	"	"	"	"	
95-47-6	o-Xylene	BRL	5.0 µg/l	5	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	50.0 µg/l	5	"	"	"	"	"	
60-29-7	Ethyl ether	BRL	5.0 µg/l	5	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	5.0 µg/l	5	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	5.0 µg/l	5	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	5.0 µg/l	5	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	50.0 µg/l	5	"	"	"	"	"	
123-91-1	1,4-Dioxane	BRL	100 µg/l	5	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*98.2*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*98.8*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*102*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*95.8*	*70-130 %*		"	"	"	"	"	
VPH Aliphatic/Aromatic Carbon Ranges			Prepared by method	VPH						
	C5-C8 Aliphatic Hydrocarbons	BRL	0.150 mg/l	10	+MADEP 5/2004 Rev. 1.1	04-Aug-05	04-Aug-05	5080318	KS	
	C9-C12 Aliphatic Hydrocarbons	BRL	0.0500 mg/l	10	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	BRL	0.0500 mg/l	10	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatic Hydrocarbons	1.11	0.150 mg/l	10	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL	0.0500 mg/l	10	"	"	"	"	"	
VPH Target Analytes			Prepared by method	VPH						
71-43-2	Benzene	BRL	10.0 µg/l	10	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6 SA31813-04	CEA#5795-05-02	Ground Water	01-Aug-05 12:00	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
VPH Target Analytes			Prepared by method	VPH						
100-41-4	Ethylbenzene	BRL	10.0 µg/l	10	+MADEP 5/2004 Rev. 1.1	04-Aug-05	04-Aug-05	5080318	KS	
1634-04-4	Methyl tert-butyl ether	1,570	10.0 µg/l	10	"	"	"	"	"	
91-20-3	Naphthalene	BRL	10.0 µg/l	10	"	"	"	"	"	
108-88-3	Toluene	BRL	10.0 µg/l	10	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	20.0 µg/l	10	"	"	"	"	"	
95-47-6	o-Xylene	BRL	10.0 µg/l	10	"	"	"	"	"	
Surrogate recoveries:										
615-59-8	*2,5-Dibromotoluene (FID)*	*100*	*70-130 %*		"	"	"	"	"	
615-59-8	*2,5-Dibromotoluene (PID)*	*94.6*	*70-130 %*		"	"	"	"	"	
Soluble Metals by EPA 6000/7000 Series Methods										
7440-22-4	Silver	BRL	0.0050 mg/l	1	SW846 6010B	03-Aug-05	04-Aug-05	5080281	RE	
7440-38-2	Arsenic	BRL	0.0040 mg/l	1	"	"	"	"	"	
7440-39-3	Barium	0.109	0.0025 mg/l	1	"	"	"	"	"	
7440-43-9	Cadmium	BRL	0.0012 mg/l	1	"	"	"	"	"	
7440-47-3	Chromium	BRL	0.0025 mg/l	1	"	"	"	"	"	
7439-92-1	Lead	BRL	0.0038 mg/l	1	"	"	"	"	"	
7782-49-2	Selenium	BRL	0.0075 mg/l	1	"	"	"	"	"	
Soluble Metals by EPA 200 Series Methods										
	Filtration	Lab Filtered	N/A	1	EPA 200.7/3005A	03-Aug-05	03-Aug-05	5080244	YP	
7439-97-6	Mercury	BRL	0.00020 mg/l	1	EPA 245.2/7470A	04-Aug-05	04-Aug-05	5080282	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080209 - Volatiles										
Blank (5080209-BLK1)				Prepared & Analyzed: 03-Aug-05						
Acetone	BRL	10.0	µg/l							
Acrylonitrile	BRL	1.0	µg/l							
Benzene	BRL	1.0	µg/l							
Bromobenzene	BRL	1.0	µg/l							
Bromochloromethane	BRL	1.0	µg/l							
Bromodichloromethane	BRL	1.0	µg/l							
Bromoform	BRL	1.0	µg/l							
Bromomethane	BRL	2.0	µg/l							
2-Butanone (MEK)	BRL	10.0	µg/l							
n-Butylbenzene	BRL	1.0	µg/l							
sec-Butylbenzene	BRL	1.0	µg/l							
tert-Butylbenzene	BRL	1.0	µg/l							
Carbon disulfide	BRL	5.0	µg/l							
Carbon tetrachloride	BRL	1.0	µg/l							
Chlorobenzene	BRL	1.0	µg/l							
Chloroethane	BRL	2.0	µg/l							
Chloroform	BRL	1.0	µg/l							
Chloromethane	BRL	2.0	µg/l							
2-Chlorotoluene	BRL	1.0	µg/l							
4-Chlorotoluene	BRL	1.0	µg/l							
1,2-Dibromo-3-chloropropane	BRL	2.0	µg/l							
Dibromochloromethane	BRL	1.0	µg/l							
1,2-Dibromoethane (EDB)	BRL	1.0	µg/l							
Dibromomethane	BRL	1.0	µg/l							
1,2-Dichlorobenzene	BRL	1.0	µg/l							
1,3-Dichlorobenzene	BRL	1.0	µg/l							
1,4-Dichlorobenzene	BRL	1.0	µg/l							
Dichlorodifluoromethane (Freon12)	BRL	2.0	µg/l							
1,1-Dichloroethane	BRL	1.0	µg/l							
1,2-Dichloroethane	BRL	1.0	µg/l							
1,1-Dichloroethene	BRL	1.0	µg/l							
cis-1,2-Dichloroethene	BRL	1.0	µg/l							
trans-1,2-Dichloroethene	BRL	1.0	µg/l							
1,2-Dichloropropane	BRL	1.0	µg/l							
1,3-Dichloropropane	BRL	1.0	µg/l							
2,2-Dichloropropane	BRL	1.0	µg/l							
1,1-Dichloropropene	BRL	1.0	µg/l							
cis-1,3-Dichloropropene	BRL	1.0	µg/l							
trans-1,3-Dichloropropene	BRL	1.0	µg/l							
Ethylbenzene	BRL	1.0	µg/l							
Hexachlorobutadiene	BRL	1.0	µg/l							
2-Hexanone (MBK)	BRL	10.0	µg/l							
Isopropylbenzene	BRL	1.0	µg/l							
4-Isopropyltoluene	BRL	1.0	µg/l							
Methyl tert-butyl ether	BRL	1.0	µg/l							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	µg/l							
Methylene chloride	BRL	10.0	µg/l							
Naphthalene	BRL	1.0	µg/l							
n-Propylbenzene	BRL	1.0	µg/l							
Styrene	BRL	1.0	µg/l							
1,1,1,2-Tetrachloroethane	BRL	1.0	µg/l							
1,1,2,2-Tetrachloroethane	BRL	1.0	µg/l							
Tetrachloroethene	BRL	1.0	µg/l							
Toluene	BRL	1.0	µg/l							

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080209 - Volatiles										
Blank (5080209-BLK1)				Prepared & Analyzed: 03-Aug-05						
1,2,3-Trichlorobenzene	BRL	1.0	µg/l							
1,2,4-Trichlorobenzene	BRL	1.0	µg/l							
1,1,1-Trichloroethane	BRL	1.0	µg/l							
1,1,2-Trichloroethane	BRL	1.0	µg/l							
Trichloroethene	BRL	1.0	µg/l							
Trichlorofluoromethane (Freon 11)	BRL	1.0	µg/l							
1,2,3-Trichloropropane	BRL	1.0	µg/l							
1,2,4-Trimethylbenzene	BRL	1.0	µg/l							
1,3,5-Trimethylbenzene	BRL	1.0	µg/l							
Vinyl chloride	BRL	1.0	µg/l							
m,p-Xylene	BRL	2.0	µg/l							
o-Xylene	BRL	1.0	µg/l							
Tetrahydrofuran	BRL	10.0	µg/l							
Ethyl ether	BRL	1.0	µg/l							
Tert-amyl methyl ether	BRL	1.0	µg/l							
Ethyl tert-butyl ether	BRL	1.0	µg/l							
Di-isopropyl ether	BRL	1.0	µg/l							
Tert-Butanol / butyl alcohol	BRL	10.0	µg/l							
1,4-Dioxane	BRL	20.0	µg/l							
Surrogate: 4-Bromofluorobenzene	*49.3*		µg/l	*50.0*		*98.6*	*70-130*			
Surrogate: Toluene-d8	*48.7*		µg/l	*50.0*		*97.4*	*70-130*			
Surrogate: 1,2-Dichlcroethane-d4	*48.2*		µg/l	*50.0*		*96.4*	*70-130*			
Surrogate: Dibromofluoromethane	*46.5*		µg/l	*50.0*		*93.0*	*70-130*			
LCS (5080209-BS1)				Prepared & Analyzed: 03-Aug-05						
Acetone	13.5		µg/l	20.0		67.5	25-189			
Acrylonitrile	17.7		µg/l	20.0		88.5	70-130			
Benzene	19.1		µg/l	20.0		95.5	70-130			
Bromobenzene	19.8		µg/l	20.0		99.0	70-130			
Bromochloromethane	19.7		µg/l	20.0		98.5	70-130			
Bromodichloromethane	19.8		µg/l	20.0		99.0	70-130			
Bromoform	17.6		µg/l	20.0		88.0	70-130			
Bromomethane	23.0		µg/l	20.0		115	60.9-149			
2-Butanone (MEK)	13.2		µg/l	20.0		66.0	24.9-149			
n-Butylbenzene	19.4		µg/l	20.0		97.0	70-130			
sec-Butylbenzene	19.6		µg/l	20.0		98.0	70-130			
tert-Butylbenzene	19.8		µg/l	20.0		99.0	70-130			
Carbon disulfide	18.7		µg/l	20.0		93.5	70-130			
Carbon tetrachloride	18.2		µg/l	20.0		91.0	70-130			
Chlorobenzene	19.4		µg/l	20.0		97.0	70-130			
Chloroethane	21.4		µg/l	20.0		107	70-135			
Chloroform	19.0		µg/l	20.0		95.0	70-130			
Chloromethane	24.2		µg/l	20.0		121	70-130			
2-Chlorotoluene	19.6		µg/l	20.0		98.0	70-130			
4-Chlorotoluene	19.0		µg/l	20.0		95.0	70-130			
1,2-Dibromo-3-chloropropane	17.4		µg/l	20.0		87.0	70-130			
Dibromochloromethane	19.8		µg/l	20.0		99.0	66.3-145			
1,2-Dibromoethane (EDB)	19.0		µg/l	20.0		95.0	70-130			
Dibromomethane	19.2		µg/l	20.0		96.0	70-130			
1,2-Dichlorobenzene	20.2		µg/l	20.0		101	70-130			
1,3-Dichlorobenzene	21.0		µg/l	20.0		105	70-130			
1,4-Dichlorobenzene	20.4		µg/l	20.0		102	70-130			
Dichlorodifluoromethane (Freon12)	26.3		µg/l	20.0		132	61.3-157			
1,1-Dichloroethane	19.3		µg/l	20.0		96.5	70-130			
1,2-Dichloroethane	19.3		µg/l	20.0		96.5	70-130			

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* Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080209 - Volatiles										
LCS (5080209-BS1)				Prepared & Analyzed: 03-Aug-05						
1,1-Dichloroethene	19.6		µg/l	20.0		98.0	70-130			
cis-1,2-Dichloroethene	19.2		µg/l	20.0		96.0	70-130			
trans-1,2-Dichloroethene	18.9		µg/l	20.0		94.5	70-130			
1,2-Dichloropropane	19.7		µg/l	20.0		98.5	70-130			
1,3-Dichloropropane	19.6		µg/l	20.0		98.0	70-130			
2,2-Dichloropropane	23.8		µg/l	20.0		119	70-130			
1,1-Dichloropropene	20.1		µg/l	20.0		100	70-130			
cis-1,3-Dichloropropene	20.6		µg/l	20.0		103	70-130			
trans-1,3-Dichloropropene	20.3		µg/l	20.0		102	70-130			
Ethylbenzene	19.2		µg/l	20.0		96.0	70-130			
Hexachlorobutadiene	21.6		µg/l	20.0		108	70-141			
2-Hexanone (MBK)	23.3		µg/l	20.0		116	70-130			
Isopropylbenzene	18.2		µg/l	20.0		91.0	70-130			
4-Isopropyltoluene	20.5		µg/l	20.0		102	70-130			
Methyl tert-butyl ether	19.2		µg/l	20.0		96.0	70-130			
4-Methyl-2-pentanone (MIBK)	15.6		µg/l	20.0		78.0	54.2-133			
Methylene chloride	20.8		µg/l	20.0		104	70-130			
Naphthalene	19.7		µg/l	20.0		98.5	70-130			
n-Propylbenzene	19.1		µg/l	20.0		95.5	70-130			
Styrene	18.8		µg/l	20.0		94.0	70-130			
1,1,1,2-Tetrachloroethane	19.5		µg/l	20.0		97.5	70-130			
1,1,2,2-Tetrachloroethane	19.1		µg/l	20.0		95.5	70-130			
Tetrachloroethene	20.6		µg/l	20.0		103	70-130			
Toluene	19.2		µg/l	20.0		96.0	70-130			
1,2,3-Trichlorobenzene	20.0		µg/l	20.0		100	70-130			
1,2,4-Trichlorobenzene	19.9		µg/l	20.0		99.5	70-130			
1,1,1-Trichloroethane	19.0		µg/l	20.0		95.0	70-130			
1,1,2-Trichloroethane	20.4		µg/l	20.0		102	70-130			
Trichloroethene	18.6		µg/l	20.0		93.0	70-130			
Trichlorofluoromethane (Freon 11)	19.9		µg/l	20.0		99.5	69-143			
1,2,3-Trichloropropane	17.9		µg/l	20.0		89.5	70-130			
1,2,4-Trimethylbenzene	19.0		µg/l	20.0		95.0	70-130			
1,3,5-Trimethylbenzene	18.8		µg/l	20.0		94.0	70-130			
Vinyl chloride	20.8		µg/l	20.0		104	70-130			
m,p-Xylene	39.2		µg/l	40.0		98.0	70-130			
o-Xylene	19.4		µg/l	20.0		97.0	70-130			
Tetrahydrofuran	20.5		µg/l	20.0		102	70-130			
Ethyl ether	20.2		µg/l	20.0		101	70-132			
Tert-amyl methyl ether	22.9		µg/l	20.0		114	70-130			
Ethyl tert-butyl ether	19.1		µg/l	20.0		95.5	70-130			
Di-isopropyl ether	18.2		µg/l	20.0		91.0	70-130			
Tert-Butanol / butyl alcohol	190		µg/l	200		95.0	70-130			
1,4-Dioxane	247		µg/l	200		124	38.4-132			
Surrogate: 4-Bromofluorobenzene	*48.8*		µg/l	*50.0*		*97.6*	*70-130*			
Surrogate: Toluene-d8	*48.8*		µg/l	*50.0*		*97.6*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.6*		µg/l	*50.0*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*48.8*		µg/l	*50.0*		*97.6*	*70-130*			
LCS Dup (5080209-BSD1)				Prepared & Analyzed: 03-Aug-05						
Acetone	28.2		µg/l	20.0		141	25-189	70.5	50	QC-2
Acrylonitrile	18.7		µg/l	20.0		93.5	70-130	5.49	25	
Benzene	19.6		µg/l	20.0		98.0	70-130	2.58	25	
Bromobenzene	20.7		µg/l	20.0		104	70-130	4.93	25	
Bromochloromethane	20.2		µg/l	20.0		101	70-130	2.51	25	
Bromodichloromethane	20.4		µg/l	20.0		102	70-130	2.99	25	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080209 - Volatiles										
LCS Dup (5080209-BSD1)				Prepared & Analyzed: 03-Aug-05						
Bromoform	18.6		µg/l	20.0		93.0	70-130	5.52	25	
Bromomethane	22.7		µg/l	20.0		114	60.9-149	0.873	50	
2-Butanone (MEK)	27.2		µg/l	20.0		136	24.9-149	69.3	50	QC-2
n-Butylbenzene	20.1		µg/l	20.0		100	70-130	3.05	25	
sec-Butylbenzene	20.2		µg/l	20.0		101	70-130	3.02	25	
tert-Butylbenzene	20.6		µg/l	20.0		103	70-130	3.96	25	
Carbon disulfide	18.6		µg/l	20.0		93.0	70-130	0.536	25	
Carbon tetrachloride	18.5		µg/l	20.0		92.5	70-130	1.63	25	
Chlorobenzene	19.8		µg/l	20.0		99.0	70-130	2.04	25	
Chloroethane	21.7		µg/l	20.0		108	70-135	0.930	50	
Chloroform	19.6		µg/l	20.0		98.0	70-130	3.11	25	
Chloromethane	24.9		µg/l	20.0		124	70-130	2.45	25	
2-Chlorotoluene	19.8		µg/l	20.0		99.0	70-130	1.02	25	
4-Chlorotoluene	20.0		µg/l	20.0		100	70-130	5.13	25	
1,2-Dibromo-3-chloropropane	17.2		µg/l	20.0		86.0	70-130	1.16	25	
Dibromochloromethane	20.4		µg/l	20.0		102	66.3-145	2.99	50	
1,2-Dibromoethane (EDB)	19.6		µg/l	20.0		98.0	70-130	3.11	25	
Dibromomethane	19.5		µg/l	20.0		97.5	70-130	1.55	25	
1,2-Dichlorobenzene	20.4		µg/l	20.0		102	70-130	0.985	25	
1,3-Dichlorobenzene	22.0		µg/l	20.0		110	70-130	4.65	25	
1,4-Dichlorobenzene	20.8		µg/l	20.0		104	70-130	1.94	25	
Dichlorodifluoromethane (Freon12)	26.9		µg/l	20.0		134	61.3-157	1.50	50	
1,1-Dichloroethane	19.6		µg/l	20.0		98.0	70-130	1.54	25	
1,2-Dichloroethane	19.6		µg/l	20.0		98.0	70-130	1.54	25	
1,1-Dichloroethene	20.0		µg/l	20.0		100	70-130	2.02	25	
cis-1,2-Dichloroethene	19.6		µg/l	20.0		98.0	70-130	2.06	25	
trans-1,2-Dichloroethene	19.2		µg/l	20.0		96.0	70-130	1.57	25	
1,2-Dichloropropane	20.1		µg/l	20.0		100	70-130	1.51	25	
1,3-Dichloropropane	20.4		µg/l	20.0		102	70-130	4.00	25	
2,2-Dichloropropane	23.4		µg/l	20.0		117	70-130	1.69	25	
1,1-Dichloropropene	20.4		µg/l	20.0		102	70-130	1.98	25	
cis-1,3-Dichloropropene	20.7		µg/l	20.0		104	70-130	0.966	25	
trans-1,3-Dichloropropene	21.3		µg/l	20.0		106	70-130	3.85	25	
Ethylbenzene	19.6		µg/l	20.0		98.0	70-130	2.06	25	
Hexachlorobutadiene	22.4		µg/l	20.0		112	70-141	3.64	50	
2-Hexanone (MBK)	30.5		µg/l	20.0		152	70-130	26.9	25	QC-2
Isopropylbenzene	18.8		µg/l	20.0		94.0	70-130	3.24	25	
4-Isopropyltoluene	20.9		µg/l	20.0		104	70-130	1.94	25	
Methyl tert-butyl ether	20.0		µg/l	20.0		100	70-130	4.08	25	
4-Methyl-2-pentanone (MIBK)	17.5		µg/l	20.0		87.5	54.2-133	11.5	50	
Methylene chloride	21.1		µg/l	20.0		106	70-130	1.90	25	
Naphthalene	19.8		µg/l	20.0		99.0	70-130	0.506	25	
n-Propylbenzene	20.2		µg/l	20.0		101	70-130	5.60	25	
Styrene	19.7		µg/l	20.0		98.5	70-130	4.68	25	
1,1,1,2-Tetrachloroethane	20.2		µg/l	20.0		101	70-130	3.53	25	
1,1,2,2-Tetrachloroethane	19.9		µg/l	20.0		99.5	70-130	4.10	25	
Tetrachloroethene	21.1		µg/l	20.0		106	70-130	2.87	25	
Toluene	20.6		µg/l	20.0		103	70-130	7.04	25	
1,2,3-Trichlorobenzene	20.6		µg/l	20.0		103	70-130	2.96	25	
1,2,4-Trichlorobenzene	20.5		µg/l	20.0		102	70-130	2.48	25	
1,1,1-Trichloroethane	19.0		µg/l	20.0		95.0	70-130	0.00	25	
1,1,2-Trichloroethane	21.3		µg/l	20.0		106	70-130	3.85	25	
Trichloroethene	19.4		µg/l	20.0		97.0	70-130	4.21	25	
Trichlorofluoromethane (Freon 11)	20.2		µg/l	20.0		101	69-143	1.50	50	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080209 - Volatiles										
LCS Dup (5080209-BSD1)				Prepared & Analyzed: 03-Aug-05						
1,2,3-Trichloropropane	18.8		µg/l	20.0		94.0	70-130	4.90	25	
1,2,4-Trimethylbenzene	19.8		µg/l	20.0		99.0	70-130	4.12	25	
1,3,5-Trimethylbenzene	19.8		µg/l	20.0		99.0	70-130	5.18	25	
Vinyl chloride	21.8		µg/l	20.0		109	70-130	4.69	25	
m,p-Xylene	41.0		µg/l	40.0		102	70-130	4.00	25	
o-Xylene	20.0		µg/l	20.0		100	70-130	3.05	25	
Tetrahydrofuran	21.4		µg/l	20.0		107	70-130	4.78	25	
Ethyl ether	21.1		µg/l	20.0		106	70-132	4.83	50	
Tert-amyl methyl ether	24.0		µg/l	20.0		120	70-130	5.13	25	
Ethyl tert-butyl ether	19.4		µg/l	20.0		97.0	70-130	1.56	25	
Di-isopropyl ether	19.1		µg/l	20.0		95.5	70-130	4.83	25	
Tert-Butanol / butyl alcohol	185		µg/l	200		92.5	70-130	2.67	25	
1,4-Dioxane	228		µg/l	200		114	38.4-132	8.40	25	
Surrogate: 4-Bromofluorobenzene	*48.8*		µg/l	*50.0*		*97.6*	*70-130*			
Surrogate: Toluene-d8	*49.4*		µg/l	*50.0*		*98.8*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.8*		µg/l	*50.0*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*48.4*		µg/l	*50.0*		*96.8*	*70-130*			
Matrix Spike (5080209-MS1)		**Source: SA31690-04RE1**		Prepared & Analyzed: 03-Aug-05						
Benzene	19.2		µg/l	20.0	BRL	96.0	70-130			
Chlorobenzene	19.9		µg/l	20.0	BRL	99.5	70-130			
1,1-Dichloroethene	18.4		µg/l	20.0	BRL	92.0	70-130			
Toluene	19.8		µg/l	20.0	BRL	99.0	70-130			
Trichloroethene	20.3		µg/l	20.0	2.30	90.0	70-130			
Surrogate: 4-Bromofluorobenzene	*48.5*		µg/l	*50.0*		*97.0*	*70-130*			
Surrogate: Toluene-d8	*49.6*		µg/l	*50.0*		*99.2*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.3*		µg/l	*50.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*49.0*		µg/l	*50.0*		*98.0*	*70-130*			
Matrix Spike Dup (5080209-MSD1)		**Source: SA31690-04RE1**		Prepared & Analyzed: 03-Aug-05						
Benzene	19.8		µg/l	20.0	BRL	99.0	70-130	3.08	30	
Chlorobenzene	20.2		µg/l	20.0	BRL	101	70-130	1.50	30	
1,1-Dichloroethene	20.9		µg/l	20.0	BRL	104	70-130	12.2	30	
Toluene	23.3		µg/l	20.0	BRL	116	70-130	15.8	30	
Trichloroethene	20.2		µg/l	20.0	2.30	89.5	70-130	0.557	30	
Surrogate: 4-Bromofluorobenzene	*48.8*		µg/l	*50.0*		*97.6*	*70-130*			
Surrogate: Toluene-d8	*49.0*		µg/l	*50.0*		*98.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*54.3*		µg/l	*50.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*51.8*		µg/l	*50.0*		*104*	*70-130*			
Batch 5080318 - VPH										
Blank (5080318-BLK1)				Prepared & Analyzed: 04-Aug-05						
C5-C8 Aliphatic Hydrocarbons	BRL	0.0750	mg/l							
C9-C12 Aliphatic Hydrocarbons	BRL	0.0250	mg/l							
C9-C10 Aromatic Hydrocarbons	BRL	0.0250	mg/l							
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL	0.0750	mg/l							
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL	0.0250	mg/l							
Benzene	BRL	5.0	µg/l							
Ethylbenzene	BRL	5.0	µg/l							
Methyl tert-butyl ether	BRL	5.0	µg/l							
Naphthalene	BRL	5.0	µg/l							
Toluene	BRL	5.0	µg/l							
m,p-Xylene	BRL	10.0	µg/l							
o-Xylene	BRL	5.0	µg/l							

