



August 19, 2013

Goldman
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Ms. Thatiana J. Gibson, Project Manager
Division of Capital Asset Management and Maintenance
One Ashburton Place
Boston, MA 02108

**RE: Limited Subsurface Investigation
106 Hale Street
Bridgewater, Massachusetts
GEC Project No. 1424-3020**

Dear Ms. Gibson:

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts has completed a limited subsurface investigation at the above-referenced property (the "Site"). The purpose of GEC's investigation was to: (1) locate and assess the condition of existing groundwater monitoring wells on the Site, and (2) installing test borings/monitoring wells to evaluate potential adverse Site impacts associated with historical on-Site manufacturing operations and sampling groundwater monitoring wells to assess groundwater conditions associated with historically identified petroleum contamination related to former on-Site UST systems.

BACKGROUND

In our *Environmental Site Assessment* report for the Site, dated December 12, 2012, GEC identified historical records that indicated a historic nail manufacturer located on-Site utilized up to 14 USTs, containing fuels and process chemicals such as gasoline, fuel oil, quench oil, and xylenes. Many of these USTs were removed; however, several were abandoned in-place. No UST closure documentation (which should have indicated the environmental conditions of soil and groundwater around the USTs) was identified for all but one UST. Additionally, the Site was listed as an ERNS Site after 11,000 gallons of hazardous waste was left behind in drums when Independent Nail, Inc. vacated the Site on December 12, 1993, and the adjacent MBTA commuter rail right-of-way was identified as an ERNS site after a release of quench oil from USTs associated with the former Independent Nail, Inc. were observed on the MBTA property and reported to the National Response Center. Also, the Site is listed as State Disposal Site (RTNs 4-1187 and 4-12138), and as a State Spill Site. Response actions for RTN 4-12138 were completed (for a UST) and a condition of No Significant Risk was documented; however, a portion of the Site is considered to be part of a disposal site that originates on an adjacent property (under RTN 4-1187, for which a Class C RAO Statement was submitted to achieve a Temporary Solution under the MCP), which will remain under assessment until a Permanent Solution is achieved under the MCP.

SCOPE OF WORK

Based on the foregoing, GEC recommended performing a limited subsurface investigation that included the installation of soil test borings and groundwater monitoring wells and the collection of soil and groundwater samples for laboratory analysis. The scope of work described herein was developed by John M. O'Donnell, P.E., L.S.P. of DCAMM and included: determining whether any groundwater monitoring wells are presently located on-Site and gauging said wells, if any, to determine the depth to groundwater and presence/thickness of petroleum NAPL floating on the groundwater surface; performing a total of seven test borings inside and outside the Site building and completing up to four test borings as groundwater monitoring wells (located in the exterior of the Site, at GEC's direction); collecting soil and groundwater samples for laboratory analysis; and preparing a letter report documenting the work conducted and providing recommendations for additional subsurface investigation and/or remediation work, if any, to bring the Site to regulatory closure. The work proposed is in accordance with M.G.L. c. 21E and the MCP, 310 CMR 40.0000, and is described below.

LIMITED SUBSURFACE INVESTIGATION

GEC's limited subsurface investigation included performing seven soil test borings, four of which were completed as groundwater monitoring wells, throughout the Site. Refer to Figure 2 for a Site Plan depicting test boring and monitoring well locations. A total of thirteen soil samples and four groundwater samples were submitted to Contest Analytical Laboratory of East Longmeadow, Massachusetts, a state-certified laboratory, for laboratory analysis for Volatile Petroleum Hydrocarbons (VPH), including target volatile organic compounds (VOCs), and/or Extractable Petroleum Hydrocarbons (EPH), including target polycyclic aromatic hydrocarbons (PAHs), via the MADEP Methods, VOCs via USEPA Method 8260C and/or 14 Massachusetts Metals (MM14 Metals) via USEPA Method 6020A/7470A. The laboratory certificates of analysis are attached hereto.

Test Boring, Soil Screening, and Monitoring Well Installation

On May 2, 2013, New England Geotech, LLC (NEG), under the supervision of GEC personnel, performed seven soil test borings (B-1 through B-7) and installed four groundwater monitoring wells (GEC-1, GEC-4, GEC-5 and GEC-6) on-Site. Test borings were advanced using a truck-mounted, direct-push GeoProbe® 7726 drill rig. Soil samples were collected continuously utilizing clean five foot acetate sleeves inside hollow steel rods. A new, clean, acetate sleeve was used for each sample collected.

Test borings B-1 through B-6 were performed within the footprint of the former Site building that was located on the eastern portion of the Site. Test boring B-1 was performed approximately 20 feet from the northeast corner of the existing Site building to assess the potential for vapor intrusion into the existing Site building resulting from the known and possible unknown releases of OHM at this location. Test borings B-2 through B-6 were advanced to depth throughout the footprint of the former Site building to assess current subsurface conditions in relation to known releases of OHM in this area. Test

boring B-7 was advanced to depth within the western portion the existing Site building to evaluate current subsurface conditions. All soil test borings, except B-2, were advanced to a depth of 15 feet below surface grade (BSG). At B-2, drilling refusal was encountered between 2.5 and 7 feet BSG on four attempts to install this test boring.

Soil from each sampling interval was headspace screened for total ionizable compounds using a MiniRae 2000 photoionization detector (PID) equipped with a 10.6 eV lamp. PID readings ranged from 0.0 to 13.0 parts per million (ppm). During test boring activities, wet soils, indicative of the approximate depth of the groundwater table, were encountered approximately nine to eleven feet BSG.

Groundwater monitoring wells were installed in test borings B-1, B-4, B-5 and B-6 and designated GEC-1, GEC-4, GEC-5 and GEC-6, respectively. The monitoring wells were constructed of ten feet of 2-inch I.D schedule 40 PVC ten-slot (0.010" slots) screen followed by varying lengths of solid PVC riser pipe to the ground surface. The borings were backfilled with clean silica sand to one foot above the screen, followed by a bentonite seal and finished with a flush-mounted road box. Monitoring wells GEC-1 and GEC-4 were installed to a depth of 15 feet BSG and monitoring wells GEC-5 and GEC-6 were installed to a depth of 17 feet BSG.

To ensure an acceptable hydrologic connection between the well and surrounding substrata and to remove fines, the wells were developed using dedicated hand-bailers following installation. Approximately three well volumes were removed indicating good communication with the surrounding aquifer. Please refer to the attached Boring Logs for additional test boring and monitoring well installation information.

Soil Sampling

On May 2, 2013 GEC collected soil samples from test borings B-1 through B-7 for laboratory analysis for laboratory analysis for VPH, including target VOCs, EPH, including target PAHs, VOCs and/or MM14 Metals. In addition, because a headspace reading exceeding 10 ppmv was observed for the soil sample collected from the 10-15 foot sampling interval of test boring B-3, a sample was submitted for VOCs via USEPA Method 8260C. Where feasible, two soil samples from each test boring were submitted for laboratory analysis. Samples were collected from the 0-5 foot sampling interval and from the sampling interval that intersected the groundwater interface. At B-2, GEC did not encounter the groundwater interface since drilling refusal was encountered at 7 feet BSG.

Groundwater Sampling

On May 7, 2013, GEC returned to the Site and gauged depth to groundwater at the four newly installed monitoring wells. The depth to water ranged from 9.54 to 9.70 feet BSG. Groundwater samples were collected utilizing low-flow sampling methodology. A 1.75 inch QED bladder pump with a QED MP-15 controller was used to purge monitoring wells at a rate that allowed the groundwater level to stabilize if possible. Inorganic parameters, including temperature, conductivity, dissolved oxygen, pH and oxidation/reduction potential were monitored while purging. When these

parameters stabilized, indicating good communication between the well and surrounding aquifer samples were collected. In addition, groundwater samples submitted for dissolved metals analysis were field filtered with 0.45µm filter. Groundwater samples from each monitoring well were submitted for laboratory analysis for VPH including target VOCs, EPH, including target PAHs, VOCs and dissolved MM14 Metals.