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080318 - VPH										
Blank (5080318-BLK1)				Prepared & Analyzed: 04-Aug-05						
Surrogate: 2,5-Dibromotoluene (FID)	*51.5*		µg/l	*50.0*		*103*	*70-130*			
Surrogate: 2,5-Dibromotoluene (PID)	*47.8*		µg/l	*50.0*		*95.6*	*70-130*			
LCS (5080318-BS1)				Prepared & Analyzed: 04-Aug-05						
C5-C8 Aliphatic Hydrocarbons	122		mg/l	140		87.1	70-130			
C9-C12 Aliphatic Hydrocarbons	63.0		mg/l	55.0		115	70-130			
C9-C10 Aromatic Hydrocarbons	33.2		mg/l	40.0		83.0	70-130			
Unadjusted C5-C8 Aliphatic Hydrocarbons	246		mg/l	280		87.9	70-130			
Unadjusted C9-C12 Aliphatic Hydrocarbons	96.2		mg/l	85.0		113	70-130			
Benzene	16.8		µg/l	20.0		84.0	70-130			
Ethylbenzene	17.7		µg/l	20.0		88.5	70-130			
Methyl tert-butyl ether	19.4		µg/l	20.0		97.0	70-130			
Naphthalene	24.4		µg/l	20.0		122	70-130			
Toluene	17.6		µg/l	20.0		88.0	70-130			
m,p-Xylene	35.1		µg/l	40.0		87.8	70-130			
o-Xylene	17.7		µg/l	20.0		88.5	70-130			
2-Methylpentane	21.3		µg/l	20.0		106	70-130			
n-Nonane	19.3		µg/l	20.0		96.5	70-130			
n-Pentane	25.4		µg/l	20.0		127	70-130			
1,2,4-Trimethylbenzene	18.3		µg/l	20.0		91.5	70-130			
2,2,4-Trimethylpentane	20.3		µg/l	20.0		102	70-130			
n-Butylcyclohexane	24.5		µg/l	20.0		122	70-130			
n-Decane	25.3		µg/l	20.0		126	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	*54.8*		µg/l	*50.0*		*110*	*70-130*			
Surrogate: 2,5-Dibromotoluene (PID)	*51.4*		µg/l	*50.0*		*103*	*70-130*			
LCS Dup (5080318-BSD1)				Prepared & Analyzed: 04-Aug-05						
C5-C8 Aliphatic Hydrocarbons	118		mg/l	140		84.3	70-130	3.27	25	
C9-C12 Aliphatic Hydrocarbons	51.0		mg/l	55.0		92.7	70-130	21.5	25	
C9-C10 Aromatic Hydrocarbons	31.0		mg/l	40.0		77.5	70-130	6.85	25	
Unadjusted C5-C8 Aliphatic Hydrocarbons	229		mg/l	280		81.8	70-130	7.19	25	
Unadjusted C9-C12 Aliphatic Hydrocarbons	82.0		mg/l	85.0		96.5	70-130	15.8	25	
Benzene	15.5		µg/l	20.0		77.5	70-130	8.05	25	
Ethylbenzene	15.5		µg/l	20.0		77.5	70-130	13.3	25	
Methyl tert-butyl ether	19.5		µg/l	20.0		97.5	70-130	0.514	25	
Naphthalene	19.9		µg/l	20.0		99.5	70-130	20.3	25	
Toluene	15.4		µg/l	20.0		77.0	70-130	13.3	25	
m,p-Xylene	29.9		µg/l	40.0		74.8	70-130	16.0	25	
o-Xylene	15.1		µg/l	20.0		75.5	70-130	15.9	25	
2-Methylpentane	20.1		µg/l	20.0		100	70-130	5.83	25	
n-Nonane	17.2		µg/l	20.0		86.0	70-130	11.5	25	
n-Pentane	24.0		µg/l	20.0		120	70-130	5.67	25	
1,2,4-Trimethylbenzene	15.4		µg/l	20.0		77.0	70-130	17.2	25	
2,2,4-Trimethylpentane	18.8		µg/l	20.0		94.0	70-130	8.16	25	
n-Butylcyclohexane	21.0		µg/l	20.0		105	70-130	15.0	25	
n-Decane	18.6		µg/l	20.0		93.0	70-130	30.1	25	QR-02
Surrogate: 2,5-Dibromotoluene (FID)	*48.0*		µg/l	*50.0*		*96.0*	*70-130*			
Surrogate: 2,5-Dibromotoluene (PID)	*43.4*		µg/l	*50.0*		*86.8*	*70-130*			
Duplicate (5080318-DUP1)		**Source: SA31813-01**		Prepared & Analyzed: 04-Aug-05						
C5-C8 Aliphatic Hydrocarbons	BRL	0.0750	mg/l		0.00952			6.90	50	
C9-C12 Aliphatic Hydrocarbons	BRL	0.0250	mg/l		0.00357			0.837	50	

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* Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080318 - VPH										
Duplicate (5080318-DUP1)		**Source: SA31813-01**		Prepared & Analyzed: 04-Aug-05						
C9-C10 Aromatic Hydrocarbons	BRL	0.0250	mg/l		0.00190			0.528	50	
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL	0.0750	mg/l		0.0103			0.976	50	
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL	0.0250	mg/l		0.00546			0.730	50	
Benzene	BRL	5.0	µg/l		BRL				50	
Ethylbenzene	BRL	5.0	µg/l		BRL				50	
Methyl tert-butyl ether	BRL	5.0	µg/l		BRL				50	
Naphthalene	BRL	5.0	µg/l		5.0			27.3	50	
Toluene	BRL	5.0	µg/l		BRL				50	
m,p-Xylene	BRL	10.0	µg/l		BRL				50	
o-Xylene	BRL	5.0	µg/l		BRL				50	
Surrogate: 2,5-Dibromotoluene (FID)	*54.2*		µg/l	*50.0*		*108*	*70-130*			
Surrogate: 2,5-Dibromotoluene (PID)	*50.2*		µg/l	*50.0*		*100*	*70-130*			
Matrix Spike (5080318-MS1)		**Source: SA31813-01**		Prepared & Analyzed: 04-Aug-05						
Benzene	16.6		µg/l	20.0	BRL	83.0	70-130			
Ethylbenzene	17.2		µg/l	20.0	BRL	86.0	70-130			
Methyl tert-butyl ether	21.1		µg/l	20.0	BRL	106	70-130			
Naphthalene	17.0		µg/l	20.0	5.00	60.0	70-130			QM-07
Toluene	17.2		µg/l	20.0	BRL	86.0	70-130			
m,p-Xylene	33.3		µg/l	40.0	BRL	83.2	70-130			
o-Xylene	17.0		µg/l	20.0	BRL	85.0	70-130			
2-Methylpentane	20.0		µg/l	20.0	BRL	100	70-130			
n-Nonane	15.9		µg/l	20.0	BRL	79.5	70-130			
n-Pentane	23.9		µg/l	20.0	BRL	120	70-130			
1,2,4-Trimethylbenzene	16.7		µg/l	20.0	BRL	83.5	70-130			
2,2,4-Trimethylpentane	18.6		µg/l	20.0	BRL	93.0	70-130			
n-Butylcyclohexane	19.9		µg/l	20.0	1.10	94.0	70-130			
n-Decane	23.0		µg/l	20.0	0.0	115	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	*49.8*		µg/l	*50.0*		*99.6*	*70-130*			
Surrogate: 2,5-Dibromotoluene (PID)	*45.8*		µg/l	*50.0*		*91.6*	*70-130*			

Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080281 - SW846 3005A										
Blank (5080281-BLK1)				Prepared & Analyzed: 04-Aug-05						
Lead	BRL	0.0038	mg/l							
Selenium	BRL	0.0075	mg/l							
Cadmium	BRL	0.0012	mg/l							
Barium	BRL	0.0025	mg/l							
Chromium	BRL	0.0025	mg/l							
Arsenic	BRL	0.0040	mg/l							
Silver	BRL	0.0050	mg/l							
LCS (5080281-BS1)				Prepared & Analyzed: 04-Aug-05						
Lead	0.0906	0.0038	mg/l	0.100		90.6	85-115			
Selenium	0.0964	0.0075	mg/l	0.100		96.4	85-115			
Arsenic	0.0873	0.0040	mg/l	0.100		87.3	85-115			
Silver	0.0434	0.0050	mg/l	0.0500		86.8	85-115			
Barium	0.0908	0.0025	mg/l	0.100		90.8	85-115			
Chromium	0.0882	0.0025	mg/l	0.100		88.2	85-115			
Cadmium	0.0947	0.0012	mg/l	0.100		94.7	85-115			
LCS Dup (5080281-BSD1)				Prepared & Analyzed: 04-Aug-05						
Selenium	0.110	0.0075	mg/l	0.100		110	85-115	13.2	20	
Lead	0.102	0.0038	mg/l	0.100		102	85-115	11.8	20	
Silver	0.0490	0.0050	mg/l	0.0500		98.0	85-115	12.1	20	
Chromium	0.0994	0.0025	mg/l	0.100		99.4	85-115	11.9	20	
Cadmium	0.107	0.0012	mg/l	0.100		107	85-115	12.2	20	
Barium	0.102	0.0025	mg/l	0.100		102	85-115	11.6	20	
Arsenic	0.0998	0.0040	mg/l	0.100		99.8	85-115	13.4	20	
Duplicate (5080281-DUP1)		Source: SA31813-02		Prepared & Analyzed: 04-Aug-05						
Lead	BRL	0.0038	mg/l		BRL				20	
Selenium	BRL	0.0075	mg/l		BRL				20	
Barium	0.148	0.0025	mg/l		0.134			9.93	20	
Cadmium	BRL	0.0012	mg/l		BRL				20	
Arsenic	BRL	0.0040	mg/l		BRL				20	
Silver	BRL	0.0050	mg/l		BRL				20	
Chromium	BRL	0.0025	mg/l		BRL				20	
Matrix Spike (5080281-MS1)		Source: SA31813-04		Prepared & Analyzed: 04-Aug-05						
Lead	0.0878	0.0038	mg/l	0.100	BRL	87.8	75-125			
Selenium	0.0985	0.0075	mg/l	0.100	BRL	98.5	75-125			
Silver	0.0446	0.0050	mg/l	0.0500	BRL	89.2	75-125			
Arsenic	0.100	0.0040	mg/l	0.100	BRL	100	75-125			
Barium	0.202	0.0025	mg/l	0.100	0.109	93.0	75-125			
Cadmium	0.0964	0.0012	mg/l	0.100	BRL	96.4	75-125			
Chromium	0.0910	0.0025	mg/l	0.100	BRL	91.0	75-125			
Matrix Spike Dup (5080281-MSD1)		Source: SA31813-04		Prepared & Analyzed: 04-Aug-05						
Selenium	0.102	0.0075	mg/l	0.100	BRL	102	75-125	3.49	20	
Lead	0.0906	0.0038	mg/l	0.100	BRL	90.6	75-125	3.14	20	
Cadmium	0.0969	0.0012	mg/l	0.100	BRL	96.9	75-125	0.517	20	
Silver	0.0452	0.0050	mg/l	0.0500	BRL	90.4	75-125	1.34	20	
Barium	0.205	0.0025	mg/l	0.100	0.109	96.0	75-125	1.47	20	
Chromium	0.0914	0.0025	mg/l	0.100	BRL	91.4	75-125	0.439	20	
Arsenic	0.0979	0.0040	mg/l	0.100	BRL	97.9	75-125	2.12	20	

Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080244 - General Prep-Metal										
Blank (5080244-BLK1)				Prepared & Analyzed: 03-Aug-05						
Filtration	0.00	N/A								
Batch 5080282 - EPA200/SW7000 Series										
Blank (5080282-BLK1)				Prepared & Analyzed: 04-Aug-05						
Mercury	BRL	0.00020	mg/l							
LCS (5080282-BS1)				Prepared & Analyzed: 04-Aug-05						
Mercury	0.00228	0.00020	mg/l	0.00250		91.2	75-125			
Duplicate (5080282-DUP1)		Source: SA31813-02		Prepared & Analyzed: 04-Aug-05						
Mercury	BRL	0.00020	mg/l		0.00009			20.0	20	
Matrix Spike (5080282-MS1)		Source: SA31813-04		Prepared & Analyzed: 04-Aug-05						
Mercury	0.00236	0.00020	mg/l	0.00250	0.00010	90.4	75-125			
Matrix Spike Dup (5080282-MSD1)		Source: SA31813-04		Prepared & Analyzed: 04-Aug-05						
Mercury	0.00245	0.00020	mg/l	0.00250	0.00010	94.0	75-125	3.74	20	

Notes and Definitions

LF	Lab Filtered
QC-2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
June O'Connor
Nicole Brown

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrix	☐ Aqueous ☐ Soil ☐ Sediment ☐ Other			
Containers	☐ Satisfactory ☐ Broken ☐ Leaking			
Sample Preservative	Aqueous (acid-preserved)	☐ N/A ☐ pH≤2 ☐ pH>2 Comment:		
	Soil or Sediment	☐ N/A ☐ Samples not received in Methanol or air-tight container		ml Methanol/g soil ☐ 1:1 +/-25% ☐ Other:
		☐ Samples received in Methanol: ☐ covering soil/sediment ☐ not covering soil/sediment		
		☐ Samples received in air-tight container.		
Temperature	☐ Received on ice ☐ Received at 4 ± 2 °C ☐ Other: °C			

Were all QA/QC procedures followed as required by the VPH method? Yes_____ No _____
Were any significant modifications made to the VPH method as specified in section 11.3? No *see below
Were all performance/acceptance standards for required QA/QC procedures achieved? Yes_____ No_____
* Yes, if PID and FID surrogate recoveries are listed as n/a, then that sample was run via GCMS using all QC criteria specified in the method

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrix	☐ Aqueous ☐ Soil ☐ Sediment ☐ Other			
Containers	☐ Satisfactory ☐ Broken ☐ Leaking			
Aqueous Preservative	☐ N/A ☐ pH≤2 ☐ pH>2 ☐ pH adjusted to <2 in lab Comment:			
Temperature	☐ Received on ice ☐ Received at 4 ± 2 °C ☐ Other: °C			

Were all QA/QC procedures followed as required by the EPH method? Yes_____ No _____
Were any significant modifications made to the EPH method as specified in Section 11.3? No
Were all performance/acceptance standards for required QA/QC procedures achieved? Yes_____ No_____

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

MADEP MCP ANALYTICAL METHOD REPORT CERTIFICATION FORM

MADEP RTN [1]:					
This form provides certifications for the following Spectrum Analytical, Inc. work order #: SA31813					
Matrix	☐ Groundwater	☐ Soil/Sediment	☐ Drinking Water	☐ Other	
MCP SW-846 Methods Used	☐ 8260B	☐ 8151A	☐ 8330	☐ 6010B	☐ 7470A/1A
	☐ 8270C	☐ 8081A	☐ VPH	☐ 6020	☐ 9014M [2]
	☐ 8082	☐ 8021B	☐ EPH	☐ 7000S [3]	☐ 7196A

1 List Release Tracking Number (RTN), if known
2 M - SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method
3 S - SW-846 Methods 7000 Series List individual method and analyte

An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status

A	Were all samples received by the laboratory in a condition consistent with that described on the Chain of Custody documentation for the data set?	☐ Yes ☐ No
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	☐ Yes ☐ No
C	Does the data included in this report meet all the analytical requirements for "Presumptive Certainty", as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☐ Yes ☐ No
D	***VPH and EPH methods only***: Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective methods)?	☐ Yes ☐ No

A response to questions E and F below is required for "Presumptive Certainty" status

E	Were all analytical QC performance standards and recommendations for the specified methods achieved?	☐ Yes ☐ No
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	☐ Yes ☐ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Date: 8/5/2005

SA 31813 (n) 8-4-05

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 8-5-05
All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes. Samples disposed of after 60 days unless otherwise instructed.

Report To: CEA inc.
127 Hartwell St.
West Boylston, Ma. 01583
508-835-8822
Project Mgr.: Scott Vander Sea

Invoice To: CEA inc.

P.O. No.: RQN:

Project No.: CEA # 5795-05-02
Site Name: Sunoco inc (M+M) Westover,
Location: 88 S. Maple St. State: Ma
Sampler(s): Busch + Kasprasch

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=None 10=

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		VPH	RCRA-8 (metals)	VOC's, 8260-C						QA Reporting Notes (check if needed)
31813-01	MW-1	8-1-05	11:15	G	GW	2/9	2					X								- Site is 21 J
-02	MW-4	↓	11:45	↓	↓	↓	4			1		X	X	X						
-03	MW-5	↓	11:30				2					X								- RCRA-8
-04	MW-6	↓	12:00	↓	↓	↓	4			1		X	X	X						needs to be
																				Lab Filtered
																				Please.

☐ Fax results when available to (508) 835-8812
☒ E-mail to dzukauskas@cea-inc.com
EDD Format

Condition upon receipt: ☐ Iced ☐ Ambient ☒ °C 4 Rpt

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	8/2/05	1013
[signature]	Mary Demaw	8/2/05	1646

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

This laboratory report is not valid without an authorized signature on the cover page.
* Reportable Detection Limit BRL = Below Reporting Limit

SA 31813 (n) 8-4-05

SPECTRUM ANALYTICAL, INC.
Formerly
HANNIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 8-4-05
All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes. Samples disposed of after 60 days unless otherwise instructed.

Report To: CEA inc.
127 Hartwell St.
West Boylston, Ma. 01583
508-835-8822
Project Mgr.: Scott Vander Sea

Invoice To: CEA inc.
P.O. No.: RQN:

Project No.: CEA # 5995-05-02
Site Name: Sunoco inc (M+M) Westfield ~~Gilmour~~
Location: 88 S. Maple St. State: Ma
Sampler(s): Busik + Kasprasack

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=None 10=

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=
G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		VPH	RCRA-8 (metals)	VOC's, 8260-B						QA Reporting Notes: (check if needed):
31813-01	MW-1	8-1-05	11:15	G	GW	2/9	2					X								- Site is 21 J
-02	MW-4	↓	11:45	↓	↓	↓	4			1		X	X	X						
-03	MW-5		11:30				2					X								- RCRA-8
-04	MW-6		12:00				4			1		X	X	X						needs to be
																				Lab Filtered
																				Please
																				per client
																				8/4/05

☐ Fax results when available to (508) 835-8812
☒ E-mail to dzukauskas@cea-inc.com
EDD Format

Condition upon receipt: ☐ Iced ☐ Ambient ☒ Cooler 4 Rpt

Relinquished by:	Received by:	Date:	Time:
[illegible]	[illegible]	8/2/05	1013
[illegible]	Mary Demant	8/2/05	1646

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• Reportable Detection Limit BRL = Below Reporting Limit

Report Date:
04-Aug-05 15:31

☑ Final Report

SPECTRUM ANALYTICAL, INC.
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Laboratory Report

CEA, Inc.
127 Hartwell Street
West Boylston, MA 01583
Attn: Scott Vandersea

Project: Sunoco Inc (M&M)-88 S. Maple St-Westfield
Project #: CEA#5795-05-02

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA31815-01	MW-4	Ground Water	01-Aug-05 11:45	02-Aug-05 16:43
SA31815-02	MW-6	Ground Water	01-Aug-05 12:00	02-Aug-05 16:43

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 11 pages of analytical data including Chain of Custody document(s).
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Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

CASE NARRATIVE:

The data set for work order SA31844 complies with internal QC criteria for the methods performed. The samples were received @ 4.0 degrees Celsius. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2004 Rev.4, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although recovery may still be within the recommended 70%-130% range, the analytical range has been set based on historical control limits. Please refer to "Notes and Definitions" for all sample/analyte qualifiers. Qualifiers will note any exceedance levels and items specific to sample analysis/matrix.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-4 SA31815-01	CEA#5795-05-02	Ground Water	01-Aug-05 11:45	02-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Extractable Petroleum Hydrocarbons										
EPH Aliphatic/Aromatic Ranges			Prepared by method		SW846 3510C					
	C9-C18 Aliphatic Hydrocarbons	BRL	0.2 mg/l	1	+MADEP 5/2004 R	03-Aug-05	03-Aug-05	5080189	JD	
	C19-C36 Aliphatic Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	Unadjusted Total Petroleum Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
EPH Target PAH Analytes			Prepared by method		SW846 3510C					
91-20-3	Naphthalene	BRL	5.10 µg/l	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL	5.10 µg/l	1	"	"	"	"	"	
208-96-8	Acenaphthylene	BRL	5.10 µg/l	1	"	"	"	"	"	
83-32-9	Acenaphthene	BRL	5.10 µg/l	1	"	"	"	"	"	
86-73-7	Fluorene	BRL	5.10 µg/l	1	"	"	"	"	"	
85-01-8	Phenanthrene	BRL	5.10 µg/l	1	"	"	"	"	"	
120-12-7	Anthracene	BRL	5.10 µg/l	1	"	"	"	"	"	
206-44-0	Fluoranthene	BRL	5.10 µg/l	1	"	"	"	"	"	
129-00-0	Pyrene	BRL	5.10 µg/l	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL	5.10 µg/l	1	"	"	"	"	"	
218-01-9	Chrysene	BRL	5.10 µg/l	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL	5.10 µg/l	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL	5.10 µg/l	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL	5.10 µg/l	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL	5.10 µg/l	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL	5.10 µg/l	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL	5.10 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
3386-33-2	*1-Chlorooctadecane*	*47.5*	*40-140 %*		"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*49.2*	*40-140 %*		"	"	"	"	"	
580-13-2	*2-Bromonaphthalene*	*63.7*	*40-140 %*		"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*71.1*	*40-140 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6 SA31815-02	CEA#5795-05-02	Ground Water	01-Aug-05 12:00	02-Aug-05