Monitoring Well Inventory and Well Survey

On May 7, 2013, GEC attempted to locate pre-existing monitoring wells located on the Site including MW-5, MW-6, MW-8, and RIZ 8 through RIZ-10. GEC was only able to locate MW-5, which is located on the sidewalk along Plymouth Street.

GEC also conducted an elevation survey to determine the well head elevation of the newly installed monitoring wells at the Site. This survey included all the newly installed monitoring wells and MW-5. Elevation of the top of the PVC riser pipe was determined via rod and level survey. MW-5 according to previous MCP reports has an elevation of 58.92 feet; therefore, this elevation was applied to the survey to tie the newly installed monitoring wells into the existing network, which includes several monitoring wells located off-Site. Well head elevations ranged 58.92 at GEC-5 to 62.99 feet at GEC-4. Based on the surveyed well head elevations and measured depth to groundwater, GEC determined that groundwater at the Site appears to flow in a northeasterly direction. Refer to Table 1 for a summary of the groundwater elevation data.

DATA EVALUATION

Soil Data

Ten metals including arsenic, barium, beryllium, cadmium, chromium, lead, nickel, vanadium, zinc and mercury were detected in one or more soil samples at concentrations above laboratory sample detection limits. The C9-C18 aliphatic, C19-C36 aliphatic and C11-C22 aromatic subsets of EPH and several PAHs were detected in one or more the soil samples from the 0-5 foot sampling interval from B-2, B-3, B-4 and B-5 and from the 10-15 foot sampling interval at B-5 at concentrations above laboratory sample detection limits. No VPH or VOCs were detected in any of the samples submitted for laboratory analysis above laboratory detection limits, except for xylenes which was detected at a low concentration, near sample detection limits, in B-2 (0-5 feet). Refer to Tables 2 through 4 for a summary of the soil analytical data.

Groundwater Data

Seven metals including arsenic, barium, cadmium, chromium, lead, nickel and zinc were detected in one or more groundwater samples at concentrations above laboratory sample detection limits. The C9-C18 aliphatic, C19-C36 aliphatic and C11-C22 aromatic subsets of EPH were detected above laboratory sample detection limits in the groundwater sample from GEC-5 only. No VPH or target VOCs were detected above laboratory sample detection limits in any groundwater samples submitted for analysis. Refer to Table 5 and 6 for a summary of the groundwater analytical data.

Data Evaluation Relative to Historic Data

GEC was unable to locate any pre-existing monitoring wells within the Site boundaries although several wells were observed adjacent to the Site. Wells identified on a Site Plan dated August 2003 prepared by Weston and Sampson (W&S) as part of the Class C RAO for RTN 4-1187 has monitoring wells MW-8, RIZ-8, RIZ-9 and RIZ-10 located within the Site boundaries; GEC was not able to identify any evidence of these wells on-Site. None of these pre-existing on-Site monitoring wells were reported by W&S to contain a measurable thickness of LNAPL; however, it should be noted that on May 22, 2003, W&S reported that sumps S-1 and S-2 had greater than one foot of LNAPL, and off-Site wells RIZ-14, RIZ-16, and RIZ-17 had measurable thicknesses of LNAPL.

Based upon GEC's Site Plan, attached as Figure 2, it appears that test borings B-3 through B-6 and groundwater monitoring wells GEC-4 through GEC-6 were installed proximal to the former monitoring wells; however, it should be noted as well that the W&S Site Plan was not scaled properly and historical well locations may not be reliable. B-5/GEC-5 appears to be the only sampling location installed downgradient of the pre-existing monitoring wells on the Site and is also slightly upgradient of the former quench oil USTs. Soil and groundwater samples collected from B-5/GEC-5 had low concentrations of petroleum-related compounds. RIZ-8, which is the closest upgradient well to GEC-5 for which historic data are available, had lower previously detected concentrations of petroleum compounds than noted in GEC-5.

MassDEP REPORTING REQUIREMENTS

M.G.L. Chapter 21E and the MCP provide requirements for evaluating whether a release of OHM must be reported to the Massachusetts Department of Environmental Protection (MassDEP). Reporting Categories for soil and groundwater, and Reportable Concentrations for oil and/or hazardous materials (OHM) in soils and groundwater, have been promulgated within the MCP for this purpose. The applicable soil and groundwater reporting categories for a site are based on site characteristics and nearby actual and potential land and water usage. GEC has determined that the applicable Reporting Category is "RCS-1" for soil and "RCGW-2" for groundwater. The rationale for selecting the Reporting Category is provided below.

Soil Category - Soil Category 1 (RCS-1) was determined to be applicable to the Site because the Site is situated within 500 feet of a residential dwelling.

Groundwater Category - Groundwater Category 2 (RCGW-2) was determined to be applicable to the Site because the Site is not situated within a Current or Potential Drinking Water Source Area.

The applicable soil Reporting Category and OHM detected at the Site dictates the applicable Reportable Concentration. The level of OHM present in each sample is compared to the applicable Reportable Concentration to determine whether the release is

reportable. A comparison of OHM detected in the samples collected from the Site to Reportable Concentrations, is described below.

Although OHM were detected in both in the soil and the groundwater above laboratory sample detection limits, none of the detected concentrations exceed MCP Reportable Concentrations for the categories described above.

CONCLUSIONS

Although several metals and petroleum related compounds were detected in soil and groundwater samples, none of the detected concentrations exceeded MCP Reportable Concentrations. Test boring B-5 and monitoring well GEC-5 had the highest detectable concentrations of petroleum-related compounds, which was expected due to its close proximity to the former quench oil USTs. GEC determined the apparent direction of groundwater flow at the Site is to the northeast, which is consistent with the findings documented in previous MassDEP submittals for the quench oil release. Therefore, it is unlikely that subsurface conditions at the Site will worsen over time, as the petroleum release occurred downgradient of the Site. However, it is possible that petroleum-related contaminant concentrations in soil and groundwater may increase with proximity to the northeastern property boundary (i.e., where the quench oil tanks from which the petroleum release occurred were formerly located).

RECOMMENDATIONS

GEC has no further recommendations at this time.

GEC understands that reports of this nature often raise more questions than they answer. Please do not hesitate to contact Parrish C. Smolcha at (781) 356-9140 x116 with any questions or comments.

Sincerely,
Goldman Environmental Consultants, Inc.



Mike Bradley
Environmental Field Scientist

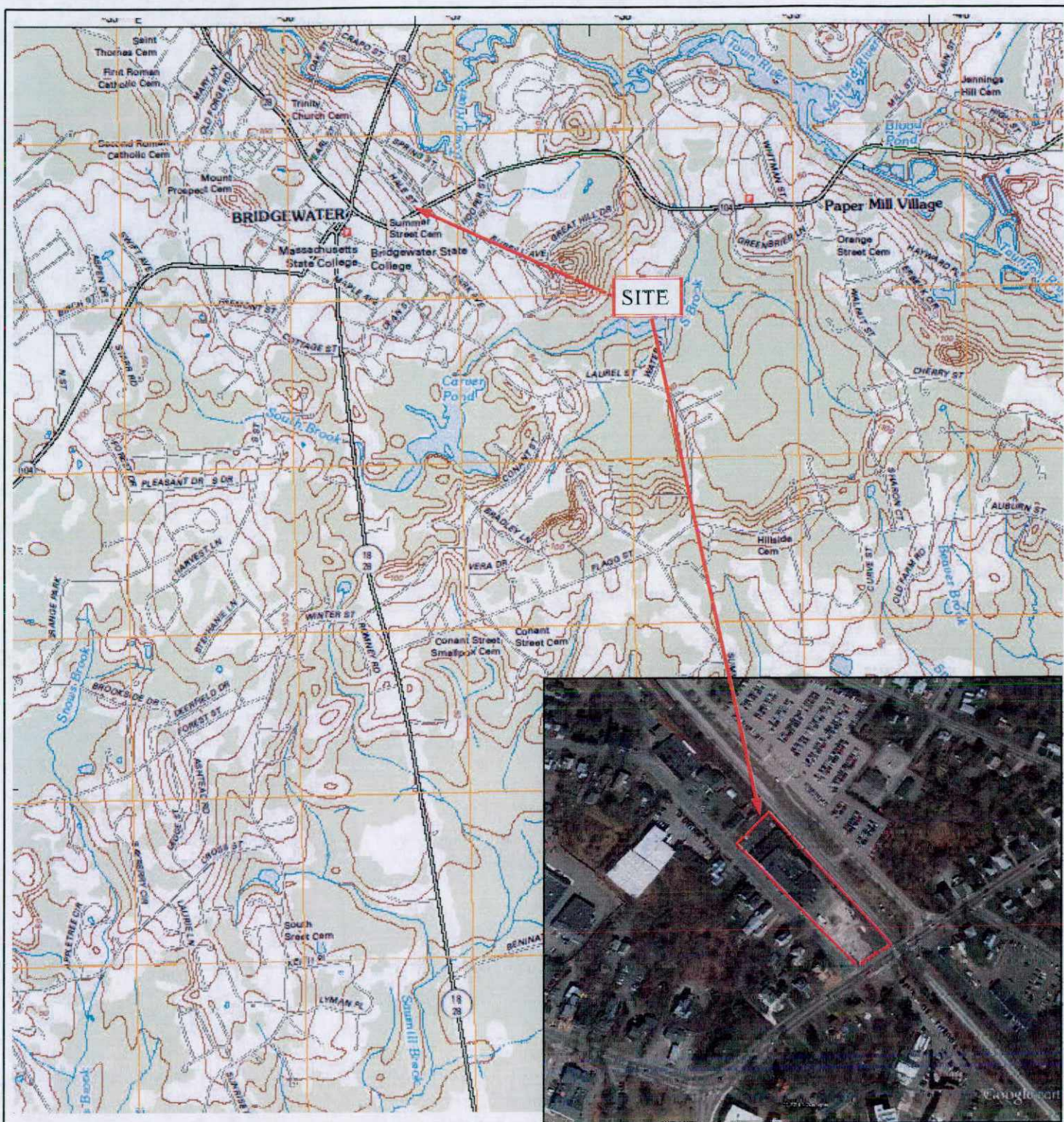


Parrish C. Smolcha
Senior Project Manager

cc: John M. O'Donnell, DCAMM (john.odonnell@state.ma.us)

Attachments -Figures
-Tables
-Boring Logs
-Laboratory Certificates of Analysis

Figures



USGS 7.5 Minute Topographic & 2012 Google Aerial

Bridgewater
Massachusetts Quadrangle



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SITE LOCUS

106 Hale Street
Bridgewater, Massachusetts

GEC Project #: 1424-3020

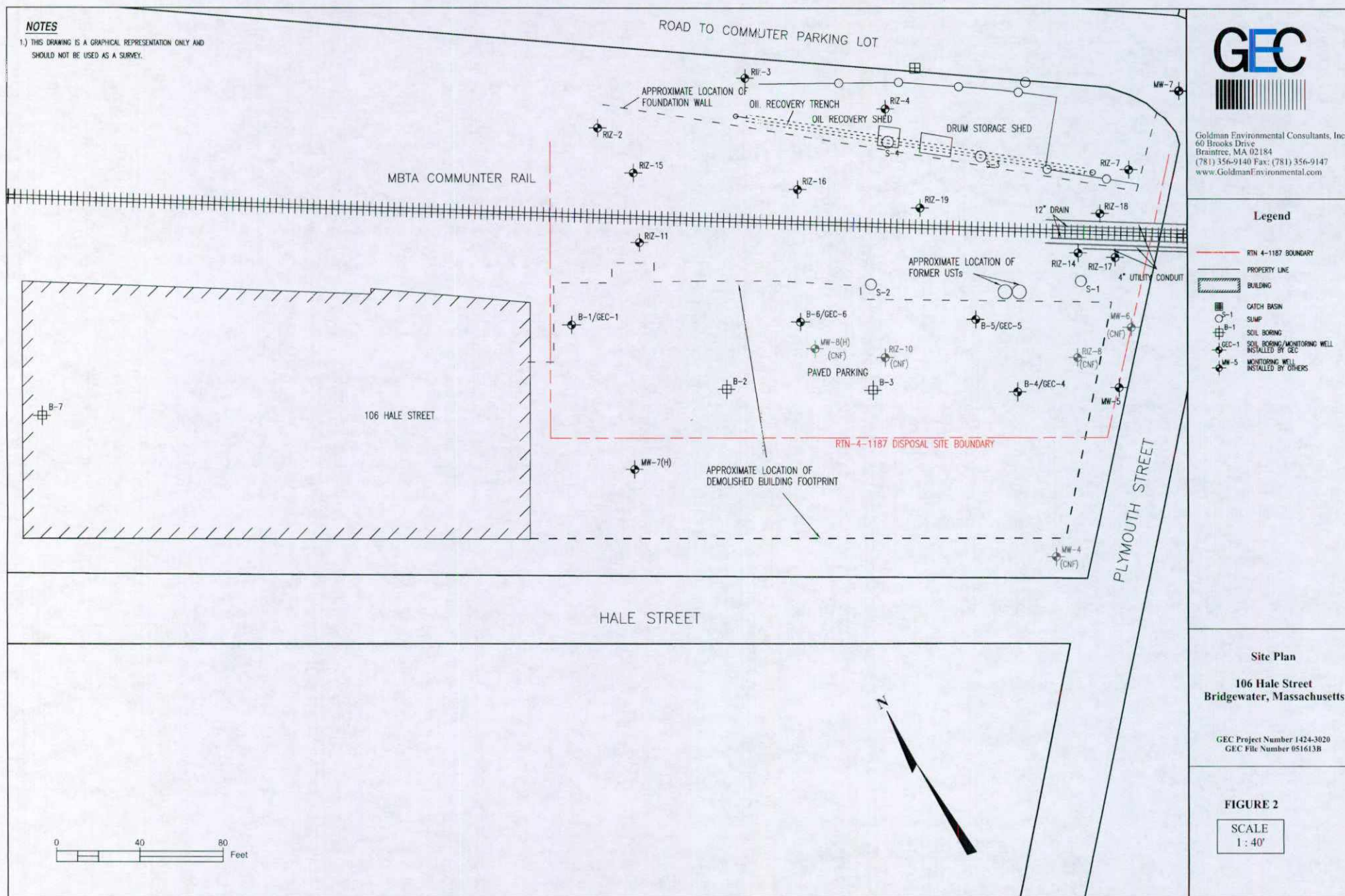
Figure 1

Scale
1 : 24,000



NOTES

1.) THIS DRAWING IS A GRAPHICAL REPRESENTATION ONLY AND SHOULD NOT BE USED AS A SURVEY.