CAS No.	*Analyte(s)*	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Extractable Petroleum Hydrocarbons										
EPH Aliphatic/Aromatic Ranges			Prepared by method	SW846 3510C						
	C9-C18 Aliphatic Hydrocarbons	BRL	0.2 mg/l	1	+MADEP 5/2004 R	03-Aug-05	03-Aug-05	5080189	JD	
	C19-C36 Aliphatic Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
	Unadjusted Total Petroleum Hydrocarbons	BRL	0.2 mg/l	1	"	"	"	"	"	
EPH Target PAH Analytes			Prepared by method	SW846 3510C						
91-20-3	Naphthalene	BRL	5.26 µg/l	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL	5.26 µg/l	1	"	"	"	"	"	
208-96-8	Acenaphthylene	BRL	5.26 µg/l	1	"	"	"	"	"	
83-32-9	Acenaphthene	BRL	5.26 µg/l	1	"	"	"	"	"	
86-73-7	Fluorene	BRL	5.26 µg/l	1	"	"	"	"	"	
85-01-8	Phenanthrene	BRL	5.26 µg/l	1	"	"	"	"	"	
120-12-7	Anthracene	BRL	5.26 µg/l	1	"	"	"	"	"	
206-44-0	Fluoranthene	BRL	5.26 µg/l	1	"	"	"	"	"	
129-00-0	Pyrene	BRL	5.26 µg/l	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL	5.26 µg/l	1	"	"	"	"	"	
218-01-9	Chrysene	BRL	5.26 µg/l	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL	5.26 µg/l	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL	5.26 µg/l	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL	5.26 µg/l	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL	5.26 µg/l	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL	5.26 µg/l	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL	5.26 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
3386-33-2	*1-Chlorooctadecane*	*55.7*	*40-140 %*		"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*52.5*	*40-140 %*		"	"	"	"	"	
580-13-2	*2-Bromonaphthalene*	*54.2*	*40-140 %*		"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*67.9*	*40-140 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0508024 - 5080189										
Calibration Check (0508024-CCV1)				Prepared & Analyzed: 03-Aug-05						
C9-C18 Aliphatic Hydrocarbons	0.508		mg/l	0.600		84.7	75-125			
C19-C36 Aliphatic Hydrocarbons	0.743		mg/l	0.800		92.9	75-125			
C11-C22 Aromatic Hydrocarbons	2.04		mg/l	1.70		120	75-125			
Naphthalene	117		µg/l	100		117	80-120			
2-Methylnaphthalene	115		µg/l	100		115	80-120			
Acenaphthylene	118		µg/l	100		118	80-120			
Acenaphthene	116		µg/l	100		116	80-120			
Fluorene	114		µg/l	100		114	80-120			
Phenanthrene	113		µg/l	100		113	80-120			
Anthracene	110		µg/l	100		110	80-120			
Fluoranthene	112		µg/l	100		112	80-120			
Pyrene	112		µg/l	100		112	80-120			
Benzo (a) anthracene	108		µg/l	100		108	80-120			
Chrysene	112		µg/l	100		112	80-120			
Benzo (b) fluoranthene	100		µg/l	100		100	80-120			
Benzo (k) fluoranthene	108		µg/l	100		108	80-120			
Benzo (a) pyrene	116		µg/l	100		116	80-120			
Indeno (1,2,3-cd) pyrene	108		µg/l	100		108	80-120			
Dibenzo (a,h) anthracene	119		µg/l	100		119	80-120			
Benzo (g,h,i) perylene	117		µg/l	100		117	80-120			
Batch 5080189 - SW846 3510C										
Blank (5080189-BLK1)				Prepared & Analyzed: 03-Aug-05						
C9-C18 Aliphatic Hydrocarbons	BRL	0.2	mg/l							
C19-C36 Aliphatic Hydrocarbons	BRL	0.2	mg/l							
C11-C22 Aromatic Hydrocarbons	BRL	0.2	mg/l							
Unadjusted C11-C22 Aromatic Hydrocarbons	BRL	0.2	mg/l							
Total Petroleum Hydrocarbons	BRL	0.2	mg/l							
Unadjusted Total Petroleum Hydrocarbons	BRL	0.2	mg/l							
Naphthalene	BRL	2.50	µg/l							
2-Methylnaphthalene	BRL	2.50	µg/l							
Acenaphthylene	BRL	2.50	µg/l							
Acenaphthene	BRL	2.50	µg/l							
Fluorene	BRL	2.50	µg/l							
Phenanthrene	BRL	2.50	µg/l							
Anthracene	BRL	2.50	µg/l							
Fluoranthene	BRL	2.50	µg/l							
Pyrene	BRL	2.50	µg/l							
Benzo (a) anthracene	BRL	2.50	µg/l							
Chrysene	BRL	2.50	µg/l							
Benzo (b) fluoranthene	BRL	2.50	µg/l							
Benzo (k) fluoranthene	BRL	2.50	µg/l							
Benzo (a) pyrene	BRL	2.50	µg/l							
Indeno (1,2,3-cd) pyrene	BRL	2.50	µg/l							
Dibenzo (a,h) anthracene	BRL	2.50	µg/l							
Benzo (g,h,i) perylene	BRL	2.50	µg/l							
Surrogate: 1-Chlorooctadecane	*21.9*		µg/l	*50.0*		*43.8*	*40-140*			
Surrogate: Ortho-Terphenyl	*23.7*		µg/l	*50.0*		*47.4*	*40-140*			
Surrogate: 2-Bromonaphthalene	*24.7*		µg/l	*40.0*		*61.8*	*40-140*			
Surrogate: 2-Fluorobiphenyl	*26.6*		µg/l	*40.0*		*66.5*	*40-140*			
LCS (5080189-BS1)				Prepared & Analyzed: 03-Aug-05						
C9-C18 Aliphatic Hydrocarbons	0.242	0.2	mg/l	0.600		40.3	40-140			
C19-C36 Aliphatic Hydrocarbons	0.472	0.2	mg/l	0.800		59.0	40-140			

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080189 - SW846 3510C										
LCS (5080189-BS1)				Prepared & Analyzed: 03-Aug-05						
C11-C22 Aromatic Hydrocarbons	1.14	0.2	mg/l	1.70		67.1	40-140			
Naphthalene	45.9	2.50	µg/l	100		45.9	40-140			
2-Methylnaphthalene	47.0	2.50	µg/l	100		47.0	40-140			
Acenaphthylene	54.9	2.50	µg/l	100		54.9	40-140			
Acenaphthene	53.4	2.50	µg/l	100		53.4	40-140			
Fluorene	57.0	2.50	µg/l	100		57.0	40-140			
Phenanthrene	60.3	2.50	µg/l	100		60.3	40-140			
Anthracene	63.1	2.50	µg/l	100		63.1	40-140			
Fluoranthene	60.1	2.50	µg/l	100		60.1	40-140			
Pyrene	59.1	2.50	µg/l	100		59.1	40-140			
Benzo (a) anthracene	52.7	2.50	µg/l	100		52.7	40-140			
Chrysene	57.2	2.50	µg/l	100		57.2	40-140			
Benzo (b) fluoranthene	51.7	2.50	µg/l	100		51.7	40-140			
Benzo (k) fluoranthene	52.4	2.50	µg/l	100		52.4	40-140			
Benzo (a) pyrene	51.7	2.50	µg/l	100		51.7	40-140			
Indeno (1,2,3-cd) pyrene	52.5	2.50	µg/l	100		52.5	40-140			
Dibenzo (a,h) anthracene	54.0	2.50	µg/l	100		54.0	40-140			
Benzo (g,h,i) perylene	52.0	2.50	µg/l	100		52.0	40-140			
Naphthalene (aliphatic fraction)	0.000100		µg/l	100		0.000100	0-200			
2-Methylnaphthalene (aliphatic fraction)	0.000100		µg/l	100		0.000100	0-200			
Surrogate: 1-Chlorooctodecane	*29.5*		µg/l	*50.0*		*59.0*	*40-140*			
Surrogate: Ortho-Terphenyl	*25.2*		µg/l	*50.0*		*50.4*	*40-140*			
Surrogate: 2-Bromonaphthalene	*22.8*		µg/l	*40.0*		*57.0*	*40-140*			
Surrogate: 2-Fluorobiphenyl	*29.5*		µg/l	*40.0*		*73.8*	*40-140*			
Naphthalene Breakthrough	0.00		%				0-5			
2-Methylnaphthalene Breakthrough	0.00		%				0-5			
Fractionation Check Standard (5080189-BS2)				Prepared & Analyzed: 03-Aug-05						
C9-C18 Aliphatic Hydrocarbons	0.318	0.2	mg/l	0.600		53.0	40-140			
C19-C36 Aliphatic Hydrocarbons	0.517	0.2	mg/l	0.800		64.6	40-140			
C11-C22 Aromatic Hydrocarbons	1.38	0.2	mg/l	1.70		81.2	40-140			
Naphthalene	61.1	2.50	µg/l	100		61.1	40-140			
2-Methylnaphthalene	65.5	2.50	µg/l	100		65.5	40-140			
Acenaphthylene	73.2	2.50	µg/l	100		73.2	40-140			
Acenaphthene	71.4	2.50	µg/l	100		71.4	40-140			
Fluorene	72.3	2.50	µg/l	100		72.3	40-140			
Phenanthrene	73.4	2.50	µg/l	100		73.4	40-140			
Anthracene	76.6	2.50	µg/l	100		76.6	40-140			
Fluoranthene	70.0	2.50	µg/l	100		70.0	40-140			
Pyrene	70.5	2.50	µg/l	100		70.5	40-140			
Benzo (a) anthracene	64.7	2.50	µg/l	100		64.7	40-140			
Chrysene	65.4	2.50	µg/l	100		65.4	40-140			
Benzo (b) fluoranthene	62.2	2.50	µg/l	100		62.2	40-140			
Benzo (k) fluoranthene	58.5	2.50	µg/l	100		58.5	40-140			
Benzo (a) pyrene	59.0	2.50	µg/l	100		59.0	40-140			
Indeno (1,2,3-cd) pyrene	59.2	2.50	µg/l	100		59.2	40-140			
Dibenzo (a,h) anthracene	61.5	2.50	µg/l	100		61.5	40-140			
Benzo (g,h,i) perylene	58.5	2.50	µg/l	100		58.5	40-140			
Naphthalene (aliphatic fraction)	0.000100		µg/l	100		0.000100	0-200			
2-Methylnaphthalene (aliphatic fraction)	0.000100		µg/l	100		0.000100	0-200			
Surrogate: 1-Chlorooctadecane	*31.0*		µg/l	*50.0*		*62.0*	*40-140*			
Surrogate: Ortho-Terphenyl	*30.6*		µg/l	*50.0*		*61.2*	*40-140*			
Surrogate: 2-Bromonaphthalene	*24.5*		µg/l	*40.0*		*61.2*	*40-140*			
Surrogate: 2-Fluorobiphenyl	*30.5*		µg/l	*40.0*		*76.2*	*40-140*			

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* Reportable Detection Limit BRL = Below Reporting Limit

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5080189 - SW846 3510C										
LCS Dup (5080189-BSD1)				Prepared & Analyzed: 03-Aug-05						
C9-C18 Aliphatic Hydrocarbons	0.283	0.2	mg/l	0.600		47.2	40-140	15.8	25	
C19-C36 Aliphatic Hydrocarbons	0.420	0.2	mg/l	0.800		52.5	40-140	11.7	25	
C11-C22 Aromatic Hydrocarbons	1.26	0.2	mg/l	1.70		74.1	40-140	9.92	25	
Naphthalene	42.9	2.50	µg/l	100		42.9	40-140	6.76	20	
2-Methylnaphthalene	49.0	2.50	µg/l	100		49.0	40-140	4.17	20	
Acenaphthylene	55.5	2.50	µg/l	100		55.5	40-140	1.09	20	
Acenaphthene	55.7	2.50	µg/l	100		55.7	40-140	4.22	20	
Fluorene	59.6	2.50	µg/l	100		59.6	40-140	4.46	20	
Phenanthrene	64.0	2.50	µg/l	100		64.0	40-140	5.95	20	
Anthracene	66.4	2.50	µg/l	100		66.4	40-140	5.10	20	
Fluoranthene	66.0	2.50	µg/l	100		66.0	40-140	9.36	20	
Pyrene	66.0	2.50	µg/l	100		66.0	40-140	11.0	20	
Benzo (a) anthracene	63.2	2.50	µg/l	100		63.2	40-140	18.1	20	
Chrysene	68.2	2.50	µg/l	100		68.2	40-140	17.5	20	
Benzo (b) fluoranthene	63.6	2.50	µg/l	100		63.6	40-140	20.6	20	QR-02
Benzo (k) fluoranthene	63.4	2.50	µg/l	100		63.4	40-140	19.0	20	
Benzo (a) pyrene	61.8	2.50	µg/l	100		61.8	40-140	17.8	20	
Indeno (1,2,3-cd) pyrene	63.0	2.50	µg/l	100		63.0	40-140	18.2	20	
Dibenzo (a,h) anthracene	64.8	2.50	µg/l	100		64.8	40-140	18.2	20	
Benzo (g,h,i) perylene	62.4	2.50	µg/l	100		62.4	40-140	18.2	20	
Naphthalene (aliphatic fraction)	0.000100		µg/l	100		0.000100	0-200	0.00	200	
2-Methylnaphthalene (aliphatic fraction)	0.000100		µg/l	100		0.000100	0-200	0.00	200	
Surrogate: 1-Chlorooctadecane	*26.5*		µg/l	*50.0*		*53.0*	*40-140*			
Surrogate: Ortho-Terphenyl	*25.8*		µg/l	*50.0*		*51.6*	*40-140*			
Surrogate: 2-Bromonaphthalene	*26.5*		µg/l	*40.0*		*66.2*	*40-140*			
Surrogate: 2-Fluorobiphenyl	*32.5*		µg/l	*40.0*		*81.2*	*40-140*			
Naphthalene Breakthrough	0.00		%				0-5			
2-Methylnaphthalene Breakthrough	0.00		%				0-5			

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte	Average RF	CCRF	% D		Limit
Batch 0508024					
Calibration Check (0508024-CCV1)					
C9-C18 Aliphatic Hydrocarbons	1.87539E+08	1.58655E+08	-15.4		25.00
C19-C36 Aliphatic Hydrocarbons	1.4791E+08	1.37303E+08	-7.17		25.00
C11-C22 Aromatic Hydrocarbons	18269.7	19.3145	-99.9	#	25.00
Naphthalene	8.21924	9.60121	16.8		20.00
2-Methylnaphthalene	5.20969	5.975	14.7		20.00
Acenaphthylene	7.12596	8.40432	17.9		20.00
Acenaphthene	4.92981	5.71317	15.9		20.00
Fluorene	5.22537	5.93362	13.6		20.00
Phenanthrene	6.58189	7.46975	13.5		20.00
Anthracene	7.1002	7.81987	10.1		20.00
Fluoranthene	6.78953	7.59024	11.8		20.00
Pyrene	7.00701	7.85114	12.0		20.00
Benzo (a) anthracene	5.86729	6.36039	8.40		20.00
Chrysene	5.98057	6.69626	12.0		20.00
Benzo (b) fluoranthene	5.08862	5.10503	0.322		20.00
Benzo (k) fluoranthene	5.53875	5.99855	8.30		20.00
Benzo (a) pyrene	4.82661	5.58604	15.7		20.00
Indeno (1,2,3-cd) pyrene	4.93162	5.32144	7.90		20.00
Dibenzo (a,h) anthracene	3.86699	4.60797	19.2		20.00
Benzo (g,h,i) perylene	4.05765	4.73273	16.6		20.00

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrix	☐ Aqueous	☐ Soil	☐ Sediment	☐ Other	
Containers	☐ Satisfactory	☐ Broken	☐ Leaking		
Aqueous Preservative	☐ N/A	☐ pH≤2	☐ pH>2	☐ pH adjusted to <2 in lab	Comment
Temperature	☐ Received on ice	☐ Received at 4 ± 2 °C	☐ Other:	°C	

Were all QA/QC procedures followed as required by the EPH method? Yes_____ No _____
Were any significant modifications made to the EPH method as specified in Section 11.3? No
Were all performance/acceptance standards for required QA/QC procedures achieved? Yes_____ No_____

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

MADEP MCP ANALYTICAL METHOD REPORT CERTIFICATION FORM

MADEP RTN [1]:					
This form provides certifications for the following Spectrum Analytical, Inc. work order #: SA31815					
Matrix	☐ Groundwater	☐ Soil/Sediment	☐ Drinking Water	☐ Other	
MCP SW-846 Methods Used	☐ 8260B	☐ 8151A	☐ 8330	☐ 6010B	☐ 7470A/1A
	☐ 8270C	☐ 8081A	☐ VPH	☐ 6020	☐ 9014M [2]
	☐ 8082	☐ 8021B	☐ EPH	☐ 7000S [3]	☐ 7196A

1 List Release Tracking Number (RTN), if known
2 M - SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method
3 S - SW-846 Methods 7000 Series List individual method and analyte

	An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status	
A	Were all samples received by the laboratory in a condition consistent with that described on the Chain of Custody documentation for the data set?	☐ Yes ☐ No
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	☐ Yes ☐ No
C	Does the data included in this report meet all the analytical requirements for "Presumptive Certainty", as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☐ Yes ☐ No
D	***VPH and EPH methods only***: Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective methods)?	☐ Yes ☐ No
	A response to questions E and F below is required for "Presumptive Certainty" status	
E	Were all analytical QC performance standards and recommendations for the specified methods achieved?	☐ Yes ☐ No
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	☐ Yes ☐ No
	All negative responses are addressed in a case narrative on the cover page of this report.	

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Hanibal C. Taych, Ph.D.
President/Laboratory Director

Date: 8/4/2005

887-31815 [illegible]

SPECTRUM ANALYTICAL, INC.
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 8-4-05
All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.
Samples disposed of after 60 days unless otherwise instructed.

Report To: CEA inc.
122 Hartwell St.
West Boylston, Ma. 01583
508-835-8822
Project Mgr.: Scott VanderSea

Invice To: CEA inc.

P.O. No.: RQN:

Project No.: ~~Sunoco inc. (Rtm)~~ CEA # 5795-05-02
Site Name: Sunoco inc. (Rtm) Westfield
Location: 88 S. Maple St. State: Ma
Sampler(s): Busch + Kasprasuk

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= 10=

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Containers: | Analyses: | QA Reporting Notes (check if needed)

State specific reporting standards
If applicable, please list below:

☒ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0? ☒ Yes ☐ No
(Response required for CAM report)

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	EPH	QA Reporting Notes
31815-01	MW-4	8-1-05	11:45	G	GW	2		1			X	- site is 21J
02	MW-6	8-1-05	12:00	G	GW	2		1			X	

☐ Fax results when available to (508) 835-8812
☒ E-mail to dzukauskas@cea-inc.com
EDD Format

Condition upon receipt: ☐ Iced ☐ Ambient ☒ °C 4 Rpt

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	8/2/05	1013
[signature]	Mary DeMarco	8/2/05	1643

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

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• Reportable Detection Limit BRL = Below Reporting Limit

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Automated Report

New England ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

02/21/06

Technical Report for

Corporate Environmental Advisors

Sunoco, 88 South Maple St., Westfield MA

5795-05-005

Accutest Job Number: M54470

Sampling Date: 02/07/06

Report to:

Corporate Environmental Advisors, Inc.
127 Hartwell Street
West Boylston, MA 01583
dazukauskas@cea-inc.com

ATTN: Debbie Zukauskas

Total number of pages in report: **14**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

1956 - 2006
50
YEARS OF EXCELLENCE
Accutest Laboratories

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579) NY (23346) NJ (MA926) NAVY USACE

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Sample Summary

Corporate Environmental Advisors

Job No: M54470

Sunoco, 88 South Maple St., Westfield MA
Project No: 5795-05-005

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
M54470-1	02/07/06	08:40	MB	02/09/06	AQ	Ground Water	MW-1
M54470-2	02/07/06	09:20	MB	02/09/06	AQ	Ground Water	MW-3B
M54470-3	02/07/06	09:00	MB	02/09/06	AQ	Ground Water	MW-5
M54470-4	02/07/06	10:10	MB	02/09/06	AQ	Ground Water	MW-6

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	M54470-1	**Date Sampled:**	02/07/06
Matrix:	AQ - Ground Water	**Date Received:**	02/09/06
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB25740.D	1	02/15/06	CH	n/a	n/a	GAB1348
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	84%		70-130%
615-59-8	2,5-Dibromotoluene	84%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-3B		
Lab Sample ID:	M54470-2	**Date Sampled:**	02/07/06
Matrix:	AQ - Ground Water	**Date Received:**	02/09/06
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB25741.D	1	02/15/06	CH	n/a	n/a	GAB1348
Run #2	AB25762.D	10	02/16/06	CH	n/a	n/a	GAB1349

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	252	2.0	ug/l	
100-41-4	Ethylbenzene	676	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2320 [a]	20	ug/l	
91-20-3	Naphthalene	95.4	3.0	ug/l	
108-88-3	Toluene	2060 [a]	20	ug/l	
	m,p-Xylene	1250	2.0	ug/l	
95-47-6	o-Xylene	988	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	7550 [a]	500	ug/l	
	C9- C12 Aliphatics (Unadj.)	6500	50	ug/l	
	C9- C10 Aromatics (Unadj.)	2520	50	ug/l	
	C5- C8 Aliphatics	2920	50	ug/l	
	C9- C12 Aliphatics	1070	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	65%	93%	70-130%
615-59-8	2,5-Dibromotoluene	66%	94%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	M54470-3	**Date Sampled:**	02/07/06
Matrix:	AQ - Ground Water	**Date Received:**	02/09/06
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB25742.D	1	02/15/06	CH	n/a	n/a	GAB1348
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	3.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	50	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	76%		70-130%
615-59-8	2,5-Dibromotoluene	76%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	M54470-4	**Date Sampled:**	02/07/06
Matrix:	AQ - Ground Water	**Date Received:**	02/09/06
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB25743.D	1	02/15/06	CH	n/a	n/a	GAB1348
Run #2	AB25763.D	100	02/16/06	CH	n/a	n/a	GAB1349

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	446	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	22900 [a]	200	ug/l	
91-20-3	Naphthalene	6.75	3.0	ug/l	
108-88-3	Toluene	12.3	2.0	ug/l	
	m,p-Xylene	4.0	2.0	ug/l	
95-47-6	o-Xylene	5.5	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	16300 [a]	5000	ug/l	
	C9- C12 Aliphatics (Unadj.)	54.2	50	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	50	ug/l	
	C5- C8 Aliphatics	ND	50	ug/l	
	C9- C12 Aliphatics	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	86%	79%	70-130%
615-59-8	2,5-Dibromotoluene	86%	81%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- VPH Form

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M54470
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: CEA inc.
ADDRESS: 127 Hartwell St.
CITY, STATE, ZIP: West Boylston, Ma, 01583
SEND REPORT TO: Scott Vandel Sen
PHONE #: 508-835-8820

FACILITY INFORMATION

PROJECT NAME: Sunoco inc
LOCATION: 88 S. Maple St. Westfield, Ma
PROJECT NO.: CEA # 5795-05-05
FAX #:

ANALYTICAL INFORMATION

VOA

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	PRESERVATION RUSH	PRESERVATION HNO3	PRESERVATION H2SO4	PRESERVATION NONE	VOA	LAB USE ONLY
-1	MW-1	2-7-06	8:40	MB	GW	2	X					X	
-2	MW-3B	↓	9:20	↓	↓	↓	↓					↓	
-3	MW-5		9:00										
-4	MW-6		10:10										

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS RUSH
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [x] OTHER (SPECIFY) E-Mail to dozubauskas@cea-inc.com

COMMENTS/REMARKS

- Site is 21-J
- 1 of 1

3H2

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1. [signature]	2/9/06 09:45	1. [signature]	2. [signature]	2/9/06 10:10	2. [signature]
3.		3.	4.		4.
5.		5.			