MassDEP - Bureau of Waste Site Cleanup

Site Information: MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

106 HALE STREET BRIDGEWATER, MA

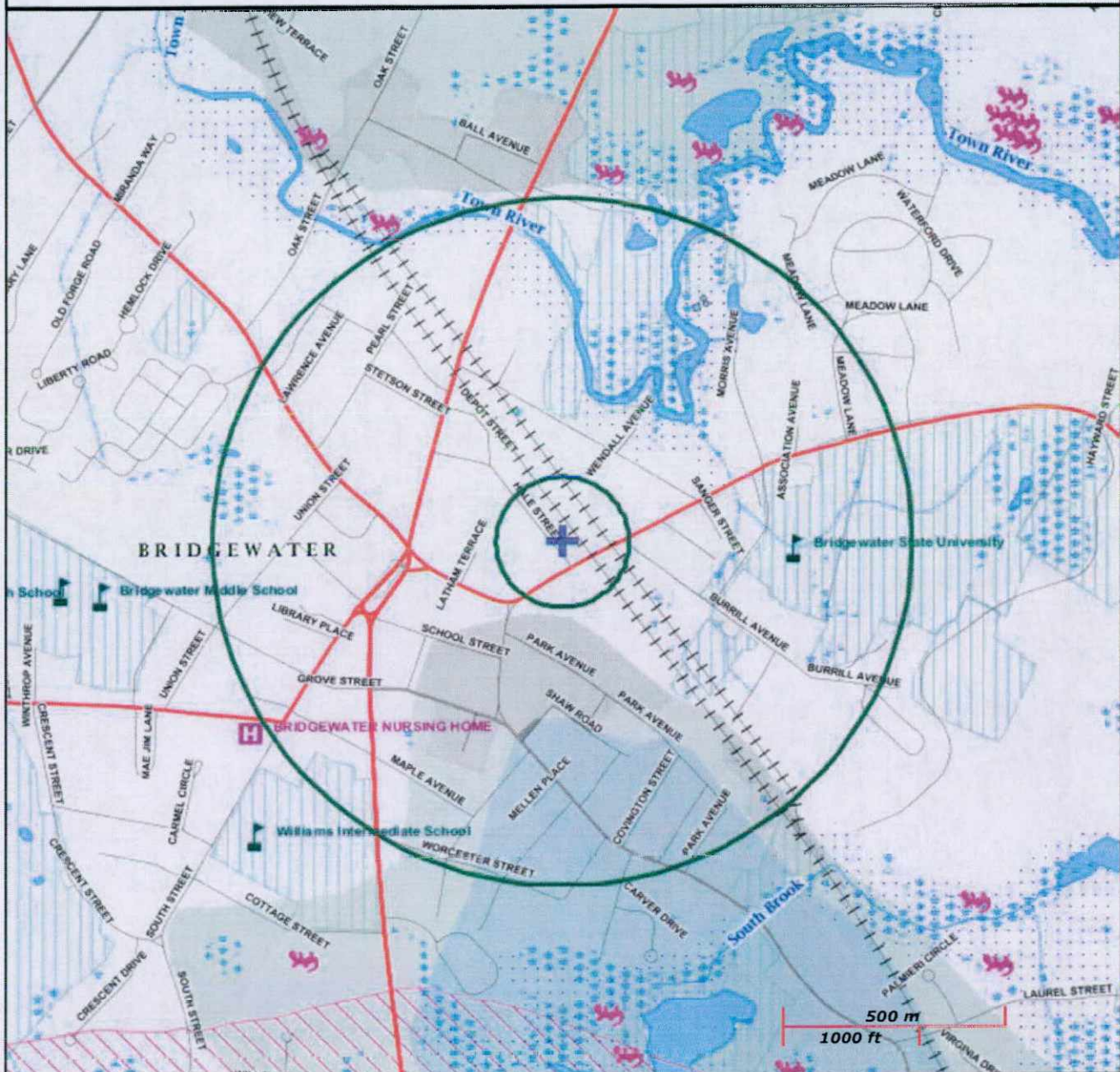
NAD83 UTM Meters:
4650580mN, 336727mE (Zone: 19)
May 21, 2013

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>.



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail
Boundaries: Town, County, DEP Region, Train, Powerline, Pipeline, Aqueduct
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam
Aquifers: Medium Yield, High Yield, EPA Sole Source
Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A
Hydrography: Open Water, PWS Reservoir, Tidal Flat
Wetlands: Freshwater, Saltwater, Cranberry Bog
FEMA 100yr Floodplain, Protected Open Space, ACEC
Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert, Potential
Solid Waste Landfill, PWS: Com.GW,SW, Emerg, Non-Com

Figure 3: MassGIS Map
106 Hale Street, Bridgewater, MA

GEC Project No. 1424-3020

Tables

Table 1:
Summary of Groundwater Elevations
106 Hale Street, Bridgewater, MA
(unit, feet)

Well ID	Date	Screened Interval	Well Elevation	Depth to Groundwater	Groundwater Elevation
GEC-1	5/7/2013	5-15'	62.92	9.54	53.38
GEC-4	5/7/2013	5-15'	62.99	9.90	53.09
GEC-5	5/7/2013	5-17'	62.76	9.70	53.06
GEC-6	5/7/2013	5-17'	62.85	9.61	53.24
MW-5	5/7/2013	NA	58.92	NA	NA

Notes:

(1) In order to tie newly installed monitoring wells into the existing monitoring well network GEC calculated the well elevations based on the reported elevation of MW-5, which is 58.92

(2) On 5/7/2013 MW-5 was only surveyed and not gauged.

NA= Not Available

Table 2:
Summary of Soil Analytical Data for Metals
 106 Hale Street, Bridgewater, MA
 (unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	Arsenic	RDL	Barium	RDL	Beryllium	RDL	Cadmium	RDL	Chromium	RDL	Lead	RDL	Nickel	RDL	Vanadium	RDL	Zinc	RDL	Mercury	RDL
B-1	0-5	5/2/2013	6010C/7417B	3.1	2.6	30	2.6	BRL	0.26	BRL	0.26	6.7	0.53	28	0.79	4.4	0.53	13	1.1	31	1.1	0.061	0.027
B-1	5-10	5/2/2013	6010C/7417B	4.2	2.7	9.4	2.7	BRL	0.27	BRL	0.27	5.0	0.54	6.2	0.81	4.3	0.54	7.5	1.1	16	1.1	BRL	0.027
B-2	0-5	5/2/2013	6010C/7417B	BRL	2.4	37	2.4	BRL	0.24	BRL	0.24	12	0.48	31	0.72	10	0.48	19	0.95	87	0.95	0.066	0.025
B-3	0-5	5/2/2013	6010C/7417B	4.1	2.6	25	2.6	BRL	0.26	BRL	0.26	10	0.53	31	0.79	5.1	0.53	12	1.1	33	1.1	0.043	0.027
B-3	10-15	5/2/2013	6010C/7417B	3.4	2.9	9.1	2.9	BRL	0.29	BRL	0.29	4.2	0.58	4.1	0.88	6.1	0.58	7.2	1.2	27	1.2	BRL	0.039
B-4	0-5	5/2/2013	6010C/7417B	BRL	2.7	48	2.7	0.32	0.27	BRL	0.27	8.1	0.55	27	0.82	4.7	0.55	16	1.1	32	1.1	0.075	0.027
B-4	10-15	5/2/2013	6010C/7417B	3.0	2.6	7.2	2.6	BRL	0.26	BRL	0.26	6.3	0.52	5.1	0.78	4.2	0.52	8.2	1.0	16	1.0	BRL	0.028
B-5	0-5	5/2/2013	6010C/7417B	4.7	2.7	17	2.7	0.29	0.27	0.50	0.27	7.0	0.53	13	0.80	5.4	0.53	13	1.1	240	1.1	BRL	0.027
B-5	10-15	5/2/2013	6010C/7417B	3.4	2.9	50	2.9	BRL	0.29	BRL	0.29	6.7	0.58	200	0.87	4.8	0.58	12	1.2	220	1.2	0.11	0.030
B-6	0-5	5/2/2013	6010C/7417B	3.2	2.8	39	2.8	BRL	0.28	BRL	0.28	8.1	0.56	23	0.83	4.1	0.56	16	1.1	44	1.1	BRL	0.027
B-6	10-15	5/2/2013	6010C/7417B	3.1	2.8	12	2.8	BRL	0.28	BRL	0.28	5.4	0.56	4.8	0.84	5.2	0.56	8.3	1.1	55	1.1	BRL	0.029
B-7	0-5	5/2/2013	6010C/7417B	BRL	2.4	8.8	2.4	BRL	0.24	BRL	0.24	4.2	0.48	7.1	0.72	2.6	0.48	7.1	0.96	35	0.96	BRL	0.025
B-7	5-10	5/2/2013	6010C/7417B	BRL	2.7	18	2.7	BRL	0.27	BRL	0.27	2.2	0.54	7.6	0.81	1.3	0.54	3.5	1.1	18	1.1	0.036	0.027
<i>Selected Soil Standards</i>																							
<i>MA RCS-I</i>				20		1000		100		2		30		300		20		600		2500		20	

Notes:

RDL = Reported Detection Limit
 BRL = Below Reporting Limit

Table 3:
Summary of Soil Analytical Data for EPH and target PAHs
106 Hale Street, Bridgewater, MA
(unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	ALIPHATIC	RDL	ALIPHATIC	RDL	AROMATIC	RDL	ANTHRACEN	RDL	BENZO(A) PYRENE	RDL	FLUORANTHEN	RDL	BENZO(G,H,I) PERYLENE	RDL	FLUORANTHEN	RDL	CHRYSENE	RDL	FLUORANTHEN	RDL	INDENO(1,2,3-CD) PYRENE	RDL	PHENANTHREN	RDL	PYRENE	RDL
B-1	0-5	5-2-2013	MADEP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-1	5-10	5-2-2013	MADEP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-2	0-5	5-2-2013	MADEP EPH	BRL	10	46	10	66	10	0.20	0.10	0.25	0.10	0.35	0.10	0.18	0.10	0.11	0.10	0.23	0.10	0.44	0.10	0.18	0.10	0.22	0.10	0.44	0.10
B-3	0-5	5-2-2013	MADEP EPH	BRL	10	BRL	10	21	10	0.19	0.10	0.19	0.10	0.33	0.10	0.21	0.10	0.11	0.10	0.25	0.10	0.37	0.10	0.16	0.10	0.14	0.10	0.34	0.10
B-3	10-15	5-2-2013	MADEP EPH	BRL	12	BRL	12	BRL	12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12
B-4	0-5	5-2-2013	MADEP EPH	BRL	11	14	11	24	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-4	10-15	5-2-2013	MADEP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-5	0-5	5-2-2013	MADEP EPH	BRL	11	36	11	21	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-5	10-15	5-2-2013	MADEP EPH	190	11	800	11	370	11	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12
B-6	0-5	5-2-2013	MADEP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-6	10-15	5-2-2013	MADEP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-7	0-5	5-2-2013	MADEP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-7	5-10	5-2-2013	MADEP EPH	BRL	11	BRL	11	12	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	0.12		0.25	0.11	BRL	0.11	BRL	0.11	BRL	0.11
Selected Soil Standards																													
ATA RCS-1				1000		3000		1000		7		2		7		1000		70		70		1000		7		10		1000	

Notes:
RDL = Reported Detection Limit
BRL = Below Reporting Limit

Table 4:
Summary of Soil Analytical Data for VPH and target VOCs
 106 Hale Street, Bridgewater, MA
 (unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	m/p-Xylenes	RDL	o-Xylenes	RDL
B-1	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.057
B-1	5-10	5-2-2013	MADEP VPH	BRL	0.096	BRL	0.048
B-2	0-5	5-2-2013	MADEP VPH	0.18	0.069	0.86	0.034
B-3	0-5	5-2-2013	MADEP VPH	BRL	0.27	BRL	0.055
B-3	10-15	5-2-2013	8260B	BRL	0.0034	BRL	0.0017
B-4	0-5	5-2-2013	MADEP VPH	BRL	0.12	BRL	0.06
B-4	10-15	5-2-2013	MADEP VPH	BRL	0.10	BRL	0.051
B-5	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.053
B-5	10-15	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.053
B-6	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.054
B-6	10-15	5-2-2013	MADEP VPH	BRL	0.10	BRL	0.052
B-7	0-5	5-2-2013	MADEP VPH	BRL	0.088	BRL	0.044
B-7	5-10	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.055
<i>Selected Soil Standards</i>							
<i>MA RCS-1</i>				1000		3000	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 5:
Summary of Groundwater Analytical Data for EPH
 106 Hale Street, Bridgewater, MA
 (unit: ug/L, ppb)

Well ID	Sample Date	Analytical Method	C9-C18 ALIPHATICS	RDL	C19-C36 ALIPHATICS	RDL	C11-C22 AROMATICS	RDL
GEC-1	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
GEC-4	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
GEC-5	5-7-2013	MADEP EPH	150	100	240	100	200	100
GEC-6	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
<i>Selected Groundwater Standards</i>								
<i>MA RCGW-2</i>			5000		50000		5000	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 6:
Summary of Groundwater Analytical Data for Metals
 106 Hale Street, Bridgewater, MA
 (unit: ug/L, ppb)

Well ID	Sample Date	Analytical Method	Arsenic	RDL	Barium	RDL	Cadmium	RDL	Chromium	RDL	Lead	RDL	Nickel	RDL	Zinc	RDL
GEC-1	5-7-2013	6020A	3.2	0.40	72	10	BRL	0.50	BRL	1.0	BRL	1.0	BRL	5.0	22	10
GEC-4	5-7-2013	6020A	BRL	0.40	83	10	BRL	0.50	1.1	1.0	BRL	1.0	BRL	5.0	26	10
GEC-5	5-7-2013	6020A	BRL	0.40	19	10	BRL	0.50	BRL	1.0	BRL	1.0	BRL	5.0	27	10
GEC-6	5-7-2013	6020A	BRL	0.40	72	10	1.0	0.50	3.2	1.0	1.7	1.0	11	5.0	880	10
<i>Selected Groundwater Standards</i>																
<i>MA RCGW-2</i>			900		50000		4		300		10		200		900	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Boring Logs



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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-1/GEC-1

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 10' South of NE building corner & 20' from building

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack:

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/37	0-5'	SILT	0-5' = 0.4 ppmv	S-1: 0"-2" ASPHALT / GRAVEL 2"-10" Brown, SILT with little fine sand & small gravel (brick) 10"-18" Brown, SILT with little fine sand & small gravel (brick), coal ash between 14"-15" 18"-25" Brown, SILT 25"-37" Light Brown, SILT with some fine sand, little medium sand & small gravel	Samples collected for laboratory analysis: B-1 / 0'-5' VPH/ VOC, EPH/PAH and MA 14 metals	
10'	2	60/52	5-10'	SAND	5-10' = 0.0 ppmv	S-2: Wet @ 45" 0-32" Tan, fine to medium SAND, little small gravel, trace silt 32"-47" Tan, fine SAND 45"-52" Tan, fine SAND, some silt	B-1 / 5'-10' VPH/ VOC, EPH/PAH and MA 14 metals	
15'	3	60/28	10-15'	SAND	10-15' = 0.0 ppmv	S-3: Wet 0-28" Tan / Brown, fine to coarse SAND (no odor)		

B-1 completed as a 2" monitoring well to an approximate depth of 15' BSG with 10' of screen and 5' of riser. Completed with a flush mount roadbox. Designated GEC-1.

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/19	0-5'	TOP SOIL	0-5' = 0.7 ppmv	S-1: 0"-11" TOP SOIL, some small to medium gravel, small root at 12" 12"-19" BRICK	Samples collected for laboratory analysis: B-2 / 0'-5' VPH/ VOC, EPH/PAH and MA 14 metals	
				BRICK				
5'	2	24/19	5-7'	BRICK, WOOD, CONCRETE	5-7' = 0.2 ppmv	S-2: 0"-3" BRICK 3"-6" WOOD 6"-12" BRICK 12"-19" CONCRETE (Refusal)	Refusal encountered in four separate attempts from 2.5'-7' BSG	
7'								
10'								
							B-2 Not completed as a Monitoring Well	



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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-3

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location:

40' South of NE building corner and 120' east of building

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack:

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION						
	No.	Pen./Rec.	Depth											
5'	1	60/29	0-5'	SAND	0-5' = 2.5 ppmv	S-1: 0"-6" CONCRETE 6"-10" Brown, fine SAND, trace silt 10"-15" Dark Brown, SILT, some fine to medium sand (coal, brick, coal ash) 15"-21" Brown, SILT 21"-29" Tan, medium SAND, trace coarse sand & silt	Samples collected for laboratory analysis: B-3 / 10'-15' VPH, 8260, EPH and MA 14 metals							
				SILT										
				SAND										
					5-10' = 0.0 ppmv	S-2: Dry / No Odor 0"-4" Tan, medium SAND, trace coarse sand & silt 4"-20" Tan-brown, fine SAND 20"-46" Tan, fine to medium SAND, some small to medium gravel 46"-51" Tan, fine to medium SAND, some silt								
	2	60/51	5-10'	SAND										
10'														
	3	60/51	10-15'	SAND	10-15' = 13.0 ppmv	S-3: Wet @ 9' / No Odor 0"-14" Tan fine to medium SAND, some silt 14"-28" Brown, fine SAND, some medium to coarse sand 28"-30" Brown, fine SAND, some silt 30"-35" Brown, fine SAND, some medium to coarse sand 35"-41" Brown, fine SAND, some silt 41"-51" Brown, fine SAND, some medium to coarse sand								
15'														
							B-3 Not completed as a Monitoring Well							