SEAL # | PRESERVE WHERE APPLICABLE ☐ | ON ICE ☑ | TEMPERATURE 3.0 C

3.1 3

MADEP VPH FORM

Matrix	Aqueous	☑	Soil	☐	Sediment	☐	Other	☐
Containers	Satisfactory	☑	Broken	☐	Leaking	☐		
Aqueous Preservatives	N/A	☐	pH <= 2	☑	pH > 2	☐		
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other	☑	Rec'd at 3 deg C	
Methanol	N/A							

3.2 3

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1

Client ID: MW-1
Date Collected: 2/7/2006

Lab ID: M54470-1
Date Received: 2/9/2006

VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Date Extracted: N/A
% Solids: N/A

First Date Run: 2/15/2006
Low Dilution: 1

Last Date Run: N/A
High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND [A]	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND [A]	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND [A]	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	2	
Benzene	71-43-2	C5-C8	ug/l	ND	2	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND [B]	50	
C9- C12 Aliphatics		N/A	ug/l	ND [C]	50	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	84	70-130 %
PID:2,5-Dibromotoluene	%	84	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director

Printed Name Reza Tand Date 2/21/2006

ACCUTEST Laboratories M54470

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐				
Containers	Satisfactory ☑	Broken ☐	Leaking ☐					
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐					
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 3 deg C				
Methanol	N/A							

3.2 3

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1

Client ID: MW-3B
Date Collected: 2/7/2006

Lab ID: M54470-2
Date Received: 2/9/2006

VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Date Extracted: N/A
% Solids: N/A

First Date Run: 2/15/2006
Low Dilution: 1

Last Date Run: 02/16/06
High Dilution: 10

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	7550 A	500	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	2520 A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	6500 A	50	
Target Analytes						
Toluene	108-88-3	C5-C8	ug/l	2060	20	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	2320	20	
Ethylbenzene	100-41-4	C9-C12	ug/l	676	2	
Benzene	71-43-2	C5-C8	ug/l	252	2	
Naphthalene	91-20-3	N/A	ug/l	95.4	3	
o-Xylene	95-47-6	C9-C12	ug/l	988	2	
m,p-Xylene		C9-C12	ug/l	1250	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	2920 B	50	
C9- C12 Aliphatics		N/A	ug/l	1070 C	50	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	93	70-130 %
PID:2,5-Dibromotoluene	%	94	70-130 %
FID:2,5-Dibromotoluene	%	85	70-130 %
PID:2,5-Dibromotoluene	%	66	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature

Printed Name Reza Tand

Postition Laboratory Director

Date 2/21/2006

ACCUTEST Laboratories M54470

MADEP VPH FORM

Matrix	Aqueous	☑	Soil	☐	Sediment	☐	Other	☐
Containers	Satisfactory	☑	Broken	☐	Leaking	☐		
Aqueous Preservatives	N/A	☐	pH <= 2	☑	pH > 2	☐		
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other	☑	Rec'd at 3 deg C	
Methanol	N/A							

3.2 3

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1

Client ID: MW-5
Date Collected: 2/7/2006

Lab ID: M54470-3
Date Received: 2/9/2006

VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Date Extracted: N/A
% Solids: N/A

First Date Run: 2/15/2006
Low Dilution: 1

Last Date Run: N/A
High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/l	ND [A]	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND [A]	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	ND [A]	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	ND	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	ND	2	
Benzene	71-43-2	C5-C8	ug/l	ND	2	
Naphthalene	91-20-3	N/A	ug/l	ND	3	
o-Xylene	95-47-6	C9-C12	ug/l	ND	2	
m,p-Xylene		C9-C12	ug/l	ND	2	
Adjusted Ranges						
C5- C6 Aliphatics		N/A	ug/l	ND [B]	50	
C9- C12 Aliphatics		N/A	ug/l	ND [C]	50	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	76	70-130 %
PID:2,5-Dibromotoluene	%	76	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Deteils Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director

Printed Name Reza Tand Date 2/21/2006

ACCUTEST Laboratories M54470

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 3 deg C			
Methanol	N/A						

3.2 3

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1

Client ID: MW-6
Date Collected: 2/7/2006

Lab ID: M54470-4
Date Received: 2/9/2006

VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Date Extracted:	First Date Run:	Last Date Run:
N/A	2/15/2006	02/16/06
% Solids:	Low Dilution:	High Dilution:
N/A	1	100

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C6 Aliphatics (Unadj.)		N/A	ug/l	16300 A	5000	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	ND A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	54.2 A	50	
Target Analytes						
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	22900	200	
Ethylbenzene	100-41-4	C9-C12	ug/l	ND	2	
Toluene	108-88-3	C5-C8	ug/l	12.3	2	
Benzene	71-43-2	C5-C8	ug/l	448	2	
Naphthalene	91-20-3	N/A	ug/l	6.7	3	
o-Xylene	95-47-6	C9-C12	ug/l	5.5	2	
m,p-Xylene		C9-C12	ug/l	4	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	ND B	50	
C9- C12 Aliphatics		N/A	ug/l	ND C	50	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	79	70-130 %
PID:2,5-Dibromotoluene	%	81	70-130 %
FID:2,5-Dibromotoluene	%	66	70-130 %
PID:2,5-Dibromotoluene	%	86	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performence/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and balief, accurate and complete.

Signature

Postition Laboratory Director

Printed Name Reza Tand

Date 2/21/2006

ACCUTEST Laboratories M54470

e-Hardcopy 2.0
Automated Report

New England ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

03/15/06

Technical Report for

Corporate Environmental Advisors

Sunoco, 88 South Maple St., Westfield MA

5795-05

Accutest Job Number: M54984

Sampling Date: 03/06/06

Report to:

Corporate Environmental Advisors, Inc.
127 Hartwell Street
West Boylston, MA 01583
dazukauskas@cea-inc.com

ATTN: Debbie Zukauskas

Total number of pages in report: 8

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Pand
Lab Director

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579) NY (23346) NJ (MA926) NAVY USACE

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Sections: 1 2 3

Accutest Laboratories

Sample Summary

Corporate Environmental Advisors

Job No: M54984

Sunoco, 88 South Maple St., Westfield MA
Project No: 5795-05

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
M54984-1	03/06/06	12:45	BF	03/07/06	AQ	Ground Water	MW-3B

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-3B		
Lab Sample ID:	M54984-1	**Date Sampled:**	03/06/06
Matrix:	AQ - Ground Water	**Date Received:**	03/07/06
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD4187.D	1	03/13/06	AF	n/a	n/a	GBD180
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	77.2	2.0	ug/l	
100-41-4	Ethylbenzene	585	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	637	2.0	ug/l	
91-20-3	Naphthalene	103	3.0	ug/l	
108-88-3	Toluene	536	2.0	ug/l	
	m,p-Xylene	734	2.0	ug/l	
95-47-6	o-Xylene	432	2.0	ug/l	
	C5- C8 Aliphatics (Unadj.)	3350	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	4880	50	ug/l	
	C9- C10 Aromatics (Unadj.)	2650	50	ug/l	
	C5- C8 Aliphatics	2100	50	ug/l	
	C9- C12 Aliphatics	478	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	93%		70-130%
615-59-8	2,5-Dibromotoluene	97%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- VPH Form

CHAIN OF CUSTODY

ACCUTEST Laboratories

495 TECHNOLOGY CENTER WEST * BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 * FAX: 508-481-7753

Accutest Job # M54984
Accutest Quote #

Client / Reporting Information

Company Name: CEA Inc.
Address: 127 Hartwell Street
City: West Boylston State: MA Zip: 1583
Project Contact: Mr. Scott VanderSea E-mail: SVanderSea@Cea-Inc.com
Phone #: 508-835-8822
Sampler's Name: Bill Flood

Project Information

Project Name: Sunoco Westfield
Street: 88-90 South Maple Street
City: Westfield State: MA
Project #: 5795-05
Fax #: 508-835-8812
Client Purchase Order #

Requested Analysis

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH		VPH									LAB USE ONLY
-1	MW-3B	3-6	12:45	Bill F	GW	2	X								X									
	SBAL B.F. 3-6-06																							

Turnaround Time (Business days)

- [X] Std. 14 Business Days
- [ ] 10 Day RUSH
- [ ] 6 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Approved By/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Standard
- [ ] Commercial "B"
- [ ] Disk Deliverable
- [ ] State Forms
- [ ] Other

Comments / Remarks

Email lab reports to: SvanderSea@cea-inc.com and Pbrown@cea-inc.com

3C3

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date/Time	Received by:	Relinquished by:	Date/Time	Received by:
1	Bill Flood	3/7/06 1545	Ryan Sweeney	Ryan Sweeney	3/7/06 1620	Ryan Sweeney
2						
3						
4						
5						

Custody Seal #: Preserved where applicable: ☐ On Ice: ☐ Cooler Temp: 3.1°c

3.1 3

M54984: Chain of Custody
Page 1 of 1

MADEP VPH FORM

Matrix	Aqueous ☑	Soil ☐	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☐	pH <= 2 ☑	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 3.1 deg C			
Methanol	N/A						

3.2

Method for Ranges: MADEP VPH REV 1.1 Client ID: MW-3B Lab ID: M54984-1

Method for Target Analytes: MADEP VPH REV 1.1 Date Collected: 3/6/2006 Date Received: 3/7/2006

VPH Surrogate Standards

PID: 2,5-Dibromotoluene

FID: 2,5-Dibromotoluene

Date Extracted:	First Date Run:	Last Date Run:
N/A	3/13/2006	N/A
% Solids:	Low Dilution:	High Dilution:
N/A	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C6 Aliphatics (Unadj.)		N/A	ug/l	3350 A	50	
C9- C10 Aromatics (Unadj.)		N/A	ug/l	2650 A	50	
C9- C12 Aliphatics (Unadj.)		N/A	ug/l	4680 A	50	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/l	585	2	
Toluene	108-88-3	C5-C8	ug/l	538	2	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/l	637	2	
Benzene	71-43-2	C5-C8	ug/l	77.2	2	
Naphthalene	91-20-3	N/A	ug/l	103	3	
o-Xylene	95-47-6	C9-C12	ug/l	432	2	
m,p-Xylene		C9-C12	ug/l	734	2	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/l	2100 B	50	
C9- C12 Aliphatics		N/A	ug/l	476 C	50	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	93	70-130 %
PID:2,5-Dibromotoluane	%	97	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the VPH method, as specifiad in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature Postition Laboratory Director

Printed Name Reza Tand Date 3/15/2006

ACCUTEST Laboratories M54984

APPENDIX F

Soil Analytical Report

e-Hardcopy 2.0
Automated Report

New England
ACCUTEST.
Laboratories

04/30/05

Technical Report for

Corporate Environmental Advisors

Sunoco, 88 South Maple St., Westfield MA

5795-05-001

Accutest Job Number: M46536

Sampling Date: 04/14/05

Report to:

Corporate Environmental Advisors, Inc.
127 Hartwell Street
West Boylston, MA 01583
dazukauskas@cea-inc.com

ATTN: Debbie Zukauskas

Total number of pages in report: 13

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Pand
Lab Director

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579) NY (23346) NJ (MA926) NAVY USACE

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Sections: 1 2 3

Accutest Laboratories

Sample Summary

Corporate Environmental Advisors

Job No: M46536

Sunoco, 88 South Maple St., Westfield MA
Project No: 5795-05-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
M46536-1	04/14/05	17:00	PB	04/15/05	SO	Soil	SAMPLE 1
M46536-2	04/14/05	17:05	PB	04/15/05	SO	Soil	SAMPLE 2
M46536-3	04/14/05	17:15	PB	04/15/05	SO	Soil	SAMPLE 3
M46536-4	04/14/05	17:30	PB	04/15/05	SO	Soil	SAMPLE 4

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Accutest Laboratories

Report of Analysis

Client Sample ID:	SAMPLE 1		
Lab Sample ID:	M46536-1	**Date Sampled:**	04/14/05
Matrix:	SO - Soil	**Date Received:**	04/15/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a [a]
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	QR31733.D	1	04/25/05	AP	n/a	n/a	GQR1622
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	33.8 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	120	ug/kg	
100-41-4	Ethylbenzene	124	120	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3790	47	ug/kg	
91-20-3	Naphthalene	ND	120	ug/kg	
108-88-3	Toluene	639	120	ug/kg	
	m,p-Xylene	336	120	ug/kg	
95-47-6	o-Xylene	148	120	ug/kg	
	C5- C8 Aliphatics (Unadj.)	9410	2400	ug/kg	
	C9- C12 Aliphatics (Unadj.)	3520	2400	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	2400	ug/kg	
	C5- C8 Aliphatics	4900	2400	ug/kg	
	C9- C12 Aliphatics	ND	2400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	100%		70-130%
615-59-8	2,5-Dibromotoluene	99%		70-130%

(a) Percent solids not analyzed due to sample matrix. Results reported on wet weight basis.
(b) Soil to methanol ratio greater than 1.25 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	SAMPLE 2		
Lab Sample ID:	M46536-2	**Date Sampled:**	04/14/05
Matrix:	SO - Soil	**Date Received:**	04/15/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a [a]
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	QR31734.D	1	04/25/05	AP	n/a	n/a	GQR1622
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	35.1 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	110	ug/kg	
100-41-4	Ethylbenzene	300	110	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2890	46	ug/kg	
91-20-3	Naphthalene	ND	110	ug/kg	
108-88-3	Toluene	902	110	ug/kg	
	m,p-Xylene	1080	110	ug/kg	
95-47-6	o-Xylene	549	110	ug/kg	
	C5- C8 Aliphatics (Unadj.)	13600	2300	ug/kg	
	C9- C12 Aliphatics (Unadj.)	14600	2300	ug/kg	
	C9- C10 Aromatics (Unadj.)	8410	2300	ug/kg	
	C5- C8 Aliphatics	9690	2300	ug/kg	
	C9- C12 Aliphatics	4280	2300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	98%		70-130%
615-59-8	2,5-Dibromotoluene	98%		70-130%

(a) Percent solids not analyzed due to sample matrix. Results reported on wet weight basis.
(b) Soil to methanol ratio greater than 1.25 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SAMPLE 3		
Lab Sample ID:	M46536-3	**Date Sampled:**	04/14/05
Matrix:	SO - Soil	**Date Received:**	04/15/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a [a]
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	QR31735.D	1	04/25/05	AP	n/a	n/a	GQR1622
Run #2 [b]	QR31775.D	1	04/27/05	AP	n/a	n/a	GQR1624

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	38.9 g	16.0 ml	10.0 ul
Run #2	38.9 g	16.0 ml	2.0 ul

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	28600	1000	ug/kg	
100-41-4	Ethylbenzene	124000	1000	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	205000	410	ug/kg	
91-20-3	Naphthalene	19900	1000	ug/kg	
108-88-3	Toluene	545000 [c]	5100	ug/kg	
	m,p-Xylene	295000	1000	ug/kg	
95-47-6	o-Xylene	136000	1000	ug/kg	
	C5- C8 Aliphatics (Unadj.)	4190000 [c]	100000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	2900000	21000	ug/kg	
	C9- C10 Aromatics (Unadj.)	1040000	21000	ug/kg	
	C5- C8 Aliphatics	3410000	21000	ug/kg	
	C9- C12 Aliphatics	1300000	21000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	118%	250% [d]	70-130%
615-59-8	2,5-Dibromotoluene	113%	344% [d]	70-130%

(a) Percent solids not analyzed due to sample matrix. Results reported on wet weight basis.
(b) Soil to methanol ratio greater than 1.25 to 1.
(c) Result is from Run# 2
(d) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	SAMPLE 4		
Lab Sample ID:	M46536-4	**Date Sampled:**	04/14/05
Matrix:	SO - Soil	**Date Received:**	04/15/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a [a]
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	QR31736.D	1	04/25/05	AP	n/a	n/a	GQR1622
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	37.8 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	110	ug/kg	
100-41-4	Ethylbenzene	ND	110	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	622	42	ug/kg	
91-20-3	Naphthalene	ND	110	ug/kg	
108-88-3	Toluene	381	110	ug/kg	
	m,p-Xylene	273	110	ug/kg	
95-47-6	o-Xylene	117	110	ug/kg	
	C5- C8 Aliphatics (Unadj.)	5620	2100	ug/kg	
	C9- C12 Aliphatics (Unadj.)	4610	2100	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	2100	ug/kg	
	C5- C8 Aliphatics	4580	2100	ug/kg	
	C9- C12 Aliphatics	2370	2100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	104%		70-130%
615-59-8	2,5-Dibromotoluene	94%		70-130%

(a) Percent solids not analyzed due to sample matrix. Results reported on wet weight basis.
(b) Soil to methanol ratio greater than 1.25 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- VPH Form

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M46536
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: CEA
ADDRESS: 127 Hartwell St.
CITY: W. Boylston STATE: MA ZIP: 01583
SEND REPORT TO: Scott Vandalfen
PHONE #: 508-835-8822

FACILITY INFORMATION

PROJECT NAME: Sunoco
LOCATION: 88 South Maple St., Westfield, MA
PROJECT NO.: 5795-05-001
FAX #: 508-835-8812

ANALYTICAL INFORMATION: VPH

MATRIX CODES: DW - DRINKING WATER; GW - GROUND WATER; WW - WASTE WATER; SO - SOIL; SL - SLUDGE; OI - OIL; LIQ - OTHER LIQUID; SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VPH	LAB USE ONLY
-1	Sample 1	04/14/05	5:00	PB	S	1					X	X	
-2	Sample 2	04/14/05	5:05	PB	S	1					X	X	
-3	Sample 3	04/14/05	5:15	PB	S	1					X	X	
-4	Sample 4	04/14/05	5:30	PB	S	1					X	X	
	~~Trip Blank~~ EP	04/14/05				1					X	X	

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS RUSH
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

Loc. 184

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Barry Bown	04/15/05 8:00	1. [signature]	2. [signature]	4/15/05 8:30	2. [signature]
RELINQUISHED BY: 3. [signature]	DATE TIME: 4/15/05 10:10	RECEIVED BY: 3. [signature]	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 4.7 C

M46536: Chain of Custody
Page 1 of 1

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.7 deg C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.						

Method for Ranges:	MADEP VPH REV 1.1	Client ID: SAMPLE 1		Lab ID: M46536-1
Method for Target Analytes:	MADEP VPH REV 1.1	Date Collected: 4/14/2005		Date Received: 4/15/2005
VPH Surrogate Standards		Date Extracted:	First Date Run:	Last Date Run:
PID: 2,5-Dibromotoluene		N/A	4/25/2005	N/A
FID: 2,5-Dibromotoluene		% Solids:	Low Dilution:	High Dilution:
		100	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	9410 A	2400	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND A	2400	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	3520 A	2400	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	124	120	
Toluene	108-88-3	C5-C8	ug/kg	639	120	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	3790	47	
Benzene	71-43-2	C5-C8	ug/kg	ND	120	
Naphthalene	91-20-3	N/A	ug/kg	ND	120	
o-Xylene	95-47-6	C9-C12	ug/kg	148	120	
m,p-Xylene		C9-C12	ug/kg	338	120	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	4900 B	2400	
C9- C12 Aliphatics		N/A	ug/kg	ND C	2400	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	100	70-130 %
PID:2,5-Dibromotoluene	%	99	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Position Laboratory Director

Printed Name Reza Tand Date 4/29/2005

ACCUTEST Laboratories M46536

3.2 3

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.7 deg C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: SAMPLE 2 — Lab ID: M46536-2
Date Collected: 4/14/2005 — Date Received: 4/15/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	4/25/2005	N/A
% Solids:	Low Dilution:	High Dilution:
100	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	13600 [A]	2300	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	8410 [A]	2300	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	14600 [A]	2300	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	300	110	
Toluene	108-88-3	C5-C8	ug/kg	902	110	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	2890	46	
Benzene	71-43-2	C5-C8	ug/kg	ND	110	
Naphthalene	91-20-3	N/A	ug/kg	ND	110	
o-Xylene	95-47-6	C9-C12	ug/kg	549	110	
m,p-Xylene		C9-C12	ug/kg	1080	110	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	9690 [B]	2300	
C9- C12 Aliphatics		N/A	ug/kg	4280 [C]	2300	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	98	70-130 %
PID:2,5-Dibromotoluene	%	98	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature — Position: Laboratory Director

Printed Name: Reza Tand — Date: 4/29/2005

ACCUTEST Laboratories M46536

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.7 deg C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: SAMPLE 3 **Lab ID:** M46536-3
Date Collected: 4/14/2005 **Date Received:** 4/15/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	4/25/2005	04/27/05
% Solids:	**Low Dilution:**	**High Dilution:**
100	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	4190000 A	100000	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	1040000 A	21000	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	2900000 A	21000	
Target Analytes						
Toluene	108-88-3	C5-C8	ug/kg	545000	5100	
Ethylbenzene	100-41-4	C9-C12	ug/kg	124000	1000	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	205000	410	
Benzene	71-43-2	C5-C8	ug/kg	26600	1000	
Naphthalene	91-20-3	N/A	ug/kg	19900	1000	
o-Xylene	95-47-6	C9-C12	ug/kg	136000	1000	
m,p-Xylene		C9-C12	ug/kg	295000	1000	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	3410000 B	21000	
C9- C12 Aliphatics		N/A	ug/kg	1300000 C	21000	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	250 D	70-130 %
PID:2,5-Dibromotoluene	%	344 D	70-130 %
FID:2,5-Dibromotoluene	%	118	70-130 %
PID:2,5-Dibromotoluene	%	113	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

D Outside control limits due to dilution.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☐ Yes ☑ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature **Position** Laboratory Director

Printed Name Reza Tand **Date** 4/29/2005

ACCUTEST Laboratories M46538

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MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.7 deg C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: SAMPLE 4 — Lab ID: M46536-4
Date Collected: 4/14/2005 — Date Received: 4/15/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	4/25/2005	N/A
% Solids:	Low Dilution:	High Dilution:
100	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	5620 A	2100	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND A	2100	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	4610 A	2100	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	110	
Toluene	108-88-3	C5-C8	ug/kg	381	110	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	622	42	
Benzene	71-43-2	C5-C8	ug/kg	ND	110	
Naphthalene	91-20-3	N/A	ug/kg	ND	110	
o-Xylene	95-47-6	C9-C12	ug/kg	117	110	
m,p-Xylene		C9-C12	ug/kg	273	110	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	4560 B	2100	
C9- C12 Aliphatics		N/A	ug/kg	2370 C	2100	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	104	70-130 %
PID:2,5-Dibromotoluene	%	94	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature — Position: Laboratory Director

Printed Name: Reza Tand — Date: 4/29/2005

ACCUTEST Laboratories M46536

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e-Hardcopy 2.0
Automated Report

New England
ACCUTEST
Laboratories

05/13/05

Technical Report for

Corporate Environmental Advisors

Sunoco, 88 South Maple St., Westfield MA

5795-05-001

Accutest Job Number: M46919

Sampling Date: 04/27/05

Report to:

Corporate Environmental Advisors, Inc.
127 Hartwell Street
West Boylston, MA 01583
dazukauskas@cea-inc.com

ATTN: Debbie Zukauskas

Total number of pages in report: 13

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579) NY (23346) NJ (MA926) NAVY USACE

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Sections: 1 2 3

Sample Summary

Corporate Environmental Advisors

Job No: M46919

Sunoco, 88 South Maple St., Westfield MA
Project No: 5795-05-001

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
M46919-1	04/27/05	12:00 PB	04/29/05	SO	Soil	1 S-B-2'
M46919-2	04/27/05	12:10 PB	04/29/05	SO	Soil	2 S-B-2'
M46919-3	04/27/05	12:20 PB	04/29/05	SO	Soil	4 S-B-2'
M46919-4	04/27/05	00:00 PB	04/29/05	SO	Soil	5 S-COMP-2'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Accutest Laboratories

Report of Analysis

Client Sample ID:	1 S-B-2'		
Lab Sample ID:	M46919-1	**Date Sampled:**	04/27/05
Matrix:	SO - Soil	**Date Received:**	04/29/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	95.2
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR31884.D	1	05/06/05	AP	n/a	n/a	GQR1632
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	29.7 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	150	ug/kg	
100-41-4	Ethylbenzene	ND	150	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	7350	62	ug/kg	
91-20-3	Naphthalene	171	150	ug/kg	
108-88-3	Toluene	197	150	ug/kg	
	m,p-Xylene	171	150	ug/kg	
95-47-6	o-Xylene	ND	150	ug/kg	
	C5- C8 Aliphatics (Unadj.)	9630	3100	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	3100	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	3100	ug/kg	
	C5- C8 Aliphatics	ND	3100	ug/kg	
	C9- C12 Aliphatics	ND	3100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	101%		70-130%
615-59-8	2,5-Dibromotoluene	102%		70-130%