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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-3

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location:

40' South of NE building corner and 120' east of building

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack:

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION						
	No.	Pen./Rec.	Depth											
5'	1	60/29	0-5'	SAND	0-5' = 2.5 ppmv	S-1: 0"-6" CONCRETE 6"-10" Brown, fine SAND, trace silt 10"-15" Dark Brown, SILT, some fine to medium sand (coal, brick, coal ash) 15"-21" Brown, SILT 21"-29" Tan, medium SAND, trace coarse sand & silt S-2: Dry / No Odor 0"-4" Tan, medium SAND, trace coarse sand & silt 4"-20" Tan-brown, fine SAND 20"-46" Tan, fine to medium SAND, some small to medium gravel 46"-51" Tan, fine to medium SAND, some silt S-3: Wet @ 9' / No Odor 0"-14" Tan fine to medium SAND, some silt 14"-28" Brown, fine SAND, some medium to coarse sand 28"-30" Brown, fine SAND, some silt 30"-35" Brown, fine SAND, some medium to coarse sand 35"-41" Brown, fine SAND, some silt 41"-51" Brown, fine SAND, some medium to coarse sand	Samples collected for laboratory analysis: B-3 / 10'-15' VPH, 8260, EPH and MA 14 metals							
				SILT										
				SAND										
					5-10' = 0.0 ppmv									
	2	60/51	5-10'	SAND										
10'	3	60/51	10-15'	SAND	10-15' = 13.0 ppmv									
15'												B-3 Not completed as a Monitoring Well		



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Project:
106 Hale Street
GEC project 1424-3020
Boring Log ID: B-4/GEC-4

Dates of Work: 5/2/2013 **Sheet:** 1 of 1
Weather: 60°F and sunny
Boring Location: 236' East of building, 40' South of North-east corner

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION			
	No.	Pen./Rec.	Depth								
5'	1	60/39	0-5'	SAND	0-5' = 0.4 ppmv	S-1: 0"-7" CONCRETE 7"-13" Tan, medium SAND, some silt and small to medium gravel 13"-36" Brown, SILT, trace fine sand, stiff (coal & coal ash) 36"-39" Tan, fine SAND	Samples collected for laboratory analysis: B-4 / 0'-5' VPH, EPH and MA 14 metals B-4 / 10'-15' VPH, EPH and MA 14 metals				
				SILT							
				SAND							
	2	60/52	5-10'	SAND		S-2: No Odor 0-37" Tan-brown, fine to medium SAND, trace silt 37"-52" Brown, fine SAND, some silt, mottling start at 46"					
10'	3	60/32	10-15'	SAND	5-10' = 0.7 ppmv 10-15' = 0.0 ppmv	S-3: Wet / No Odor 0-32" Tan-brown, medium to coarse SAND, trace medium gravel, mottling throughout sample	B-4 completed as a 2" monitoring well to an approximate depth of 15' BSG with 10' of screen and 5' of riser. Completed with a flush mount roadbox. Designated GEC-4.				
15'											

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Project:
106 Hale Street
GEC project 1424-3020

Dates of Work: 5/2/2013 **Sheet:** 1 of 1
Weather: 60°F and sunny
Boring Location: 215' East of building, 10' South of North-east corner

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:  Bentonite Seal:  Sand Pack:  Slotted Screen: 

[illegible]



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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-6/GEC-6

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 130' East of building, 10' South of North-east corner.

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/42	0-5'	SAND	0-5' = 0.0 ppmv	S-1: 0"-17" Tan, fine SAND, little silt and small to medium gravel 17"-33" Brown, SILT, little fine sand, moderately stiff 33"-42" Light brown, SILT, little fine sand, moderately stiff	Samples collected for laboratory analysis: B-6 / 10'-15' VPH, EPH and MA 14 metals	
				SILT				
10'	2	60/52	5-10'	SILT	5-10' = 0.2 ppmv	S-2: 0"-33" Brown, SILT, some fine sand 33"-52" Brown, SILT, some fine to medium sand, some mottling		
15'	3	60/52	10-15'	SAND	10-15' = 0.4 ppmv	S-3: Wet 0"-7" Red-orange, medium to coarse SAND 7"-27" Brown, SILT, some fine sand 27"-35" Brown, fine SAND, some silt 35"-40" Brown, medium to coarse SAND 40"-52" Tan, SILT, some fine sand		
				SILT				
				SAND				
				SILT				
							B-6 completed as a 2" monitoring well to an approximate depth of 17' BSG with 12' of screen and 5' of riser. Completed with a flush mount roadbox. Designated GEC-6.	

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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID:B-7

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

**Boring Location: 9' in and 4' to left of overhead door
(inside building)**

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

[illegible]

Laboratory Certificates of Analysis



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 10, 2013

Mike Bradley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: Hale St., Bridgewater
Client Job Number:
Project Number: 1424-2350
Laboratory Work Order Number: 13E0137

Enclosed are results of analyses for samples received by the laboratory on May 3, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Georgantas'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/10/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-2350

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0137

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Hale St., Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-1 (0-5ft)	13E0137-01	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-1 (5-10ft)	13E0137-02	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-2 (0-5ft)	13E0137-03	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-3 (0-5ft)	13E0137-04	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-3 (10-15ft)	13E0137-05	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B SW-846 8260C	
B-4 (0-5ft)	13E0137-06	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-4 (10-15ft)	13E0137-07	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-5 (0-5ft)	13E0137-08	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	



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REPORT DATE: 5/10/2013

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-2350

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0137

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Hale St., Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-5 (10-15ft)	13E0137-09	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-6 (0-5ft)	13E0137-10	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-6 (10-15ft)	13E0137-11	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-7 (0-5ft)	13E0137-12	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-7 (5-10ft)	13E0137-13	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method MA VPH, only hydrocarbon ranges were requested and reported for sample B-3(10-15ft)



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MADEP-EPH-04-1.1

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

C9-C18 Aliphatics, n-Nonane
B072491-BLK1, B072491-BS1, B072491-BSD1

MADEP-VPH-04-1.1

Qualifications:

Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.

Analyte & Samples(s) Qualified:

13E0137-02[B-1 (5-10ft)], 13E0137-03[B-2 (0-5ft)], 13E0137-05[B-3 (10-15ft)], 13E0137-11[B-6 (10-15ft)]

SW-846 6010C

Qualifications:

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Antimony, Barium, Lead, Zinc
13E0137-04[B-3 (0-5ft)], B072376-MS1

SW-846 7471B

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Mercury
B072378-BSD1, B072383-BS1

SW-846 8260C

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Bromoform
13E0137-05[B-3 (10-15ft)], B072417-BLK1, B072417-BS1, B072417-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Naphthalene
B072417-BS1



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Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

B072417-BSI

Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane, Dichlorodifluoromethane (Freon 12)

B072417-BSI, B072417-BSDI

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

13E0137-05[B-3 (10-15ft)], B072417-BLK I, B072417-BSI, B072417-BSDI

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,1,1,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane (DBCP), Bromoform, Naphthalene

13E0137-05[B-3 (10-15ft)], B072417-BLK I, B072417-BSI, B072417-BSDI

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane

13E0137-05[B-3 (10-15ft)], B072417-BLK I, B072417-BSI, B072417-BSDI

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane

B072417-BSI, B072417-BSDI



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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly in methanol with a soil/methanol ratio of 1:1 +/- 25% completely covered by methanol in the proper containers specified on the chain-of-custody form unless specified in this narrative.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and 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.

A handwritten signature in black ink, appearing to read "Daren J. Damboragian", is written over a horizontal line.

Daren J. Damboragian
Laboratory Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	65.8		40-140				5/8/13 14:13		
o-Terphenyl (OTP)	65.1		40-140				5/8/13 14:13		
2-Bromonaphthalene	71.6		40-140				5/8/13 14:13		
2-Fluorobiphenyl	74.1		40-140				5/8/13 14:13		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.05

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Benzene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Ethylbenzene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Naphthalene	ND	0.29	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Toluene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
o-Xylene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	104	70-130							
2,5-Dibromotoluene (PID)	104	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Arsenic	3.1	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Barium	30	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Chromium	6.7	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Lead	28	0.79	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Mercury	0.061	0.027	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:20	SAJ
Nickel	4.4	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Vanadium	13	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Zinc	31	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater.

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	73.9		40-140				5/8/13 14:34		
o-Terphenyl (OTP)	66.2		40-140				5/8/13 14:34		
2-Bromonaphthalene	73.1		40-140				5/8/13 14:34		
2-Fluorobiphenyl	73.8		40-140				5/8/13 14:34		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Sample Flags: O-01

Soil/Methanol Preservation Ratio: 1.28

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C5-C8 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Unadjusted C9-C12 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C9-C12 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C9-C10 Aromatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Benzene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Ethylbenzene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Naphthalene	ND	0.24	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Toluene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
m+p Xylene	ND	0.096	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
o-Xylene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	97.5	70-130							
2,5-Dibromotoluene (PID)	100	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Arsenic	4.2	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Barium	9.4	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Chromium	5.0	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Lead	6.2	0.81	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:22	SAJ
Nickel	4.3	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Vanadium	7.5	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Zinc	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.0		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
C19-C36 Aliphatics	46	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Unadjusted C11-C22 Aromatics	68	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
C11-C22 Aromatics	66	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(a)anthracene	0.20	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(a)pyrene	0.25	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(b)fluoranthene	0.35	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(g,h,i)perylene	0.18	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(k)fluoranthene	0.11	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Chrysene	0.23	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Fluoranthene	0.44	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Indeno(1,2,3-cd)pyrene	0.18	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Phenanthrene	0.22	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Pyrene	0.44	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Surrogates	% Recovery	Recovery Limits	Flag						
Chlorooctadecane (COD)	63.9	40-140							
o-Terphenyl (OTP)	60.6	40-140							
2-Bromonaphthalene	66.1	40-140							
2-Fluorobiphenyl	70.6	40-140							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Sample Flags: O-01

Soil/Methanol Preservation Ratio: 1.55

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C5-C8 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Unadjusted C9-C12 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C9-C12 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C9-C10 Aromatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Benzene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Ethylbenzene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Naphthalene	ND	0.17	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Toluene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
m+p Xylene	0.18	0.069	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
o-Xylene	0.086	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	109		70-130				5/7/13 18:48		
2,5-Dibromotoluene (PID)	106		70-130				5/7/13 18:48		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Arsenic	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Barium	37	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Beryllium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Cadmium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Chromium	12	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Lead	31	0.72	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Mercury	0.066	0.025	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:24	SAJ
Nickel	10	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Vanadium	19	0.95	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Zinc	87	0.95	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Unadjusted C11-C22 Aromatics	23	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
C11-C22 Aromatics	21	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(a)anthracene	0.19	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(a)pyrene	0.19	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(b)fluoranthene	0.33	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(g,h,i)perylene	0.21	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(k)fluoranthene	0.11	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Chrysene	0.25	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Fluoranthene	0.37	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Indeno(1,2,3-cd)pyrene	0.16	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Phenanthrene	0.14	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Pyrene	0.34	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	69.5	40-140	
o-Terphenyl (OTP)	68.5	40-140	
2-Bromonaphthalene	76.8	40-140	
2-Fluorobiphenyl	79.1	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.04

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Benzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Ethylbenzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Toluene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
o-Xylene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH

Surrogates	% Recovery	Recovery Limits	Flag
2,5-Dibromotoluene (FID)	98.9	70-130	5/7/13 19:24
2,5-Dibromotoluene (PID)	99.0	70-130	5/7/13 19:24



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/6/13 19:29	OP
Arsenic	4.1	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Barium	25	2.6	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/7/13 15:35	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Chromium	10	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Lead	31	0.79	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/6/13 19:29	OP
Mercury	0.043	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:22	SAJ
Nickel	5.1	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/7/13 15:35	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Vanadium	12	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Zinc	33	1.1	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/7/13 15:35	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromoform	ND	0.0017	mg/Kg dry	1	L-04, V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,4-Dioxane	ND	0.085	mg/Kg dry	1	V-16	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Naphthalene	ND	0.0085	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,3-Trichlorobenzene	ND	0.0085	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,4-Trichlorobenzene	ND	0.0034	mg/Kg dry	1	R-05, V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	116	70-130	5/6/13 14:20
Toluene-d8	101	70-130	5/6/13 14:20
4-Bromofluorobenzene	89.2	70-130	5/6/13 14:20



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	75.4		40-140				5/8/13 15:36		
o-Terphenyl (OTP)	70.5		40-140				5/8/13 15:36		
2-Bromonaphthalene	69.6		40-140				5/8/13 15:36		
2-Fluorobiphenyl	71.5		40-140				5/8/13 15:36		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Sample Flags: O-01

Soil/Methanol Preservation Ratio: 1.31

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	88.2		70-130				5/7/13 20:00		
2,5-Dibromotoluene (PID)	90.6		70-130				5/7/13 20:00		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Arsenic	3.4	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Barium	9.1	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Chromium	4.2	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Lead	4.1	0.88	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:24	SAJ
Nickel	6.1	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Vanadium	7.2	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Zinc	27	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.2		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
C19-C36 Aliphatics	14	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Unadjusted C11-C22 Aromatics	24	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
C11-C22 Aromatics	24	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	63.4		40-140				5/8/13 17:41		
o-Terphenyl (OTP)	60.1		40-140				5/8/13 17:41		
2-Bromonaphthalene	62.1		40-140				5/8/13 17:41		
2-Fluorobiphenyl	63.6		40-140				5/8/13 17:41		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.04

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C5-C8 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Unadjusted C9-C12 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C9-C12 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C9-C10 Aromatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Benzene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Ethylbenzene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Naphthalene	ND	0.30	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Toluene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
m+p Xylene	ND	0.12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
o-Xylene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	89.0		70-130				5/7/13 20:36		
2,5-Dibromotoluene (PID)	91.5		70-130				5/7/13 20:36		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Barium	48	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Beryllium	0.32	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Chromium	8.1	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Lead	27	0.82	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Mercury	0.075	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:25	SAJ
Nickel	4.7	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Vanadium	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Zinc	32	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.2		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Petroroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	76.5		40-140				5/8/13 18:02		
o-Terphenyl (OTP)	71.4		40-140				5/8/13 18:02		
2-Bromonaphthalene	73.5		40-140				5/8/13 18:02		
2-Fluorobiphenyl	75.6		40-140				5/8/13 18:02		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.23

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Benzene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Ethylbenzene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Toluene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
o-Xylene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH

Surrogates	% Recovery	Recovery Limits	Flag
2,5-Dibromotoluene (FID)	101	70-130	
2,5-Dibromotoluene (PID)	102	70-130	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Arsenic	3.0	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Barium	7.2	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Chromium	6.3	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Lead	5.1	0.78	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:27	SAJ
Nickel	4.2	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Vanadium	8.2	1.0	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Zinc	16	1.0	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
C19-C36 Aliphatics	36	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Unadjusted C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	72.4		40-140				5/8/13 18:23		
o-Terphenyl (OTP)	65.2		40-140				5/8/13 18:23		
2-Bromonaphthalene	74.2		40-140				5/8/13 18:23		
2-Fluorobiphenyl	76.9		40-140				5/8/13 18:23		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.11