(a) Soil to methanol ratio greater than 1.25 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	2 S-B-2'		
Lab Sample ID:	M46919-2	**Date Sampled:**	04/27/05
Matrix:	SO - Soil	**Date Received:**	04/29/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	94.4
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR31905.D	1	05/09/05	AP	n/a	n/a	GQR1633
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	32.8 g	16.0 ml	2.0 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	30300	7200	ug/kg	
100-41-4	Ethylbenzene	416000	7200	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	204000	2900	ug/kg	
91-20-3	Naphthalene	40100	7200	ug/kg	
108-88-3	Toluene	1050000	7200	ug/kg	
	m,p-Xylene	1010000	7200	ug/kg	
95-47-6	o-Xylene	444000	7200	ug/kg	
	C5- C8 Aliphatics (Unadj.)	6080000	140000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	6430000	140000	ug/kg	
	C9- C10 Aromatics (Unadj.)	2380000	140000	ug/kg	
	C5- C8 Aliphatics	4790000	140000	ug/kg	
	C9- C12 Aliphatics	2180000	140000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	0% [b]		70-130%
615-59-8	2,5-Dibromotoluene	0% [b]		70-130%

(a) Soil to methanol ratio greater than 1.25 to 1.
(b) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	4 S-B-2'		
Lab Sample ID:	M46919-3	**Date Sampled:**	04/27/05
Matrix:	SO - Soil	**Date Received:**	04/29/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	95.3
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR31886.D	1	05/06/05	AP	n/a	n/a	GQR1632
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	31.0 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	150	ug/kg	
100-41-4	Ethylbenzene	151	150	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3100	59	ug/kg	
91-20-3	Naphthalene	174	150	ug/kg	
108-88-3	Toluene	798	150	ug/kg	
	m,p-Xylene	429	150	ug/kg	
95-47-6	o-Xylene	213	150	ug/kg	
	C5- C8 Aliphatics (Unadj.)	12100	3000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	4090	3000	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	3000	ug/kg	
	C5- C8 Aliphatics	8210	3000	ug/kg	
	C9- C12 Aliphatics	ND	3000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	96%		70-130%
615-59-8	2,5-Dibromotoluene	92%		70-130%

(a) Soil to methanol ratio greater than 1.25 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	5 S-COMP-2'		
Lab Sample ID:	M46919-4	**Date Sampled:**	04/27/05
Matrix:	SO - Soil	**Date Received:**	04/29/05
Method:	MADEP VPH REV 1.1	**Percent Solids:**	92.6
Project:	Sunoco, 88 South Maple St., Westfield MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR31887.D	1	05/06/05	AP	n/a	n/a	GQR1632
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	27.3 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	180	ug/kg	
100-41-4	Ethylbenzene	ND	180	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	212	71	ug/kg	
91-20-3	Naphthalene	ND	180	ug/kg	
108-88-3	Toluene	ND	180	ug/kg	
	m,p-Xylene	184	180	ug/kg	
95-47-6	o-Xylene	ND	180	ug/kg	
	C5- C8 Aliphatics (Unadj.)	4750	3600	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	3600	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	3600	ug/kg	
	C5- C8 Aliphatics	4390	3600	ug/kg	
	C9- C12 Aliphatics	ND	3600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	97%		70-130%
615-59-8	2,5-Dibromotoluene	95%		70-130%

(a) Soil to methanol ratio greater than 1.25 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

3

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- VPH Form

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M46919
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Sunoco
ADDRESS: 88 S. Maple St
CITY, STATE, ZIP: Westfield MA
SEND REPORT TO: Scott VanderSea
PHONE #:

FACILITY INFORMATION

PROJECT NAME: Sunoco Station
LOCATION: Westfield MA
PROJECT NO.: 5795-05
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	PRESERVATION NaOH	PRESERVATION HNO3	PRESERVATION H2SO4	PRESERVATION NONE	VPH	% Solids
M46919-1	1 SB-2'	4/27/05	12:00	PB	SO	3					1	2	X	X
-2	2S-B-2'	4/27/05	12:10	PB	SO	3					1	2	X	X
-3	4S-B-2'	4/27/05	12:20	PB	SO	3					1	2	X	X
-4	5S-Comp-2'			PB	SO	3					1	2	X	X

LAB USE ONLY

DATA TURNAROUND INFORMATION

- ☐ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH* — APPROVED BY:
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

Samples preserved on ICE

Lot: 25, 3B4

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

RELINQUISHED BY: SAMPLER	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1.	4/29/05 09:20	1.	2.	4/29/05 10:10	2.
RELINQUISHED BY: 3.	DATE/TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE/TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE/TIME:	RECEIVED BY: 6.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 0.4 C

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M46919: Chain of Custody
Page 1 of 1

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 0.9 deg C		
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.					

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: 1 S-B-2'
Lab ID: M46919-1
Date Collected: 4/27/2005
Date Received: 4/29/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	5/6/2005	N/A
% Solids:	Low Dilution:	High Dilution:
95.2	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	9630 [A]	3100	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND [A]	3100	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	3100	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	150	
Toluene	108-88-3	C5-C8	ug/kg	197	150	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	7350	62	
Benzene	71-43-2	C5-C8	ug/kg	ND	150	
Naphthalene	91-20-3	N/A	ug/kg	171	150	
o-Xylene	95-47-6	C9-C12	ug/kg	ND	150	
m,p-Xylene		C9-C12	ug/kg	171	150	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	ND [B]	3100	
C9- C12 Aliphatics		N/A	ug/kg	ND [C]	3100	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	101	70-130 %
PID:2,5-Dibromotoluene	%	102	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature

Printed Name Reza Tand

Position Laboratory Director

Date 5/13/2005

ACCUTEST Laboratories M46919

3.2 3

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 0.9 deg C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: 2 S-B-2'
Date Collected: 4/27/2005
Lab ID: M46919-2
Date Received: 4/29/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	5/9/2005	N/A
% Solids:	Low Dilution:	High Dilution:
94.4	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	8080000 A	140000	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	2360000 A	140000	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	6430000 A	140000	
Target Analytes						
Ethylbenzena	100-41-4	C9-C12	ug/kg	416000	7200	
Toluene	108-88-3	C5-C8	ug/kg	1050000	7200	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	204000	2900	
Benzene	71-43-2	C5-C8	ug/kg	30300	7200	
Naphthalene	91-20-3	N/A	ug/kg	40100	7200	
o-Xylene	95-47-6	C9-C12	ug/kg	444000	7200	
m,p-Xylene		C9-C12	ug/kg	1010000	7200	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	4790000 B	140000	
C9- C12 Aliphatics		N/A	ug/kg	2160000 C	140000	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	0 D	70-130 %
PID:2,5-Dibromotoluene	%	0 D	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

D Outside control limits due to dilution.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☐ Yes ☑ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature

Printed Name Reza Tand

Position Laboratory Director

Date 5/13/2005

ACCUTEST Laboratories M46919

3.2 3

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 0.9 deg C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: 4 S-B-2'
Date Collected: 4/27/2005
Lab ID: M46919-3
Date Received: 4/29/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	5/6/2005	N/A
% Solids:	Low Dilution:	High Dilution:
95.3	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	12100 [A]	3000	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND [A]	3000	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	4090 [A]	3000	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	151	150	
Toluene	108-88-3	C5-C8	ug/kg	798	150	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	3100	59	
Benzene	71-43-2	C5-C8	ug/kg	ND	150	
Naphthalene	91-20-3	N/A	ug/kg	174	150	
o-Xylene	95-47-6	C9-C12	ug/kg	213	150	
m,p-Xylene		C9-C12	ug/kg	429	150	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	8210 [B]	3000	
C9- C12 Aliphatics		N/A	ug/kg	ND [C]	3000	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	96	70-130 %
PID:2,5-Dibromotoluene	%	92	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attached
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature

Printed Name Reza Tand

Position Laboratory Director

Date 5/13/2005

ACCUTEST Laboratories M46919

3.2 3

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 0.9 deg C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: Other) NOTE: Ratio > 1.25 to 1.						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID: 2,5-Dibromotoluene
FID: 2,5-Dibromotoluene

Client ID: 5 S-COMP-2'
Lab ID: M46919-4
Date Collected: 4/27/2005
Date Received: 4/29/2005

Date Extracted:	First Date Run:	Last Date Run:
N/A	5/6/2005	N/A
% Solids:	Low Dilution:	High Dilution:
92.6	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	4750 A	3600	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND A	3600	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	ND A	3600	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	180	
Toluene	108-88-3	C5-C8	ug/kg	ND	180	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	212	71	
Benzene	71-43-2	C5-C8	ug/kg	ND	180	
Naphthalene	91-20-3	N/A	ug/kg	ND	180	
o-Xylene	95-47-8	C9-C12	ug/kg	ND	180	
m,p-Xylene		C9-C12	ug/kg	184	180	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	4390 B	3600	
C9- C12 Aliphatics		N/A	ug/kg	ND C	3600	

Surrogate Recoveries			Acceptance Range
FID:2,5-Dibromotoluene	%	97	70-130 %
PID:2,5-Dibromotoluene	%	95	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attached
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attached
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Position Laboratory Director

Printed Name Reza Tand Date 5/13/2005

ACCUTEST Laboratories M46919

3.2 3

Report Date:
08-Dec-05 11:32

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

CEA, Inc.
127 Hartwell Street
West Boylston, MA 01583
Attn: Scott Vandersea

Project: Sunoco Station - Westfield, MA
Project #: 5795-05

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA37632-01	Tank Field	Soil	16-Nov-05 14:30	22-Nov-05 16:13
SA37632-02	T1	Soil	17-Nov-05 11:30	22-Nov-05 16:13
SA37632-03	R-7'	Soil	18-Nov-05 13:15	22-Nov-05 16:13
SA37632-04	T2	Soil	18-Nov-05 13:45	22-Nov-05 16:13
SA37632-05	T3	Soil	18-Nov-05 13:55	22-Nov-05 16:13
SA37632-06	T4	Soil	18-Nov-05 14:05	22-Nov-05 16:13
SA37632-07	T5	Soil	18-Nov-05 14:15	22-Nov-05 16:13
SA37632-08	T6	Soil	18-Nov-05 14:25	22-Nov-05 16:13

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 17 pages of analytical data plus Chain of Custody document(s).
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Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH nelac

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Tank Field SA37632-01	5795-05	Soil	16-Nov-05 14:30	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges			VOC10								
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	41 7		mg/kg dry	0 998	100	+MADEP 5/2004 Rev 1.1	29-Nov-05	29-Nov-05	5111785	MaR
	C9-C12 Aliphatic Hydrocarbons	26.6		mg/kg dry	0 333	100	•	•	•	•	•
	C9-C10 Aromatic Hydrocarbons	70 6		mg/kg dry	0 333	100	•	•	•	•	•
	Unadjusted C5-C8 Aliphatic Hydrocarbons	85 3		mg/kg dry	0 998	100	•	•	•	•	•
	Unadjusted C9-C12 Aliphatic Hydrocarbons	97 2		mg/kg dry	0 333	100	•	•	•	•	•
VPH Target Analytes			VOC10								
Prepared by method VPH											
71-43-2	Benzene	163		µg/kg dry	66 5	100	•	•	•	•	•
100-41-4	Ethylbenzene	4,190		µg/kg dry	66 5	100	•	•	•	•	•
1634-04-4	Methyl tert-butyl ether	10,500		µg/kg dry	66.5	100	•	•	•	•	•
91-20-3	Naphthalene	3,620		µg/kg dry	66.5	100	•	•	•	•	•
108-88-3	Toluene	7,520		µg/kg dry	66 5	100	•	•	•	•	•
1330-20-7	m,p-Xylene	15,000		µg/kg dry	133	100	•	•	•	•	•
95-47-6	o-Xylene	6,240		µg/kg dry	66.5	100	•	•	•	•	•
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*90 0*		*70-130 %*			•	•	•	•	•
615-59-8	*2,5-Dibromotoluene (PID)*	*87 6*		*70-130 %*			•	•	•	•	•
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082			I-02								
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	27 8	1	SW846 8082	06-Dec-05	07-Dec-05	5120300	SM
11104-28-2	PCB 1221	BRL		µg/kg dry	27 8	1	•	•	•	•	•
11141-16-5	PCB 1232	BRL		µg/kg dry	27.8	1	•	•	•	•	•
53469-21-9	PCB 1242	BRL		µg/kg dry	27 8	1	•	•	•	•	•
12672-29-6	PCB 1248	1,320		µg/kg dry	27 8	1	•	•	•	•	•
11097-69-1	PCB 1254	BRL		µg/kg dry	27 8	1	•	•	•	•	•
11096-82-5	PCB 1260	45 8		µg/kg dry	27 8	1	•	•	•	•	•
37324-23-5	PCB 1262	BRL		µg/kg dry	27 8	1	•	•	•	•	•
11100-14-4	PCB 1268	BRL		µg/kg dry	27 8	1	•	•	•	•	•
Surrogate recoveries:											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*84 9*		*30-150 %*			•	•	•	•	•
2051-24-3	*Decachlorobiphenyl (Sr)*	*79 9*		*30-150 %*			•	•	•	•	•
General Chemistry Parameters											
	% Solids	93 4		%		1	SM2540 G Mod	30-Nov-05	30-Nov-05	5111921	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T1 SA37632-02	5795-05	Soil	17-Nov-05 11:30	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges											
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	8 95		mg/kg dry	0 890	50	+MADEP 5/2004 Rev 1.1	29-Nov-05	29-Nov-05	5111785	MaR
	C9-C12 Aliphatic Hydrocarbons	3 45		mg/kg dry	0 297	50	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	9 89		mg/kg dry	0 297	50	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	12 3		mg/kg dry	0 890	50	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	13 3		mg/kg dry	0 297	50	"	"	"	"	"
VPH Target Analytes											
Prepared by method VPH											
71-43-2	Benzene	228		µg/kg dry	59.3	50	"	"	"	"	"
100-41-4	Ethylbenzene	344		µg/kg dry	59 3	50	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	273		µg/kg dry	59 3	50	"	"	"	"	"
91-20-3	Naphthalene	722		µg/kg dry	59 3	50	"	"	"	"	"
108-88-3	Toluene	745		µg/kg dry	59 3	50	"	"	"	"	"
1330-20-7	m,p-Xylene	1,190		µg/kg dry	119	50	"	"	"	"	"
95-47-6	o-Xylene	524		µg/kg dry	59.3	50	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*92 6*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*87 2*		*70-130 %*			"	"	"	"	"
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082			I-02								
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	606	20	SW846 8082	06-Dec-05	07-Dec-05	5120300	SM
11104-28-2	PCB 1221	BRL		µg/kg dry	606	20	"	"	"	"	"
11141-16-5	PCB 1232	BRL		µg/kg dry	606	20	"	"	"	"	"
53469-21-9	PCB 1242	BRL		µg/kg dry	606	20	"	"	"	"	"
12672-29-6	PCB 1248	31,700		µg/kg dry	606	20	"	"	"	"	"
11097-69-1	PCB 1254	BRL		µg/kg dry	606	20	"	"	"	"	"
11096-82-5	PCB 1260	346		µg/kg dry	30.3	1	"	"	"	"	"
37324-23-5	PCB 1262	BRL		µg/kg dry	30.3	1	"	"	"	"	"
11100-14-4	PCB 1268	BRL		µg/kg dry	30 3	1	"	"	"	"	"
Surrogate recoveries.											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*90.1*		*30-150 %*			"	"	"	"	"
2051-24-3	*Decachlorobiphenyl (Sr)*	*80.1*		*30-150 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	90 3		%		1	SM2540 G Mod	30-Nov-05	30-Nov-05	5111921	BD

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
R-7' SA37632-03	5795-05	Soil	18-Nov-05 13:15	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges			VOC10								
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	1,870		mg/kg dry	14 1	1000	+MADEP 5/2004 Rev 1.1	29-Nov-05	29-Nov-05	5111785	MaR
	C9-C12 Aliphatic Hydrocarbons	935		mg/kg dry	4 69	1000	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	1,650	E	mg/kg dry	4 69	1000	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	2,860	E	mg/kg dry	14 1	1000	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	2,590	E	mg/kg dry	4 69	1000	"	"	"	"	"
VPH Target Analytes			VOC10								
Prepared by method VPH											
71-43-2	Benzene	5,760		µg/kg dry	939	1000	"	"	"	"	"
100-41-4	Ethylbenzene	132,000		µg/kg dry	939	1000	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	23,800		µg/kg dry	939	1000	"	"	"	"	"
91-20-3	Naphthalene	32,900		µg/kg dry	939	1000	"	"	"	"	"
108-88-3	Toluene	291,000	E	µg/kg dry	939	1000	"	"	"	"	"
1330-20-7	m,p-Xylene	386,000	E	µg/kg dry	1880	1000	"	"	"	"	"
95-47-6	o-Xylene	153,000		µg/kg dry	939	1000	"	"	"	"	"
Surrogate recoveries.											
615-59-8	*2,5-Dibromotoluene (FID)*	*95 6*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*91.2*		*70-130 %*			"	"	"	"	"
VPH Aliphatic/Aromatic Carbon Ranges			VOC10						SA37632-03RE1		
Prepared by method VPH											
	C9-C10 Aromatic Hydrocarbons	1,400		mg/kg dry	23 5	5000	+MADEP 5/2004 Rev. 1.1	30-Nov-05	30-Nov-05	5111890	MaR
	Unadjusted C5-C8 Aliphatic Hydrocarbons	2,430		mg/kg dry	70 4	5000	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	2,270		mg/kg dry	23 5	5000	"	"	"	"	"
VPH Target Analytes			VOC10						SA37632-03RE1		
Prepared by method VPH											
108-88-3	Toluene	256,000		µg/kg dry	4690	5000	"	"	"	"	"
1330-20-7	m,p-Xylene	323,000		µg/kg dry	9390	5000	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*97.6*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*87.2*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	89 0		%		1	SM2540 G Mod	30-Nov-05	30-Nov-05	5111921	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T2 SA37632-04	5795-05	Soil	18-Nov-05 13:45	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges											
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	3 20		mg/kg dry	0 964	50	+MADEP 5/2004 Rev 1 1	30-Nov-05	30-Nov-05	5111890	MaR
	C9-C12 Aliphatic Hydrocarbons	0 608		mg/kg dry	0 321	50	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	0 977		mg/kg dry	0 321	50	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	3 84		mg/kg dry	0 964	50	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	1 59		mg/kg dry	0 321	50	"	"	"	"	"
VPH Target Analytes											
Prepared by method VPH											
71-43-2	Benzene	71 2		µg/kg dry	64 3	50	"	"	"	"	"
100-41-4	Ethylbenzene	74 4		µg/kg dry	64 3	50	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	64 3	50	"	"	"	"	"
91-20-3	Naphthalene	104		µg/kg dry	64 3	50	"	"	"	"	"
108-88-3	Toluene	237		µg/kg dry	64.3	50	"	"	"	"	"
1330-20-7	m,p-Xylene	258		µg/kg dry	129	50	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/kg dry	64 3	50	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*97 0*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*85 8*		*70-130 %*			"	"	"	"	"
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082			I-02								
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	30 1	1	SW846 8082	06-Dec-05	07-Dec-05	5120300	SM
11104-28-2	PCB 1221	BRL		µg/kg dry	30.1	1	"	"	"	"	"
11141-16-5	PCB 1232	BRL		µg/kg dry	30 1	1	"	"	"	"	"
53469-21-9	PCB 1242	BRL		µg/kg dry	30 1	1	"	"	"	"	"
12672-29-6	PCB 1248	97.7		µg/kg dry	30 1	1	"	"	"	"	"
11097-69-1	PCB 1254	BRL		µg/kg dry	30.1	1	"	"	"	"	"
11096-82-5	PCB 1260	110		µg/kg dry	30 1	1	"	"	"	"	"
37324-23-5	PCB 1262	BRL		µg/kg dry	30 1	1	"	"	"	"	"
11100-14-4	PCB 1268	BRL		µg/kg dry	30 1	1	"	"	"	"	"
Surrogate recoveries:											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*90.0*		*30-150 %*			"	"	"	"	"
2051-24-3	*Decachlorobiphenyl (Sr)*	*85 0*		*30-150 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	91 8		%		1	SM2540 G Mod.	30-Nov-05	30-Nov-05	5111921	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T3 SA37632-05	5795-05	Soil	18-Nov-05 13:55	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges											
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	1 23		mg/kg dry	0.932	50	+MADEP 5/2004 Rev 1.1	29-Nov-05	29-Nov-05	5111785	MaR
	C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0.311	50	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	0 475		mg/kg dry	0.311	50	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	1.67		mg/kg dry	0 932	50	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	0.509		mg/kg dry	0.311	50	"	"	"	"	"
VPH Target Analytes											
Prepared by method VPH											
71-43-2	Benzene	BRL		µg/kg dry	62.1	50	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/kg dry	62 1	50	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	62.1	50	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	82.1	50	"	"	"	"	"
108-88-3	Toluene	134		µg/kg dry	62 1	50	"	"	"	"	"
1330-20-7	m,p-Xylene	158		µg/kg dry	124	50	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/kg dry	62.1	50	"	"	"	"	"
Surrogate recoveries											
615-59-8	*2,5-Dibromotoluene (FID)*	*104*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*94.8*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	93.6		%		1	SM2540 G Mod	30-Nov-05	30-Nov-05	5111921	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T4 SA37632-06	5795-05	Soil	18-Nov-05 14:05	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges			VOC10								
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	2 90		mg/kg dry	2.45	50	+MADEP 5/2004 Rev 1.1	29-Nov-05	29-Nov-05	5111785	MaR
	C9-C12 Aliphatic Hydrocarbons	0 962		mg/kg dry	0 818	50	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	BRL		mg/kg dry	0 818	50	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	3 28		mg/kg dry	2.45	50	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	1 47		mg/kg dry	0 818	50	"	"	"	"	"
VPH Target Analytes			VOC10								
Prepared by method VPH											
71-43-2	Benzene	BRL		µg/kg dry	164	50	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/kg dry	164	50	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	164	50	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	164	50	"	"	"	"	"
108-88-3	Toluene	BRL		µg/kg dry	164	50	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/kg dry	327	50	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/kg dry	164	50	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*91.6*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*84.6*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	91 3		%		1	SM2540 G Mod.	30-Nov-05	30-Nov-05	5111921	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T5 SA37632-07	5795-05	Soil	18-Nov-05 14:15	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges											
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	30 1		mg/kg dry	1 69	100	+MADEP 5/2004 Rev 1.1	29-Nov-05	29-Nov-05	5111765	MaR
	C9-C12 Aliphatic Hydrocarbons	24 6		mg/kg dry	0.565	100	•	•	•	•	•
	C9-C10 Aromatic Hydrocarbons	58 2		mg/kg dry	0 565	100	•	•	•	•	•
	Unadjusted C5-C8 Aliphatic Hydrocarbons	50.4		mg/kg dry	1 69	100	•	•	•	•	•
	Unadjusted C9-C12 Aliphatic Hydrocarbons	82 8		mg/kg dry	0.565	100	•	•	•	•	•
VPH Target Analytes											
Prepared by method VPH											
71-43-2	Benzene	BRL		µg/kg dry	113	100	•	•	•	•	•
100-41-4	Ethylbenzene	1,920		µg/kg dry	113	100	•	•	•	•	•
1634-04-4	Methyl tert-butyl ether	526		µg/kg dry	113	100	•	•	•	•	•
91-20-3	Naphthalene	1,830		µg/kg dry	113	100	•	•	•	•	•
108-88-3	Toluene	3,470		µg/kg dry	113	100	•	•	•	•	•
1330-20-7	m,p-Xylene	9,780		µg/kg dry	226	100	•	•	•	•	•
95-47-6	o-Xylene	4,580		µg/kg dry	113	100	•	•	•	•	•
Surrogate recoveries											
615-59-8	*2,5-Dibromotoluene (FID)*	*110*		*70-130 %*			•	•	•	•	•
615-59-8	*2,5-Dibromotoluene (PID)*	*100*		*70-130 %*			•	•	•	•	•
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082			I-02								
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	30 2	1	SW846 8082	06-Dec-05	07-Dec-05	5120300	SM
11104-28-2	PCB 1221	BRL		µg/kg dry	30 2	1	•	•	•	•	•
11141-16-5	PCB 1232	BRL		µg/kg dry	30 2	1	•	•	•	•	•
53469-21-9	PCB 1242	BRL		µg/kg dry	30 2	1	•	•	•	•	•
12672-29-6	PCB 1248	69 5		µg/kg dry	30 2	1	•	•	•	•	•
11097-69-1	PCB 1254	BRL		µg/kg dry	30 2	1	•	•	•	•	•
11096-82-5	PCB 1260	64 9		µg/kg dry	30 2	1	•	•	•	•	•
37324-23-5	PCB 1262	BRL		µg/kg dry	30 2	1	•	•	•	•	•
11100-14-4	PCB 1268	BRL		µg/kg dry	30 2	1	•	•	•	•	•
Surrogate recoveries											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*90 1*		*30-150 %*			•	•	•	•	•
2051-24-3	*Decachlorobiphenyl (Sr)*	*95 0*		*30-150 %*			•	•	•	•	•
General Chemistry Parameters											
	% Solids	92 5		%		1	SM2540 G Mod	30-Nov-05	30-Nov-05	5111921	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T6 SA37632-08	5795-05	Soil	18-Nov-05 14:25	22-Nov-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	28-Nov-05	28-Nov-05	5111765	BD
VPH Aliphatic/Aromatic Carbon Ranges			VOC10								
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	21 7		mg/kg dry	2.55	100	+MADEP 5/2004 Rev 1 1	29-Nov-05	29-Nov-05	5111785	MaR
	C9-C12 Aliphatic Hydrocarbons	27 7		mg/kg dry	0 851	100	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	52 9		mg/kg dry	0 851	100	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	32.3		mg/kg dry	2.55	100	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	80.6		mg/kg dry	0 851	100	"	"	"	"	"
VPH Target Analytes			VOC10								
Prepared by method VPH											
71-43-2	Benzene	BRL		µg/kg dry	170	100	"	"	"	"	"
100-41-4	Ethylbenzene	1,100		µg/kg dry	170	100	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	170	100	"	"	"	"	"
91-20-3	Naphthalene	1,050		µg/kg dry	170	100	"	"	"	"	"
108-88-3	Toluene	1,240		µg/kg dry	170	100	"	"	"	"	"
1330-20-7	m,p-Xylene	5,500		µg/kg dry	340	100	"	"	"	"	"
95-47-6	o-Xylene	2,690		µg/kg dry	170	100	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*98 6*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*90 4*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	93.1		%		1	SM2540 G Mod	30-Nov-05	30-Nov-05	5111921	BD

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5111785 - VPH										
Blank (5111785-BLK1)										
Prepared & Analyzed: 29-Nov-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.250						
C9-C10 Aromatic Hydrocarbons	BRL		mg/kg wet	0.250						
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.250						
Benzene	BRL		µg/kg wet	50.0						
Ethylbenzene	BRL		µg/kg wet	50.0						
Methyl tert-butyl ether	BRL		µg/kg wet	50.0						
Naphthalene	BRL		µg/kg wet	50.0						
Toluene	BRL		µg/kg wet	50.0						
m,p-Xylene	BRL		µg/kg wet	100						
o-Xylene	BRL		µg/kg wet	50.0						
Surrogate: 2,5-Dibromotoluene (FID)	*51.0*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*51.0*		µg/kg wet		*50.0*		*102*	*70-130*		
LCS (5111785-BS1)										
Prepared & Analyzed: 29-Nov-05										
C5-C8 Aliphatic Hydrocarbons	134		mg/kg wet		140		95.7	70-130		
C9-C12 Aliphatic Hydrocarbons	45.3		mg/kg wet		55.0		82.4	70-130		
C9-C10 Aromatic Hydrocarbons	49.9		mg/kg wet		40.0		125	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	271		mg/kg wet		280		96.8	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	95.2		mg/kg wet		85.0		112	70-130		
Benzene	19.5		µg/kg wet		20.0		97.5	70-130		
Ethylbenzene	20.3		µg/kg wet		20.0		102	70-130		
Methyl tert-butyl ether	17.6		µg/kg wet		20.0		88.0	70-130		
Naphthalene	16.8		µg/kg wet		20.0		84.0	70-130		
Toluene	19.7		µg/kg wet		20.0		98.5	70-130		
m,p-Xylene	40.2		µg/kg wet		40.0		100	70-130		
o-Xylene	19.3		µg/kg wet		20.0		96.5	70-130		
2-Methylpentane	19.1		µg/kg wet		20.0		95.5	70-130		
n-Nonane	18.6		µg/kg wet		20.0		93.0	70-130		
n-Pentane	18.2		µg/kg wet		20.0		91.0	70-130		
1,2,4-Trimethylbenzene	20.5		µg/kg wet		20.0		102	70-130		
2,2,4-Trimethylpentane	20.0		µg/kg wet		20.0		100	70-130		
n-Butylcyclohexane	21.5		µg/kg wet		20.0		108	70-130		
n-Decane	22.9		µg/kg wet		20.0		114	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*48.8*		µg/kg wet		*50.0*		*97.6*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*43.9*		µg/kg wet		*50.0*		*87.8*	*70-130*		
LCS Dup (5111785-BSD1)										
Prepared & Analyzed: 29-Nov-05										
C5-C8 Aliphatic Hydrocarbons	135		mg/kg wet		140		96.4	70-130	0.729	25
C9-C12 Aliphatic Hydrocarbons	46.6		mg/kg wet		55.0		84.7	70-130	2.75	25
C9-C10 Aromatic Hydrocarbons	49.4		mg/kg wet		40.0		124	70-130	0.803	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	270		mg/kg wet		280		96.4	70-130	0.414	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	98.0		mg/kg wet		85.0		113	70-130	0.889	25
Benzene	18.5		µg/kg wet		20.0		92.5	70-130	5.26	25
Ethylbenzene	19.3		µg/kg wet		20.0		96.5	70-130	5.54	25
Methyl tert-butyl ether	19.0		µg/kg wet		20.0		95.0	70-130	7.65	25
Naphthalene	19.7		µg/kg wet		20.0		98.5	70-130	15.9	25
Toluene	19.9		µg/kg wet		20.0		99.5	70-130	1.01	25
m,p-Xylene	39.0		µg/kg wet		40.0		97.5	70-130	2.53	25
o-Xylene	19.8		µg/kg wet		20.0		99.0	70-130	2.56	25
2-Methylpentane	18.7		µg/kg wet		20.0		93.5	70-130	2.12	25
n-Nonane	17.4		µg/kg wet		20.0		87.0	70-130	6.67	25
n-Pentane	17.2		µg/kg wet		20.0		86.0	70-130	5.65	25

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5111785 - VPH										
LCS Dup (5111785-BSD1)										
Prepared & Analyzed: 29-Nov-05										
1,2,4-Trimethylbenzene	21 5		µg/kg wet		20 0		108	70-130	5 71	25
2,2,4-Trimethylpentane	18 3		µg/kg wet		20 0		91 5	70-130	8 88	25
n-Butylcyclohexane	20.4		µg/kg wet		20 0		102	70-130	5 71	25
n-Decane	22.3		µg/kg wet		20.0		112	70-130	1 77	25
Surrogate: 2,5-Dibromotoluene (FID)	*55 6*		µg/kg wet		*50 0*		*111*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*51 4*		µg/kg wet		*50 0*		*103*	*70-130*		
Duplicate (5111785-DUP1) Source: SA37671-01										
Prepared & Analyzed: 29-Nov-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	1 05		0 776			3 67	50
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0 351		BRL				50
C9-C10 Aromatic Hydrocarbons	BRL		mg/kg dry	0 351		0 201			3 54	50
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	1 05		0 776			3 67	50
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0 351		0 248			1.22	50
Benzene	BRL		µg/kg dry	70 1		BRL				50
Ethylbenzene	BRL		µg/kg dry	70.1		BRL				50
Methyl tert-butyl ether	BRL		µg/kg dry	70 1		BRL				50
Naphthalene	BRL		µg/kg dry	70 1		BRL				50
Toluene	BRL		µg/kg dry	70 1		BRL				50
m,p-Xylene	BRL		µg/kg dry	140		BRL				50
o-Xylene	BRL		µg/kg dry	70.1		BRL				50
Surrogate: 2,5-Dibromotoluene (FID)	*52 7*		µg/kg dry		*50 0*		*105*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*51 2*		µg/kg dry		*50 0*		*102*	*70-130*		
Matrix Spike (5111785-MS1) Source: SA37671-01										
Prepared & Analyzed: 29-Nov-05										
Benzene	19 2		µg/kg dry		20.0	BRL	96 0	70-130		
Ethylbenzene	19 9		µg/kg dry		20 0	BRL	99 5	70-130		
Methyl tert-butyl ether	18 0		µg/kg dry		20 0	BRL	90.0	70-130		
Naphthalene	16 9		µg/kg dry		20.0	BRL	84 5	70-130		
Toluene	19 9		µg/kg dry		20 0	BRL	99 5	70-130		
m,p-Xylene	41 0		µg/kg dry		40 0	BRL	102	70-130		
o-Xylene	19 2		µg/kg dry		20 0	BRL	96 0	70-130		
2-Methylpentane	22 5		µg/kg dry		20.0	BRL	112	70-130		
n-Nonane	21 2		µg/kg dry		20.0	BRL	106	70-130		
n-Pentane	21 9		µg/kg dry		20.0	BRL	110	70-130		
1,2,4-Trimethylbenzene	21 7		µg/kg dry		20 0	BRL	108	70-130		
2,2,4-Trimethylpentane	23 6		µg/kg dry		20 0	BRL	118	70-130		
n-Butylcyclohexane	23 8		µg/kg dry		20 0	0 0	119	70-130		
n-Decane	25.8		µg/kg dry		20.0	0.0	129	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*54 2*		µg/kg dry		*50 0*		*108*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*49.7*		µg/kg dry		*50 0*		*99 4*	*70-130*		
Batch 5111890 - VPH										
Blank (5111890-BLK1)										
Prepared & Analyzed: 30-Nov-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0 750						
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0 250						
C9-C10 Aromatic Hydrocarbons	BRL		mg/kg wet	0 250						
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0 250						
Benzene	BRL		µg/kg wet	50 0						
Ethylbenzene	BRL		µg/kg wet	50 0						
Methyl tert-butyl ether	BRL		µg/kg wet	50 0						
Naphthalene	BRL		µg/kg wet	50 0						
Toluene	BRL		µg/kg wet	50 0						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5111890 - VPH										
Blank (5111890-BLK1)										
Prepared & Analyzed: 30-Nov-05										
m,p-Xylene	BRL		µg/kg wet	100						
o-Xylene	BRL		µg/kg wet	50.0						
Surrogate: 2,5-Dibromotoluene (FID)	*47 2*		µg/kg wet		*50 0*		*94 4*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*42 6*		µg/kg wet		*50 0*		*85 2*	*70-130*		
LCS (5111890-BS1)										
Prepared & Analyzed: 30-Nov-05										
C5-C8 Aliphatic Hydrocarbons	154		mg/kg wet		140		110	70-130		
C9-C12 Aliphatic Hydrocarbons	55 9		mg/kg wet		55 0		102	70-130		
C9-C10 Aromatic Hydrocarbons	38.0		mg/kg wet		40 0		95 0	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	279		mg/kg wet		280		99 8	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	93 9		mg/kg wet		85 0		110	70-130		
Benzene	18.8		µg/kg wet		20 0		94 0	70-130		
Ethylbenzene	17.2		µg/kg wet		20 0		86 0	70-130		
Methyl tert-butyl ether	16 5		µg/kg wet		20 0		82 5	70-130		
Naphthalene	15 8		µg/kg wet		20 0		79 0	70-130		
Toluene	17 9		µg/kg wet		20 0		89 5	70-130		
m,p-Xylene	37 1		µg/kg wet		40 0		92.8	70-130		
o-Xylene	17 0		µg/kg wet		20 0		85 0	70-130		
2-Methylpentane	20 7		µg/kg wet		20 0		104	70-130		
n-Nonane	18 2		µg/kg wet		20 0		91.0	70-130		
n-Pentane	20.8		µg/kg wet		20 0		104	70-130		
1,2,4-Trimethylbenzene	18 6		µg/kg wet		20 0		93 0	70-130		
2,2,4-Trimethylpentane	18.2		µg/kg wet		20 0		91 0	70-130		
n-Butylcyclohexane	20.5		µg/kg wet		20 0		102	70-130		
n-Decane	23 4		µg/kg wet		20.0		117	70-130		
Surrogate 2,5-Dibromotoluene (FID)	*51 4*		µg/kg wet		*50 0*		*103*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*43 2*		µg/kg wet		*50 0*		*86 4*	*70-130*		
LCS Dup (5111890-BSD1)										
Prepared & Analyzed: 30-Nov-05										
C5-C8 Aliphatic Hydrocarbons	152		mg/kg wet		140		109	70-130	0.913	25
C9-C12 Aliphatic Hydrocarbons	56.9		mg/kg wet		55 0		103	70-130	0 976	25
C9-C10 Aromatic Hydrocarbons	37 1		mg/kg wet		40 0		92 8	70-130	2 34	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	277		mg/kg wet		280		98 9	70-130	0 705	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	94 0		mg/kg wet		85 0		111	70-130	0 905	25
Benzene	19 0		µg/kg wet		20 0		95 0	70-130	1 08	25
Ethylbenzene	18.9		µg/kg wet		20 0		84 5	70-130	1 78	25
Methyl tert-butyl ether	17 7		µg/kg wet		20.0		88.5	70-130	7 02	25
Naphthalene	18.2		µg/kg wet		20 0		91 0	70-130	14 1	25
Toluene	18.3		µg/kg wet		20 0		91 5	70-130	2.21	25
m,p-Xylene	37 0		µg/kg wet		40 0		92.5	70-130	0 324	25
o-Xylene	16 9		µg/kg wet		20.0		84 5	70-130	0 590	25
2-Methylpentane	20 7		µg/kg wet		20 0		104	70-130	0 00	25
n-Nonane	17.9		µg/kg wet		20 0		89.5	70-130	1 86	25
n-Pentane	21 7		µg/kg wet		20 0		108	70-130	3 77	25
1,2,4-Trimethylbenzene	21 5		µg/kg wet		20.0		108	70-130	14 9	25
2,2,4-Trimethylpentane	18 9		µg/kg wet		20 0		94 5	70-130	3.77	25
n-Butylcyclohexane	20 1		µg/kg wet		20 0		100	70-130	1.98	25
n-Decane	22 3		µg/kg wet		20.0		112	70-130	4.37	25
Surrogate: 2,5-Dibromotoluene (FID)	*53 6*		µg/kg wet		*50 0*		*107*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*46 6*		µg/kg wet		*50 0*		*93 6*	*70-130*		
Duplicate (5111890-DUP1) Source: SA37742-04										
Prepared & Analyzed: 30-Nov-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	0 850		0.828			3 56	50

This laboratory report is not valid without an authorized signature on the cover page

* Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5111890 - VPH										
Duplicate (5111890-DUP1) Source: SA37742-04										
Prepared & Analyzed: 30-Nov-05										
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0.283		0.126			0.791	50
C9-C10 Aromatic Hydrocarbons	BRL		mg/kg dry	0.283		0.136			0.733	50
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	0.850		0.828			3.56	50
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0.283		0.262			0.361	50
Benzene	BRL		µg/kg dry	56.7		BRL				50
Ethylbenzene	BRL		µg/kg dry	56.7		BRL				50
Methyl tert-butyl ether	BRL		µg/kg dry	56.7		BRL				50
Naphthalene	BRL		µg/kg dry	56.7		BRL				50
Toluene	BRL		µg/kg dry	56.7		BRL				50
m,p-Xylene	BRL		µg/kg dry	113		BRL				50
o-Xylene	BRL		µg/kg dry	56.7		BRL				50
Surrogate: 2,5-Dibromotoluene (FID)	*48.5*		µg/kg dry		*50.0*		*97.0*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*43.4*		µg/kg dry		*50.0*		*88.8*	*70-130*		
Matrix Spike (5111890-MS1) Source: SA37742-04										
Prepared & Analyzed: 30-Nov-05										
Benzene	16.7		µg/kg dry		20.0	BRL	83.5	70-130		
Ethylbenzene	15.7		µg/kg dry		20.0	BRL	78.5	70-130		
Methyl tert-butyl ether	18.1		µg/kg dry		20.0	BRL	90.5	70-130		
Naphthalene	15.3		µg/kg dry		20.0	BRL	76.5	70-130		
Toluene	16.7		µg/kg dry		20.0	BRL	83.5	70-130		
m,p-Xylene	31.0		µg/kg dry		40.0	BRL	77.5	70-130		
o-Xylene	15.4		µg/kg dry		20.0	BRL	77.0	70-130		
2-Methylpentane	20.3		µg/kg dry		20.0	BRL	102	70-130		
n-Nonane	17.7		µg/kg dry		20.0	BRL	88.5	70-130		
n-Pentane	22.2		µg/kg dry		20.0	BRL	111	70-130		
1,2,4-Trimethylbenzene	16.3		µg/kg dry		20.0	BRL	81.5	70-130		
2,2,4-Trimethylpentane	20.2		µg/kg dry		20.0	BRL	101	70-130		
n-Butylcyclohexane	19.4		µg/kg dry		20.0	0.0	97.0	70-130		
n-Decane	22.8		µg/kg dry		20.0	0.0	114	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*41.0*		µg/kg dry		*50.0*		*82.0*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*35.6*		µg/kg dry		*50.0*		*71.2*	*70-130*		

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5120300 - SW846 3550B										
Blank (5120300-BLK1)										
Prepared & Analyzed: 06-Dec-05										
PCB 1016	BRL		µg/kg wet	28.6						
PCB 1221	BRL		µg/kg wet	28.6						
PCB 1232	BRL		µg/kg wet	28.6						
PCB 1242	BRL		µg/kg wet	28.8						
PCB 1248	BRL		µg/kg wet	28.8						
PCB 1254	BRL		µg/kg wet	28.6						
PCB 1260	BRL		µg/kg wet	28.6						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*27.1*		µg/kg wet		*28.6*		*94.8*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*41.4*		µg/kg wet		*28.6*		*145*	*30-150*		
LCS (5120300-BS1)										
Prepared & Analyzed: 06-Dec-05										
PCB 1016	421		µg/kg wet	28.6	357		118	40-140		
PCB 1260	453		µg/kg wet	28.6	357		127	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*24.3*		µg/kg wet		*28.6*		*85.0*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*38.6*		µg/kg wet		*28.6*		*135*	*30-150*		
Duplicate (5120300-DUP1) Source: SA37994-01										
Prepared: 06-Dec-05 Analyzed: 07-Dec-05										
PCB 1016	BRL		µg/kg dry	29.7		BRL				40
PCB 1221	BRL		µg/kg dry	29.7		BRL				40
PCB 1232	BRL		µg/kg dry	29.7		BRL				40
PCB 1242	BRL		µg/kg dry	29.7		BRL				40
PCB 1248	BRL		µg/kg dry	29.7		BRL				40
PCB 1254	BRL		µg/kg dry	29.7		BRL				40
PCB 1260	BRL		µg/kg dry	29.7		BRL				40
PCB 1262	BRL		µg/kg dry	29.7		BRL				40
PCB 1268	BRL		µg/kg dry	29.7		BRL				40
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*35.6*		µg/kg dry		*29.6*		*120*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*32.6*		µg/kg dry		*29.6*		*110*	*30-150*		
Matrix Spike (5120300-MS1) Source: SA37994-01										
Prepared: 06-Dec-05 Analyzed: 07-Dec-05										
PCB 1016	410		µg/kg dry	29.8	372	BRL	110	40-140		
PCB 1260	415		µg/kg dry	29.8	372	BRL	112	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*23.8*		µg/kg dry		*29.7*		*80.1*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*31.2*		µg/kg dry		*29.7*		*105*	*30-150*		
Matrix Spike Dup (5120300-MSD1) Source: SA37994-01										
Prepared: 06-Dec-05 Analyzed: 07-Dec-05										
PCB 1016	487		µg/kg dry	29.8	373	BRL	131	40-140	17.4	50
PCB 1260	505		µg/kg dry	29.8	373	BRL	135	40-140	18.6	50
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*26.8*		µg/kg dry		*29.8*		*89.9*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*40.2*		µg/kg dry		*29.8*		*135*	*30-150*		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5111921 - General Preparation										
Duplicate (5111921-DUP1)	Source: SA37781-05									
Prepared & Analyzed: 30-Nov-05										
% Solids	82 7		%			79 7			3.69	20
Duplicate (5111921-DUP2)	Source: SA37781-06									
Prepared & Analyzed: 30-Nov-05										
% Solids	82 3		%			82 9			0 726	20

Notes and Definitions

__RE	Reanalysis for data confirmation
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag)
I-02	This result was analyzed outside of the EPA recommended holding time
vext2	Field extracted
VOC10	The VOC field preserved soil sample is not within the 1:1 weight to volume ratio as recommended by SW846 methods 5030 and 5035 but may be within the 1:1 volume to volume ratio
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C Tayeh, Ph D.
Nicole Brown

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrix	☐ Aqueous ☑ Soil ☐ Sediment ☐ Other			
Containers	☑ Satisfactory ☐ Broken ☐ Leaking			
Sample Preservative	Aqueous (acid-preserved)	☑ N/A ☐ pH≤2 ☐ pH>2 Comment:		
	Soil or Sediment	☐ N/A ☐ Samples not received in Methanol or air-tight container		ml Methanol/g soil ☑ 1:1 +/-25% ☑ Other:
		☑ Samples received in Methanol: ☑ covering soil/sediment ☐ not covering soil/sediment		
		☐ Samples received in air-tight container:		
Temperature	☐ Received on ice ☐ Received at 4 ± 2 °C ☑ Other: / °C			

Were all QA/QC procedures followed as required by the VPH method? Yes ✓ No _____
Were any significant modifications made to the VPH method as specified in section 11.3? No *see below
Were all performance/acceptance standards for required QA/QC procedures achieved? Yes ✓ No _____
* Yes, if PID and FID surrogate recoveries are listed as n/a, then that sample was run via GCMS using all QC criteria specified in the method

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

SA 357632

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☒ Standard TAT - 7 to ~~10 business~~ days
☐ Rush TAT - Date Needed: _____
All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes. Samples disposed of after 60 days unless otherwise instructed.

Report To: CEA Inc
Project Mgr.: S. VanderSea

Invoice To: CEA INC
"CEA Discount Pricing"
WO#50 11/17/05
P.O. No.: _____ RQN: _____

Project No.: 5795-05
Site Name: Sunoco - Westfield
Location: 88-90 S. Maple St, Westfield State: MA
Sampler(s): P. Brown

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= None 10= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	VPH	% Solids	8015					
357632-01	Tank field	11/16/05	2:30	C	SO	7/9	2	1			X	X	X					
-02	T1	11/17/05	11:30	C	SO	7/9	2	1			X	X	X					
-03	R-7'	11/18/05	1:15	C	SO	7/9	2	1			X	X						
-04	T2	11/18/05	1:45	C	SO	7/9	2	1			X	X	X					
-05	T3	11/18/05	1:55	C	SO	7/9	2	1			X	X						
-06	T4	11/18/05	2:05	C	SO	7/9	2	1			X	X						
-07	T5	11/18/05	2:15	C	SO	7/9	2	1			X	X	X					
-08	T6	11/18/05	2:25	C	SO	7/9	2	1			X	X						

QA Reporting Notes: (check if needed)
State specific reporting standards *If applicable, please list below.*
☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

PERIMENT field
EMTRICK

☐ Fax results when available to (____) _____
☒ E-mail to SVanderSea@CEA-Inc.Com
EDD Format PBrown@CEA-Inc.Com

Relinquished by:	Received by:	Date:	Time:
P. Brown	Bergeron	11/22/05	10:35 AM
Bergeron	[signature]	11/22/05	1:13

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C 1

Rob.

Report Date:
04-Jan-06 14:43

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

CEA, Inc.
127 Hartwell Street
West Boylston, MA 01583
Attn: Scott Vandersea

Project: Sunoco Station - Westfield, MA
Project #: 5795-05

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA38887-01	T1-A	Soil	19-Dec-05 09:30	22-Dec-05 15:00
SA38887-02	T1-B	Soil	19-Dec-05 09:35	22-Dec-05 15:00
SA38887-03	T1-C	Soil	19-Dec-05 09:45	22-Dec-05 15:00
SA38887-04	R-3'	Soil	19-Dec-05 10:00	22-Dec-05 15:00
SA38887-05	RS-2'	Soil	19-Dec-05 10:15	22-Dec-05 15:00
SA38887-06	RN-2'	Soil	19-Dec-05 10:30	22-Dec-05 15:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met
Please note that this report contains 14 pages of analytical data plus Chain of Custody document(s).
This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH nelac

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T1-A SA38887-01	5795-05	Soil	19-Dec-05 09:30	22-Dec-05

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082											
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	30.8	1	SW846 8082	29-Dec-05	29-Dec-05	5121623	MP
11104-28-2	PCB 1221	BRL		µg/kg dry	30.8	1	"	"	"	"	"
11141-16-5	PCB 1232	BRL		µg/kg dry	30.8	1	"	"	"	"	"
53469-21-9	PCB 1242	BRL		µg/kg dry	30.8	1	"	"	"	"	"
12672-29-6	PCB 1248	2,970		µg/kg dry	30.8	1	"	"	"	"	"
11097-69-1	PCB 1254	BRL		µg/kg dry	30.8	1	"	"	"	"	"
11096-82-5	PCB 1260	BRL		µg/kg dry	30.8	1	"	"	"	"	"
37324-23-5	PCB 1262	BRL		µg/kg dry	30.8	1	"	"	"	"	"
11100-14-4	PCB 1268	BRL		µg/kg dry	30.8	1	"	"	"	"	"
Surrogate recoveries:											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*59.9*		*30-150 %*			"	"	"	"	"
2051-24-3	*Decachlorobiphenyl (Sr)*	*90.2*		*30-150 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	93.7		%		1	SM2540 G Mod.	27-Dec-05	27-Dec-05	5121496	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T1-B SA38887-02	5795-05	Soil	19-Dec-05 09:35	22-Dec-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082											
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	31.2	1	SW846 8082	29-Dec-05	29-Dec-05	5121623	MP
11104-28-2	PCB 1221	BRL		µg/kg dry	31.2	1	"	"	"	"	"
11141-16-5	PCB 1232	BRL		µg/kg dry	31.2	1	"	"	"	"	"
53469-21-9	PCB 1242	BRL		µg/kg dry	31.2	1	"	"	"	"	"
12672-29-6	PCB 1248	3,420		µg/kg dry	31.2	1	"	"	"	"	"
11097-69-1	PCB 1254	BRL		µg/kg dry	31.2	1	"	"	"	"	"
11096-82-5	PCB 1260	BRL		µg/kg dry	31.2	1	"	"	"	"	"
37324-23-5	PCB 1262	BRL		µg/kg dry	31.2	1	"	"	"	"	"
11100-14-4	PCB 1268	BRL		µg/kg dry	31.2	1	"	"	"	"	"
Surrogate recoveries:											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*65.0*		*30-150 %*			"	"	"	"	"
2051-24-3	*Decachlorobiphenyl (Sr)*	*60.1*		*30-150 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	90.0		%		1	SM2540 G Mod	27-Dec-05	27-Dec-05	5121496	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
T1-C SA38887-03	5795-05	Soil	19-Dec-05 09:45	22-Dec-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by SW846 8082											
Prepared by method SW846 3550B											
12674-11-2	PCB 1016	BRL		µg/kg dry	152	5	SW846 8082	29-Dec-05	30-Dec-05	5121623	MP
11104-28-2	PCB 1221	BRL		µg/kg dry	152	5	"	"	"	"	"
11141-16-5	PCB 1232	BRL		µg/kg dry	152	5	"	"	"	"	"
53469-21-9	PCB 1242	BRL		µg/kg dry	152	5	"	"	"	"	"
12672-29-6	PCB 1248	8,330		µg/kg dry	152	5	"	"	"	"	"
11097-69-1	PCB 1254	BRL		µg/kg dry	30.3	1	"	"	"	"	"
11096-82-5	PCB 1260	BRL		µg/kg dry	30.3	1	"	"	"	"	"
37324-23-5	PCB 1262	BRL		µg/kg dry	30.3	1	"	"	"	"	"
11100-14-4	PCB 1268	BRL		µg/kg dry	30.3	1	"	"	"	"	"
Surrogate recoveries:											
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*74.9*		*30-150 %*			"	"	"	"	"
2051-24-3	*Decachlorobiphenyl (Sr)*	*105*		*30-150 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	90.3		%		1	SM2540 G Mod.	27-Dec-05	27-Dec-05	5121496	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
R-3' SA38887-04	5795-05	Soil	19-Dec-05 10:00	22-Dec-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	27-Dec-05	27-Dec-05	5121533	BD
VPH Aliphatic/Aromatic Carbon Ranges											
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	36.9		mg/kg dry	2.41	100	+MADEP 5/2004 Rev 1.1	29-Dec-05	29-Dec-05	5121628	JRO
	C9-C12 Aliphatic Hydrocarbons	64.4		mg/kg dry	0.803	100	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	77.9		mg/kg dry	0.803	100	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	47.4		mg/kg dry	2.41	100	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	142		mg/kg dry	0.803	100	"	"	"	"	"
VPH Target Analytes											
Prepared by method VPH											
71-43-2	Benzene	BRL		µg/kg dry	161	100	"	"	"	"	"
100-41-4	Ethylbenzene	372		µg/kg dry	161	100	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	161	100	"	"	"	"	"
91-20-3	Naphthalene	2,600		µg/kg dry	161	100	"	"	"	"	"
108-88-3	Toluene	1,710		µg/kg dry	161	100	"	"	"	"	"
1330-20-7	m,p-Xylene	5,760		µg/kg dry	321	100	"	"	"	"	"
95-47-6	o-Xylene	2,580		µg/kg dry	161	100	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*113*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*97.2*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	88.7		%		1	SM2540 G Mod.	27-Dec-05	27-Dec-05	5121496	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RS-2' SA38887-05	5795-05	Soil	19-Dec-05 10:15	22-Dec-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	27-Dec-05	27-Dec-05	5121533	BD
VPH Aliphatic/Aromatic Carbon Ranges			VOC10								
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	1.38	50	+MADEP 5/2004 Rev 1.1	29-Dec-05	29-Dec-05	5121628	JRO
	C9-C12 Aliphatic Hydrocarbons	0 646		mg/kg dry	0 460	50	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	0.773		mg/kg dry	0.460	50	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	1 39		mg/kg dry	1 38	50	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	1.42		mg/kg dry	0.460	50	"	"	"	"	"
VPH Target Analytes			VOC10								
Prepared by method VPH											
71-43-2	Benzene	94 2		µg/kg dry	92.0	50	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/kg dry	92.0	50	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	122		µg/kg dry	92 0	50	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	92.0	50	"	"	"	"	"
108-88-3	Toluene	133		µg/kg dry	92.0	50	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/kg dry	184	50	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/kg dry	92.0	50	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*118*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*102*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	89 3		%		1	SM2540 G Mod.	27-Dec-05	27-Dec-05	5121496	BD

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RN-2' SA38887-06	5795-05	Soil	19-Dec-05 10:30	22-Dec-05

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC	27-Dec-05	27-Dec-05	5121533	BD
VPH Aliphatic/Aromatic Carbon Ranges			VOC10								
Prepared by method VPH											
	C5-C8 Aliphatic Hydrocarbons	1.58		mg/kg dry	1.11	50	+MADEP 5/2004 Rev. 1.1	28-Dec-05	28-Dec-05	5121556	JRO
	C9-C12 Aliphatic Hydrocarbons	1.48		mg/kg dry	0.369	50	"	"	"	"	"
	C9-C10 Aromatic Hydrocarbons	1.16		mg/kg dry	0.369	50	"	"	"	"	"
	Unadjusted C5-C8 Aliphatic Hydrocarbons	1.77		mg/kg dry	1.11	50	"	"	"	"	"
	Unadjusted C9-C12 Aliphatic Hydrocarbons	2.64		mg/kg dry	0.369	50	"	"	"	"	"
VPH Target Analytes			VOC10								
Prepared by method VPH											
71-43-2	Benzene	BRL		µg/kg dry	73.9	50	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/kg dry	73.9	50	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	73.9	50	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	73.9	50	"	"	"	"	"
108-88-3	Toluene	98.8		µg/kg dry	73.9	50	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/kg dry	148	50	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/kg dry	73.9	50	"	"	"	"	"
Surrogate recoveries:											
615-59-8	*2,5-Dibromotoluene (FID)*	*102*		*70-130 %*			"	"	"	"	"
615-59-8	*2,5-Dibromotoluene (PID)*	*90.2*		*70-130 %*			"	"	"	"	"
General Chemistry Parameters											
	% Solids	95.7		%		1	SM2540 G Mod.	27-Dec-05	27-Dec-05	5121496	BD

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5121556 - VPH										
Blank (5121556-BLK1)										
Prepared & Analyzed: 28-Dec-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.250						
C9-C10 Aromatic Hydrocarbons	BRL		mg/kg wet	0.250						
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.250						
Benzene	BRL		µg/kg wet	50.0						
Ethylbenzene	BRL		µg/kg wet	50.0						
Methyl tert-butyl ether	BRL		µg/kg wet	50.0						
Naphthalene	BRL		µg/kg wet	50.0						
Toluene	BRL		µg/kg wet	50.0						
m,p-Xylene	BRL		µg/kg wet	100						
o-Xylene	BRL		µg/kg wet	50.0						
Surrogate: 2,5-Dibromotoluene (FID)	*58.8*		µg/kg wet		*50.0*		*118*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*50.3*		µg/kg wet		*50.0*		*101*	*70-130*		
LCS (5121556-BS1)										
Prepared & Analyzed: 28-Dec-05										
C5-C8 Aliphatic Hydrocarbons	160		mg/kg wet		140		114	70-130		
C9-C12 Aliphatic Hydrocarbons	56.2		mg/kg wet		55.0		102	70-130		
C9-C10 Aromatic Hydrocarbons	43.8		mg/kg wet		40.0		110	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	296		mg/kg wet		280		106	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	100		mg/kg wet		85.0		118	70-130		
Benzene	19.4		µg/kg wet		20.0		97.0	70-130		
Ethylbenzene	19.3		µg/kg wet		20.0		96.5	70-130		
Methyl tert-butyl ether	20.0		µg/kg wet		20.0		100	70-130		
Naphthalene	18.7		µg/kg wet		20.0		93.5	70-130		
Toluene	19.5		µg/kg wet		20.0		97.5	70-130		
m,p-Xylene	38.5		µg/kg wet		40.0		96.2	70-130		
o-Xylene	19.4		µg/kg wet		20.0		97.0	70-130		
2-Methylpentane	22.4		µg/kg wet		20.0		112	70-130		
n-Nonane	20.7		µg/kg wet		20.0		104	70-130		
n-Pentane	21.9		µg/kg wet		20.0		110	70-130		
1,2,4-Trimethylbenzene	19.4		µg/kg wet		20.0		97.0	70-130		
2,2,4-Trimethylpentane	23.5		µg/kg wet		20.0		118	70-130		
n-Butylcyclohexane	22.2		µg/kg wet		20.0		111	70-130		
n-Decane	20.6		µg/kg wet		20.0		103	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*50.6*		µg/kg wet		*50.0*		*101*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*43.0*		µg/kg wet		*50.0*		*86.0*	*70-130*		
LCS Dup (5121556-BSD1)										
Prepared & Analyzed: 28-Dec-05										
C5-C8 Aliphatic Hydrocarbons	155		mg/kg wet		140		111	70-130	2.67	25
C9-C12 Aliphatic Hydrocarbons	53.2		mg/kg wet		55.0		96.7	70-130	5.33	25
C9-C10 Aromatic Hydrocarbons	43.1		mg/kg wet		40.0		108	70-130	1.83	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	290		mg/kg wet		280		104	70-130	1.90	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	96.3		mg/kg wet		85.0		113	70-130	4.33	25
Benzene	18.7		µg/kg wet		20.0		93.5	70-130	3.67	25
Ethylbenzene	19.2		µg/kg wet		20.0		96.0	70-130	0.519	25
Methyl tert-butyl ether	19.2		µg/kg wet		20.0		96.0	70-130	4.08	25
Naphthalene	18.1		µg/kg wet		20.0		90.5	70-130	3.26	25
Toluene	19.8		µg/kg wet		20.0		99.0	70-130	1.53	25
m,p-Xylene	38.7		µg/kg wet		40.0		96.8	70-130	0.622	25
o-Xylene	19.6		µg/kg wet		20.0		98.0	70-130	1.03	25
2-Methylpentane	17.3	QR-02	µg/kg wet		20.0		86.5	70-130	25.7	25
n-Nonane	17.1		µg/kg wet		20.0		85.5	70-130	19.5	25
n-Pentane	18.5		µg/kg wet		20.0		92.5	70-130	17.3	25

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5121556 - VPH										
LCS Dup (5121556-BSD1)										
Prepared & Analyzed: 28-Dec-05										
1,2,4-Trimethylbenzene	19.3		µg/kg wet		20.0		96.5	70-130	0.517	25
2,2,4-Trimethylpentane	18.5		µg/kg wet		20.0		92.5	70-130	24.2	25
n-Butylcyclohexane	18.1		µg/kg wet		20.0		90.5	70-130	20.3	25
n-Decane	18.3		µg/kg wet		20.0		91.5	70-130	11.8	25
Surrogate: 2,5-Dibromotoluene (FID)	*53.9*		µg/kg wet		*50.0*		*108*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*46.0*		µg/kg wet		*50.0*		*92.0*	*70-130*		
Duplicate (5121556-DUP1) Source: SA38710-01										
Prepared & Analyzed: 28-Dec-05										
C5-C8 Aliphatic Hydrocarbons	1.05		mg/kg dry	1.02		0.946			10.4	50
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0.339		0.148			23.4	50
C9-C10 Aromatic Hydrocarbons	0.565		mg/kg dry	0.339		0.572			1.23	50
Unadjusted C5-C8 Aliphatic Hydrocarbons	1.08		mg/kg dry	1.02		1.02			5.71	50
Unadjusted C9-C12 Aliphatic Hydrocarbons	0.682		mg/kg dry	0.339		0.720			5.42	50
Benzene	BRL		µg/kg dry	67.7		BRL				50
Ethylbenzene	BRL		µg/kg dry	67.7		BRL				50
Methyl tert-butyl ether	BRL		µg/kg dry	67.7		BRL				50
Naphthalene	73.4		µg/kg dry	67.7		60.3			19.6	50
Toluene	BRL		µg/kg dry	67.7		43.8			21.5	50
m,p-Xylene	BRL		µg/kg dry	135		34.5				50
o-Xylene	BRL		µg/kg dry	67.7		BRL				50
Surrogate: 2,5-Dibromotoluene (FID)	*54.0*		µg/kg dry		*50.0*		*108*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*47.8*		µg/kg dry		*50.0*		*95.6*	*70-130*		
Matrix Spike (5121556-MS1) Source: SA38710-01										
Prepared & Analyzed: 28-Dec-05										
Benzene	18.7		µg/kg dry		20.0	BRL	93.5	70-130		
Ethylbenzene	19.3		µg/kg dry		20.0	BRL	96.5	70-130		
Methyl tert-butyl ether	18.6		µg/kg dry		20.0	BRL	93.0	70-130		
Naphthalene	19.3		µg/kg dry		20.0	1.00	91.5	70-130		
Toluene	19.9		µg/kg dry		20.0	0.730	95.8	70-130		
m,p-Xylene	38.9		µg/kg dry		40.0	0.574	95.8	70-130		
o-Xylene	19.6		µg/kg dry		20.0	BRL	98.0	70-130		
2-Methylpentane	20.3		µg/kg dry		20.0	BRL	102	70-130		
n-Nonane	18.8		µg/kg dry		20.0	BRL	93.0	70-130		
n-Pentane	20.7		µg/kg dry		20.0	BRL	104	70-130		
1,2,4-Trimethylbenzene	20.2		µg/kg dry		20.0	BRL	101	70-130		
2,2,4-Trimethylpentane	21.9		µg/kg dry		20.0	BRL	110	70-130		
n-Butylcyclohexane	19.9		µg/kg dry		20.0	0.0	99.5	70-130		
n-Decane	17.7		µg/kg dry		20.0	0.0	88.5	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*54.3*		µg/kg dry		*50.0*		*109*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*45.1*		µg/kg dry		*50.0*		*90.2*	*70-130*		
Batch 5121628 - VPH										
Blank (5121628-BLK1)										
Prepared & Analyzed: 29-Dec-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.250						
C9-C10 Aromatic Hydrocarbons	BRL		mg/kg wet	0.250						
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.750						
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg wet	0.250						
Benzene	BRL		µg/kg wet	50.0						
Ethylbenzene	BRL		µg/kg wet	50.0						
Methyl tert-butyl ether	BRL		µg/kg wet	50.0						
Naphthalene	BRL		µg/kg wet	50.0						
Toluene	BRL		µg/kg wet	50.0						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5121628 - VPH										
Blank (5121628-BLK1)										
Prepared & Analyzed: 29-Dec-05										
m,p-Xylene	BRL		µg/kg wet	100						
o-Xylene	BRL		µg/kg wet	50.0						
Surrogate: 2,5-Dibromotoluene (FID)	*43.4*		µg/kg wet		*50.0*		*86.8*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*36.5*		µg/kg wet		*50.0*		*73.0*	*70-130*		
LCS (5121628-BS1)										
Prepared & Analyzed: 29-Dec-05										
C5-C8 Aliphatic Hydrocarbons	157		mg/kg wet		140		112	70-130		
C9-C12 Aliphatic Hydrocarbons	59.6		mg/kg wet		55.0		108	70-130		
C9-C10 Aromatic Hydrocarbons	41.0		mg/kg wet		40.0		102	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	286		mg/kg wet		280		102	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	101		mg/kg wet		85.0		119	70-130		
Benzene	17.5		µg/kg wet		20.0		87.5	70-130		
Ethylbenzene	18.6		µg/kg wet		20.0		93.0	70-130		
Methyl tert-butyl ether	18.6		µg/kg wet		20.0		93.0	70-130		
Naphthalene	18.4		µg/kg wet		20.0		92.0	70-130		
Toluene	18.5		µg/kg wet		20.0		92.5	70-130		
m,p-Xylene	36.9		µg/kg wet		40.0		92.2	70-130		
o-Xylene	18.8		µg/kg wet		20.0		94.0	70-130		
2-Methylpentane	17.5		µg/kg wet		20.0		87.5	70-130		
n-Nonane	19.4		µg/kg wet		20.0		97.0	70-130		
n-Pentane	16.4		µg/kg wet		20.0		82.0	70-130		
1,2,4-Trimethylbenzene	19.2		µg/kg wet		20.0		96.0	70-130		
2,2,4-Trimethylpentane	21.1		µg/kg wet		20.0		106	70-130		
n-Butylcyclohexane	21.0		µg/kg wet		20.0		105	70-130		
n-Decane	19.1		µg/kg wet		20.0		95.5	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*57.0*		µg/kg wet		*50.0*		*114*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*46.7*		µg/kg wet		*50.0*		*93.4*	*70-130*		
LCS Dup (5121628-BSD1)										
Prepared & Analyzed: 29-Dec-05										
C5-C8 Aliphatic Hydrocarbons	153		mg/kg wet		140		109	70-130	2.71	25
C9-C12 Aliphatic Hydrocarbons	60.0		mg/kg wet		55.0		109	70-130	0.922	25
C9-C10 Aromatic Hydrocarbons	40.1		mg/kg wet		40.0		100	70-130	1.98	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	280		mg/kg wet		280		100	70-130	1.98	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	100		mg/kg wet		85.0		118	70-130	0.844	25
Benzene	17.5		µg/kg wet		20.0		87.5	70-130	0.00	25
Ethylbenzene	18.1		µg/kg wet		20.0		90.5	70-130	2.72	25
Methyl tert-butyl ether	19.0		µg/kg wet		20.0		95.0	70-130	2.13	25
Naphthalene	18.2		µg/kg wet		20.0		91.0	70-130	1.09	25
Toluene	18.1		µg/kg wet		20.0		90.5	70-130	2.19	25
m,p-Xylene	35.8		µg/kg wet		40.0		89.5	70-130	2.97	25
o-Xylene	18.3		µg/kg wet		20.0		91.5	70-130	2.70	25
2-Methylpentane	16.1		µg/kg wet		20.0		80.5	70-130	8.33	25
n-Nonane	18.4		µg/kg wet		20.0		92.0	70-130	6.29	25
n-Pentane	14.7		µg/kg wet		20.0		73.5	70-130	10.9	25
1,2,4-Trimethylbenzene	18.5		µg/kg wet		20.0		92.5	70-130	3.71	25
2,2,4-Trimethylpentane	18.3		µg/kg wet		20.0		91.5	70-130	14.7	25
n-Butylcyclohexane	20.4		µg/kg wet		20.0		102	70-130	2.90	25
n-Decane	20.8		µg/kg wet		20.0		104	70-130	8.52	25
Surrogate: 2,5-Dibromotoluene (FID)	*57.3*		µg/kg wet		*50.0*		*115*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*46.5*		µg/kg wet		*50.0*		*93.0*	*70-130*		
Duplicate (5121628-DUP1) Source: SA38710-07										
Prepared & Analyzed: 29-Dec-05										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	1.02		0.808			8.76	50

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* Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5121628 - VPH										
Duplicate (5121628-DUP1) Source: SA38710-07										
Prepared & Analyzed: 29-Dec-05										
C9-C12 Aliphatic Hydrocarbons	BRL		mg/kg dry	0.342		0.0798			12.7	50
C9-C10 Aromatic Hydrocarbons	0.369		mg/kg dry	0.342		0.379			2.67	50
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/kg dry	1.02		0.843			4.52	50
Unadjusted C9-C12 Aliphatic Hydrocarbons	0.460		mg/kg dry	0.342		0.459			0.218	50
Benzene	BRL		µg/kg dry	68.3		BRL				50
Ethylbenzene	BRL		µg/kg dry	68.3		BRL				50
Methyl tert-butyl ether	BRL		µg/kg dry	68.3		BRL				50
Naphthalene	BRL		µg/kg dry	68.3		BRL				50
Toluene	BRL		µg/kg dry	68.3		BRL				50
m,p-Xylene	BRL		µg/kg dry	137		34.6				50
o-Xylene	BRL		µg/kg dry	68.3		BRL				50
Surrogate: 2,5-Dibromotoluene (FID)	*53.4*		µg/kg dry		*50.0*		*107*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*46.6*		µg/kg dry		*50.0*		*93.2*	*70-130*		
Matrix Spike (5121628-MS1) Source: SA38710-07										
Prepared & Analyzed: 29-Dec-05										
Benzene	17.4		µg/kg dry		20.0	BRL	87.0	70-130		
Ethylbenzene	18.5		µg/kg dry		20.0	BRL	92.5	70-130		
Methyl tert-butyl ether	18.4		µg/kg dry		20.0	BRL	92.0	70-130		
Naphthalene	18.1		µg/kg dry		20.0	BRL	90.5	70-130		
Toluene	18.4		µg/kg dry		20.0	BRL	92.0	70-130		
m,p-Xylene	36.7		µg/kg dry		40.0	0.579	90.3	70-130		
o-Xylene	18.6		µg/kg dry		20.0	BRL	93.0	70-130		
2-Methylpentane	17.0		µg/kg dry		20.0	BRL	85.0	70-130		
n-Nonane	19.9		µg/kg dry		20.0	BRL	99.5	70-130		
n-Pentane	16.4		µg/kg dry		20.0	BRL	82.0	70-130		
1,2,4-Trimethylbenzene	19.1		µg/kg dry		20.0	BRL	95.5	70-130		
2,2,4-Trimethylpentane	20.0		µg/kg dry		20.0	BRL	100	70-130		
n-Butylcyclohexane	21.9		µg/kg dry		20.0	0.0	110	70-130		
n-Decane	22.0		µg/kg dry		20.0	0.0	110	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*53.1*		µg/kg dry		*50.0*		*106*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*44.0*		µg/kg dry		*50.0*		*88.0*	*70-130*		

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5121623 - SW846 3550B										
Blank (5121623-BLK1)										
Prepared & Analyzed: 29-Dec-05										
PCB 1016	BRL		µg/kg wet	28.1						
PCB 1221	BRL		µg/kg wet	28.1						
PCB 1232	BRL		µg/kg wet	26.1						
PCB 1242	BRL		µg/kg wet	28.1						
PCB 1248	BRL		µg/kg wet	28.1						
PCB 1254	BRL		µg/kg wet	28.1						
PCB 1260	BRL		µg/kg wet	28.1						
PCB 1262	BRL		µg/kg wet	28.1						
PCB 1268	BRL		µg/kg wet	28.1						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*23.8*		µg/kg wet		*28.1*		*84.7*	*30-150*		
Surrogate: Decachlorobiphenyl(Sr)	*30.9*		µg/kg wet		*28.1*		*110*	*30-150*		
LCS (5121623-BS1)										
Prepared & Analyzed: 29-Dec-05										
PCB 1016	422		µg/kg wet	28.1	350		121	40-140		
PCB 1260	390		µg/kg wet	28.1	350		111	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*23.8*		µg/kg wet		*28.0*		*85.0*	*30-150*		
Surrogate: Decachlorobiphenyl(Sr)	*26.6*		µg/kg wet		*28.0*		*95.0*	*30-150*		
Duplicate (5121623-DUP1) Source: SA38842-06										
Prepared & Analyzed: 29-Dec-05										
PCB 1016	BRL		µg/kg dry	29.1		BRL				40
PCB 1221	BRL		µg/kg dry	29.1		BRL				40
PCB 1232	BRL		µg/kg dry	29.1		BRL				40
PCB 1242	BRL		µg/kg dry	29.1		BRL				40
PCB 1248	BRL		µg/kg dry	29.1		BRL				40
PCB 1254	BRL		µg/kg dry	29.1		BRL				40
PCB 1260	BRL		µg/kg dry	29.1		BRL				40
PCB 1262	BRL		µg/kg dry	29.1		BRL				40
PCB 1268	BRL		µg/kg dry	29.1		BRL				40
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*24.7*		µg/kg dry		*29.1*		*84.9*	*30-150*		
Surrogate: Decachlorobiphenyl(Sr)	*30.5*		µg/kg dry		*29.1*		*105*	*30-150*		
Matrix Spike (5121623-MS1) Source: SA38842-06										
Prepared & Analyzed: 29-Dec-05										
PCB 1016	476		µg/kg dry	29.7	371	BRL	128	40-140		
PCB 1260	494		µg/kg dry	29.7	371	BRL	133	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*26.7*		µg/kg dry		*29.6*		*90.2*	*30-150*		
Surrogate: Decachlorobiphenyl(Sr)	*32.6*		µg/kg dry		*29.6*		*110*	*30-150*		
Matrix Spike Dup (5121623-MSD1) Source: SA38842-06										
Prepared & Analyzed: 29-Dec-05										
PCB 1016	442		µg/kg dry	28.0	349	BRL	127	40-140	0.784	50
PCB 1260	438		µg/kg dry	28.0	349	BRL	125	40-140	6.20	50
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*22.4*		µg/kg dry		*28.0*		*80.0*	*30-150*		
Surrogate: Decachlorobiphenyl(Sr)	*32.1*		µg/kg dry		*28.0*		*115*	*30-150*		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 5121496 - General Preparation										
Duplicate (5121496-DUP1) Source: SA38862-03										
Prepared & Analyzed: 27-Dec-05										
% Solids	94.7		%			94.6			0.106	20

This laboratory report is not valid without an authorized signature on the cover page

* Reportable Detection Limit BRL = Below Reporting Limit

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt

Matrix	☐ Aqueous ☑ Soil ☐ Sediment ☐ Other			
Containers	☑ Satisfactory ☐ Broken ☐ Leaking			
Sample Preservative	Aqueous (acid-preserved)	☑ N/A ☐ pH≤2 ☐ pH>2 Comment:		
	Soil or Sediment	☐ N/A ☐ Samples not received in Methanol or air-tight container		ml Methanol/g soil ☑ 1:1 +/-25% ☑ Other:
		☑ Samples received in Methanol: ☑ covering soil/sediment ☐ not covering soil/sediment		
		☐ Samples received in air-tight container:		
Temperature	☐ Received on ice ☑ Received at 4 ± 2 °C ☐ Other: °C			

Were all QA/QC procedures followed as required by the VPH method? Yes ✓ No ____
Were any significant modifications made to the VPH method as specified in section 11.3? No *see below
Were all performance/acceptance standards for required QA/QC procedures achieved? Yes ✓ No ____
* Yes, if PID and FID surrogate recoveries are listed as n/a, then that sample was run via GCMS using all QC criteria specified in the method

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data
vext2	Field extracted
VOC10	The VOC field preserved soil sample is not within the 1:1 weight to volume ratio as recommended by SW846 methods 5030 and 5035 but may be within the 1:1 volume to volume ratio.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure The method blank is used to document contamination resulting from the analytical process

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA 38887 HF (10)

CHAIN OF CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.
Pioneering
HANDHELD TECHNOLOGY

Page 1 of 1

NW#6000168

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To:	Invoice To: Special Spectrum Pricing	Project No.: 5795-05 Sunoco Station
Corporate Environmental Advisors	Corporate Environmental Advisors	88 South Maple Street
127 Hartwell Street	127 Hartwell Street	Westfield MA
W. Boylston, MA 01583	W. Boylston, MA 01583	Sampler: Patrick Brown
Project Manager: Scott VanderSea		

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= None 10=

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3 = _____

G= Grab C= Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		PCBs	VPH							Notes:
38887-01	T1-A	12/19/05	9:30	C	SO	9		1				X								
-02	T1-B	12/19/05	9:35	C	SO	9		1				X								
03	T1-C	12/19/05	9:45	C	SO	9		1				X								
04	R-3'	12/19/05	10:00	C	SO	7/ 9	2	1					X							
05	RS-2'	12/19/05	10:15	C	SO	7/ 9	2	1					X							
06	RN-2'	12/19/05	10:30	C	SO	7/ 9	2	1					X							

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	12/22/05	12:24
	[signature]	12/22/05	1500

☐ Fax results when available to (508) 835-8822
☐ E-mail results when available to SVandersea@cea-inc.com & Pbrown@cea-inc.com
Condition upon Receipt: ☐ Iced ☐ Ambient ☐ 1 °C

APPENDIX G

Nnmerical Ranking System Scoresheet

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Waste Site Cleanup

NUMERICAL RANKING SYSTEM SCORESHEET
(310 CMR 40.1511)

CLASSIFICATION SUBMITTAL	
Initial Submittal	Re-Classification
☑	☐

DISPOSAL SITE SCORE					
II	III	IV	V	VI	TOTAL
80	68	30	110	0	288

Disposal Site Tier Classification	1			11
Permit Category (Tier I Only)	A	B	C	

****

I. DISPOSAL SITE INFORMATION

DEP Release Tracking Number(s)	1-15718
DEP Disposal Site Number(s)	

UTM Coordinates	N:	5313249
	E:	301780

Disposal Site Name:	**Sunoco Station**
Disposal Site Address	**88-90 South Maple Street**
	City: Westfield MA Zip: 01085

	Yes	No
Is the Disposal Site classified Tier I because it is located within the boundaries of a Zone II or Interim Wellhead Protection Area and groundwater concentrations equal or exceed RCGW-1 at the time of Tier Classification pursuant to 310 CMR 40.0520(2)(a)1.?	☐	☑
Is the Disposal Site classified Tier I because an Imminent Hazard is present at the time of Tier Classification pursuant to 310 CMR 40.0520(2)(a)2.?	☐	☑

I attest under the pains and penalties of perjury that I have personally completed this Numerical Ranking System Scoresheet, and have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, and in my professional opinion and judgment based upon: (i) the standard of care in 309 CMR 40.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief, this Scoresheet was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.000. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

Licensed Site Professional Signature	3978 LSP Registration Number	4/24/06 Date
Scott E. VanderSea LSP Name (Printed)	Corporate Environmental Advisors, Inc. Company Name	(508) 835-8822 Telephone Number

Mr. William Brochu, Sunoco, Inc. (R&M)
Responsible Party, Potentially Responsible Party, or Other Person who will provide certification in accordance with 310 CMR 40.0009.

COMMONWEALTH OF MASSACHUSETTS
SCOTT E. VANDERSEA
No. 3978
REGISTERED LICENSED SITE PROFESSIONAL

40.1511 (Continued)

II. EXPOSURE PATHWAYS

II.	EXPOSURE PATHWAYS Score according to 40.1512 – Exposure Pathway Designation Criteria			
MEDIA	DESIGNATION			
	NONE *or* NOT APPLICABLE	EVIDENCE OF CONTAMINATION	POTENTIAL EXPOSURE PATHWAY	LIKELY OR CONFIRMED EXPOSURE PATHWAY
A. SOIL (Includes Sediment)	0	**15**	100	150
B. GROUNDWATER	0	**20**	100	150
C. SURFACE WATER (Includes Wetlands)	0	**20**	100	150
D. AIR	**0**	15	100	200

Note: Score only the highest value for each media, i.e., score None or Not Applicable *or* Evidence of Contamination *or* Potential Exposure Pathway *or* Likely or Confirmed Exposure Pathway.

II. (A-D)	***Summary Rationale for Section II A-D Values and Phase I Report References***

II.E.	OHM SOURCES		
Number of OHM Sources	1 **0**	2 **25**	≥3 50

SECTION II SCORE (A.+B.+C.+D.+E.)					
A.	B.	C.	D.	E.	TOTAL: (15-700)
15	**20**	**20**	**0**	**25**	**80**

Check here if Section VI has been used to amend the score for this Section of the NRS.	☐

40.1511 (Continued)

III. DISPOSAL SITE CHARACTERISTICS

III.A.	OHM TOXICITY SCORE
Highest OHM Toxicity Score From Table III.A. or Worksheet III.A.1. on Following Pages.	
OHM Scored: Methyl Tert Butyl Ether Concentration and Media: 22,900 ug/l, in groundwater	Toxicity Score (1-80) **35**

III.B.		
More Than One OHM With an OHM Toxicity Score of ≥30	No **0**	Yes 30

III.C.	OHM MOBILITY and PERSISTENCE
Score according to 40.1514 - OHM Mobility and Persistence	
OHM Scored: Benzene	Score (0-50) **25**

III.D.	DISPOSAL SITE HYDROGEOLOGY		
Score according to 40.1515 - Soil Permeability			
DEPTH TO GROUNDWATER (in feet)	SOIL PERMEABILITY Assumed Soil Permeability		
	Low	Medium	High
>25	2	4	8
10.1 – 25	4	8	12
5.1 – 10	8	12	16
0-5	12	16	20

SECTION III SCORE (A + B + C + D)				
A. **35**	B. **0**	C. **25**	D. **8**	TOTAL: (3 – 180) **68**

Check here if Section VI has been used to amend the score for this Section of the NRS.	☐

Table III.A. **OHM TOXICITY SCORE**

OHM	CONCENTRATION (soil/sediment: ug/g; surface/groundwater ug/l)						
	≤99	100-999	1,000-9,999	10,000-100,000	>100,000 NAPL <0.5"	NAPL 0.5"-12"	NAPL >12"
Aliphatics C5-C8	5	15	**25**	35	45	55	65
C9-C12	1	10	**20**	30	40	50	60
C9-C18	1	10	20	30	40	50	60
C19-C36	1	10	20	30	40	50	60
Arsenic	20	30	40	50	60		
Aromatics C9-C10	5	15	**25**	35	45	55	65
C11-C22	5	15	25	35	45	55	65
Benzene	15	25	35	45	55	65	75
Bis(2-ethylhexyl)phthalate	10	20	30	40	50	60	70
Cadmium	20	30	40	50	60		
Carbon Tetrachloride	20	30	40	50	60	70	80
Chlorobenzene	5	15	25	35	45	55	65
Chromium III	1	10	20	30	40		
Chromium VI	10	20	30	40	50		
Coal tar	10	20	30	40	50	60	70
Cyanide	5	15	25	35	45		
1,1 Dichloroethane	10	20	30	40	50	60	70
1,2 Dichloroethane	10	20	30	40	50	60	70
Ethylbenzene	5	15	25	35	45	55	65
Ethylene Dibromide	20	30	40	50	60	70	80
#2 Fuel Oil (virgin product) - - used to score NAPL - -	5	15	25	35	45	55	65
Gasoline (virgin product)	10	20	30	40	50	60	70
Lead	20	30	40	50	60		
Mercury	20	30	40	50	60	70	80
Methylene Chloride	10	20	30	40	50	60	70
Methyl Ethyl Ketone	1	10	20	30	40	50	60
Methyl Tert Butyl Ether	5	15	25	**35**	45	55	65
Nickel	5	15	25	35	45		
Phenol	1	10	20	30	40	50	60
PAHs	10	20	30	40	50	60	70
PCBs	**20**	30	40	50	60	70	80
Tetrachloroethylene	10	20	30	40	50	60	70
Toluene	1	10	20	30	40	50	60
1,1,1 Trichloroethane	5	15	25	35	45	55	65

Table III.A. – continued **OHM TOXICITY SCORE**

OHM	CONCENTRATION (soil/sediment: ug/g; surface/groundwater ug/l)						
	≤99	100-999	1,000-9,999	10,000-100,000	>100,000 NAPL <0.5"	NAPL 0.5"-12"	NAPL >12"
Trichloroethylene	15	25	35	45	55	65	75
Vinyl Chloride	15	25	35	45	55	65	75
Xylenes	1	10	20	30	40	50	60
Zinc	1	10	20	30	40		

Use Worksheet III.A.1 to determine the OHM Toxicity Score for OHM not listed in Table III.A.
See 40.1513 for Human Health-Based Toxicity Values for each OHM.

Worksheet III.A.1 **OHM TOXICITY SCORE**

HUMAN HEALTH-BASED TOXICITY VALUE	CONCENTRATION Use ug/g for Soil and ug/l for Surface Water and Groundwater						
	≤99	100-999	1,000-9,999	10,000-100,000	>100,000 NAPL <0.5"	NAPL 0.5"-12"	NAPL >12"
<5	1	10	20	30	40	50	60
5-19	5	15	25	35	45	55	65
20-29	10	20	30	40	50	60	70
30-39	15	25	35	45	55	65	75
40-50	20	30	40	50	60	70	80

III.A.1. ***OHM and Concentrations Used in Section III.A.1.***

OHM	Human Health-Based Toxicity Value	Concentration (Soil ug/g)	Concentration (Water - ug/l)	OHM Toxicity Score

40.1511 (Continued)

IV. HUMAN POPULATION AND LAND USES

IV.A.	HUMAN POPULATION			
Residential Population Within 1/2 Mile	None 0	1-99 5	100-999 10	≥1,000 **15**
Institutions Within 500 feet	None **0**		One or More 10	
On-Site Workers	None 0	1-99 **5**	100-999 10	≥1,000 15

IV.B.	AQUIFERS	
Sole Source Aquifer Name:_____	No **0**	Yes 25
Potentially Productive Aquifer	No **0**	Medium or High 15

IV.C.	WATER USE				
Proximity of Disposal Site to Public Drinking Water Supply Source	Not Applicable (NA) **0**			Zone A 20	Zone II, IWPA, or SW Intake ≤400' 50
Persons Served by Public Drinking Water Supply	NA 0	25-999 5	1,000 - 4,999 **10**	5,000 – 49,999 20	≥50,000 25
Private Water Supplies Within 500 Feet	None **0**		Commercial Industrial 10	Agriculture Residential (Not Ingested) 15	Drinking Food Processing 25
Alternative Public Water Supply Available (Viable Public Water Supply in Disposal Site Community and Public Water Connection ≤500 Feet from Site)	Yes **0**		No 25		

SECTION IV SCORE (A + B + C)			
A. **20**	B. **0**	C. **10**	TOTAL: (0 – 205) **30**

Check here if Section VI has been used to amend the score for this Section of the NRS. ☐

40.1511 (Continued)

V. ECOLOGICAL POPULATION

V.A.	ENVIRONMENTAL RESOURCE AREAS		
RESOURCE	*LOCATION*		
Area of Critical Environmental Concern	>500' from Site **0**	≤500' from Site 20	On - Site 30
Species of Special Concern, Threatened or Endangered Species Habitat	>500' from Site 0	On-Site or ≤500' from Habitat **30**	
Wetlands, Certified Vernal Pool, or Outstanding Resource Water	>100' from Site 0	≤100' from Site **20**	On-Site 30
Fish Habitat	>500' from Site 0	≤500' from Site **20**	On-Site 30
Protected Open Space (Local/State/Federal/Trustee)	>500' from Site 0	≤500' from Site **20**	On-Site 30

SCORE SECTION V.B. *ONLY* IF SECTION V.A. SCORE IS ≥30.

V.B.	ENVIRONMENTAL TOXICITY SCORE *Highest Environmental Toxicity Score From Table V.B. or Worksheet V.B.1. on Following Pages.*
OHM Scored: N/A Concentration and Media:	Toxicity Score (1-35) **0**

SECTION V. SCORE (A. + B.)		
A. **90**	B. **20**	TOTAL: (0-185) **110**

Check here if Section VI has been used to amend the score for this Section of the NRS.	☐

40.1511 (Continued)

Table V.B.	ENVIRONMENTAL TOXICITY SCORE				
OHM	*CONCENTRATION* (soil/sediment: ug/g: surface/groundwater ug/l)				
	<1	1-99	100-999	1,000-9,999	≥10,000
Arsenic	5	10	15	20	25
Benzene	0	1	5	10	15
Bis(2-ethylhexyl) phthalate*	5	10	15	20	25
Cadmium	10	15	20	25	30
Carbon tetrachloride	0	1	5	10	15
Chlorobenzene*	5	10	15	20	25
Chromium III	1	5	10	15	20
Chromium VI	5	10	15	20	25
Coal tar*	5	10	15	20	25
Cyanide	5	10	15	20	25
1,1 Dichloroethane*	5	10	15	20	25
1,2 Dichloroethane	0	1	5	10	15
Ethylbenzene	0	1	5	10	15
Ethylene Dibromide*	5	10	15	20	25
#2 Fuel Oil (virgin product) * - - NAPL and total EPH - -	1	5	10	15	20
Gasoline (virgin product) * - - Total VPH - -	5	10	15	20	25
Lead	5	10	15	20	25
Mercury	15	20	25	30	35
Methylene Chloride *	5	10	15	20	25
Methyl Ethyl Ketone *	5	10	15	20	25
Methyl Tert Butyl Ether*	1	5	10	15	20
Nickel	1	5	10	15	20
Phenol	0	1	5	10	15
PAHs*	5	10	15	20	25
PCBs	15	20	25	30	35
Tetrachlorethylene	0	1	5	10	15
Toluene	0	1	5	10	15
1,1,1 Trichloroethane	0	1	5	10	15
Trichloroethylene	0	1	5	10	15

Table V.B.	ENVIRONMENTAL TOXICITY SCORE				
OHM	*CONCENTRATION* (soil/sediment: ug/g: surface/groundwater: ug/l)				
	<1	1-99	100-999	1,000-9,999	≥10,000
Vinyl Chloride*	5	10	15	20	25
Xylenes*	5	10	15	20	25
Zinc	1	5	10	15	20

*Score derived by default methods 40.1516(2).

Use Worksheet V.B.1. to determine Environmental Toxicity Scores for OHM not listed in Table V.B.
See 40.1516 for Environmental Toxicity Values for each OHM.

Worksheet V.B. 1	ENVIRONMENTAL TOXICITY SCORE				
ENVIRONMENTAL TOXICITY VALUE	CONCENTRATION Use ug/g for Soil and ug/l for Surface Water or Groundwater				
	<1	1-99	100-999	1,000-9,900	≥10,000
10	0	1	5	10	15
20	1	5	10	15	20
30	5	10	15	20	25
40	10	15	20	25	30
50	15	20	25	30	35

V.B.1.	*OHM and Concentrations Used in Section V.B.1.*			
OHM	Environmental Toxicity Value	Concentration (Soil - ug/g)	Concentration (Water - ug/l)	Environmental Toxicity Score
N/A				

40.1511 (Continued)

VI. MITIGATING DISPOSAL SITE-SPECIFIC CONDITIONS

VI.	MITIGATING DISPOSAL SITE-SPECIFIC CONDITIONS

Disposal site-specific conditions that warrant amending the site score. Changes directly related to NRS Sections or Subsection scores may not reduce the score more than the relevant subsection value assigned for the disposal site in that subsection. Section VI must reference specific pages of the Phase 1. Section VI may not exceed ±50 Points and may be scored only in 5-point increments. Attach additional pages as necessary.

	Score
Disposal Site Score Amendment (Not to Exceed ±50 Points)	0

APPENDIX H

Public Notification Letters

CORPORATE ENVIRONMENTAL ADVISORS, INC.

PROUDLY CELEBRATING 20 YEARS Of Outstanding Service 1985 - 2005

Via U.S. Postal Service

April 24, 2006

Chief Municipal Officer
Westfield City Hall
59 Court St.
Westfield, MA 01085

RE: Notice of Availability: Phase I Report/Tier Classification
Sunoco Station
88-90 South Maple Street
Westfield, Massachusetts
DUNS: 0374-5593
DEP RTN 1-15718

To Whom It May Concern:

As promulgated within 310 CMR 40.1403(3)(e) of the Massachusetts Contingency Plan, this letter serves as official notification that a Phase I - Initial Site Investigation and Tier II Classification for the referenced site will be filed with the Massachusetts Department of Environmental Protection (MADEP). Please contact me if you wish to obtain a copy of the report. A copy of the Phase I/Tier Classification Report may also be obtained and/or viewed at the MADEP's Western Regional Office located at 436 Dwight Street, Suite 500, Springfield, Massachusetts 01103.

This Phase I Report has been prepared following the 72-hour Reportable Condition identified on April 12, 2005 upon obtaining knowledge of tightness test results for dispenser piping associated with an underground storage tank (UST). Based on available information provided by Sunoco, the dispenser lines were placed under pressure for tightness testing on April 12, 2005 and the regular unleaded line failed the tightness test. This Threat of Release condition was verbally reported to the Massachusetts Department of Environmental Protection (MA DEP) at 9:40 a.m. on April 15, 2005 within 72-hours of obtaining knowledge of the reporting condition pursuant to 310 CMR 40.0314(2) of the MCP. Based on current site conditions, no 2-hour or 72-hour reporting conditions exist and no IRAs are required.

Sincerely,
CORPORATE ENVIRONMENTAL ADVISORS, INC.

Patrick J. Brown
Environmental Scientist I

cc: Westfield Health Department, Westfield City Hall, 59 Court St., Westfield, MA 01085
MA DEP Western Region, 436 Dwight Street, Suite 500 Springfield, Massachusetts 01103

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Via U.S. Postal Service

April 24, 2006

Health Department
Westfield City Hall
59 Court St.
Westfield, MA 01085

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88-90 South Maple Street
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Sincerely,
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