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Benzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Ethylbenzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Toluene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
o-Xylene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	91.9		70-130				5/7/13 21:49		
2,5-Dibromotoluene (PID)	91.6		70-130				5/7/13 21:49		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Arsenic	4.7	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Barium	17	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Beryllium	0.29	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Cadmium	0.50	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Chromium	7.0	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Lead	13	0.80	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:29	SAJ
Nickel	5.4	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Vanadium	13	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Zinc	240	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.1		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	190	61	mg/Kg dry	5		MADEP-EPH-04-1.1	5/7/13	5/9/13 8:58	SCS
C19-C36 Aliphatics	800	61	mg/Kg dry	5		MADEP-EPH-04-1.1	5/7/13	5/9/13 8:58	SCS
Unadjusted C11-C22 Aromatics	370	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
C11-C22 Aromatics	370	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	71.9		40-140				5/8/13 18:43		
o-Terphenyl (OTP)	74.6		40-140				5/8/13 18:43		
2-Bromonaphthalene	65.9		40-140				5/8/13 18:43		
2-Fluorobiphenyl	74.0		40-140				5/8/13 18:43		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 0.87

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Unadjusted C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C9-C10 Aromatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Benzene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Ethylbenzene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Naphthalene	ND	0.41	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Toluene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
m+p Xylene	ND	0.16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
o-Xylene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	82.5	70-130							
2,5-Dibromotoluene (PID)	83.7	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Arsenic	3.4	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Barium	50	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Chromium	6.7	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Lead	200	0.87	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Mercury	0.11	0.030	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:30	SAJ
Nickel	4.8	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Vanadium	12	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Zinc	220	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	70.0		40-140				5/8/13 19:04		
o-Terphenyl (OTP)	66.9		40-140				5/8/13 19:04		
2-Bromonaphthalene	74.7		40-140				5/8/13 19:04		
2-Fluorobiphenyl	79.0		40-140				5/8/13 19:04		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.17

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Benzene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Ethylbenzene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Toluene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
o-Xylene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Surrogates	% Recovery	Recovery Limits		Flag					
2,5-Dibromotoluene (FID)	93.4	70-130						5/7/13 22:25	
2,5-Dibromotoluene (PID)	95.4	70-130						5/7/13 22:25	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Arsenic	3.2	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Barium	39	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Chromium	8.1	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Lead	23	0.83	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:32	SAJ
Nickel	4.1	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Vanadium	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Zinc	44	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.4		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	77.5	40-140	
o-Terphenyl (OTP)	68.8	40-140	
2-Bromonaphthalene	74.7	40-140	
2-Fluorobiphenyl	76.2	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Sample Flags: O-01

Soil/Methanol Preservation Ratio: 1.35

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Benzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Ethylbenzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Toluene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
o-Xylene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH

Surrogates	% Recovery	Recovery Limits	Flag
2,5-Dibromotoluene (FID)	93.9	70-130	5/7/13 23:01
2,5-Dibromotoluene (PID)	95.7	70-130	5/7/13 23:01



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Arsenic	3.1	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Barium	12	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Chromium	5.4	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Lead	4.8	0.84	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:38	SAJ
Nickel	5.2	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Vanadium	8.3	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Zinc	55	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.3		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	75.4		40-140				5/8/13 19:46		
o-Terphenyl (OTP)	71.0		40-140				5/8/13 19:46		
2-Bromonaphthalene	76.3		40-140				5/8/13 19:46		
2-Fluorobiphenyl	77.3		40-140				5/8/13 19:46		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.19

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C5-C8 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Unadjusted C9-C12 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C9-C12 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C9-C10 Aromatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Benzene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Ethylbenzene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Naphthalene	ND	0.22	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Toluene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
m+p Xylene	ND	0.088	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
o-Xylene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	85.0		70-130				5/7/13 23:37		
2,5-Dibromotoluene (PID)	84.4		70-130				5/7/13 23:37		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Arsenic	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Barium	8.8	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Beryllium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Cadmium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Chromium	4.2	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Lead	7.1	0.72	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:39	SAJ
Nickel	2.6	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Vanadium	7.1	0.96	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Zinc	35	0.96	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Unadjusted C11-C22 Aromatics	13	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
C11-C22 Aromatics	12	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Chrysene	0.12	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Fluoranthene	0.25	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Phenanthrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Pyrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	122		40-140				5/8/13 20:07		
o-Terphenyl (OTP)	110		40-140				5/8/13 20:07		
2-Bromonaphthalene	68.5		40-140				5/8/13 20:07		
2-Fluorobiphenyl	71.5		40-140				5/8/13 20:07		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.10

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Benzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Ethylbenzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Naphthalene	ND	0.28	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Toluene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
o-Xylene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH

Surrogates	% Recovery	Recovery Limits	Flag
2,5-Dibromotoluene (FID)	109	70-130	
2,5-Dibromotoluene (PID)	107	70-130	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Barium	18	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Chromium	2.2	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Lead	7.6	0.81	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Mercury	0.036	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:41	SAJ
Nickel	1.3	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Vanadium	3.5	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Zinc	18	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072491	20.4	2.00	05/07/13
13E0137-02 [B-1 (5-10ft)]	B072491	20.3	2.00	05/07/13
13E0137-03 [B-2 (0-5ft)]	B072491	20.1	2.00	05/07/13
13E0137-04 [B-3 (0-5ft)]	B072491	20.6	2.00	05/07/13
13E0137-05 [B-3 (10-15ft)]	B072491	20.0	2.00	05/07/13
13E0137-06 [B-4 (0-5ft)]	B072491	20.1	2.00	05/07/13
13E0137-07 [B-4 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-08 [B-5 (0-5ft)]	B072491	20.0	2.00	05/07/13
13E0137-09 [B-5 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-10 [B-6 (0-5ft)]	B072491	20.5	2.00	05/07/13
13E0137-11 [B-6 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-12 [B-7 (0-5ft)]	B072491	20.4	2.00	05/07/13
13E0137-13 [B-7 (5-10ft)]	B072491	20.1	2.00	05/07/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072480	15.7	16.4	05/07/13
13E0137-02 [B-1 (5-10ft)]	B072480	19.2	16.7	05/07/13
13E0137-03 [B-2 (0-5ft)]	B072480	23.2	15.6	05/07/13
13E0137-04 [B-3 (0-5ft)]	B072480	15.6	16.0	05/07/13
13E0137-06 [B-4 (0-5ft)]	B072480	15.6	16.7	05/07/13
13E0137-07 [B-4 (10-15ft)]	B072480	18.4	16.9	05/07/13
13E0137-08 [B-5 (0-5ft)]	B072480	16.6	16.3	05/07/13
13E0137-09 [B-5 (10-15ft)]	B072480	13.1	17.4	05/07/13
13E0137-10 [B-6 (0-5ft)]	B072480	17.6	16.9	05/07/13
13E0137-11 [B-6 (10-15ft)]	B072480	20.2	18.0	05/07/13
13E0137-12 [B-7 (0-5ft)]	B072480	17.9	15.4	05/07/13
13E0137-13 [B-7 (5-10ft)]	B072480	16.5	16.5	05/07/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-05 [B-3 (10-15ft)]	B072481	19.7	18.1	05/07/13

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13E0137-01 [B-1 (0-5ft)]	B072717	05/09/13
13E0137-02 [B-1 (5-10ft)]	B072717	05/09/13
13E0137-03 [B-2 (0-5ft)]	B072717	05/09/13
13E0137-04 [B-3 (0-5ft)]	B072717	05/09/13
13E0137-05 [B-3 (10-15ft)]	B072717	05/09/13
13E0137-06 [B-4 (0-5ft)]	B072717	05/09/13
13E0137-07 [B-4 (10-15ft)]	B072717	05/09/13
13E0137-08 [B-5 (0-5ft)]	B072717	05/09/13
13E0137-09 [B-5 (10-15ft)]	B072717	05/09/13
13E0137-10 [B-6 (0-5ft)]	B072717	05/09/13
13E0137-11 [B-6 (10-15ft)]	B072717	05/09/13
13E0137-12 [B-7 (0-5ft)]	B072717	05/09/13
13E0137-13 [B-7 (5-10ft)]	B072717	05/09/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072376	1.04	50.0	05/04/13
13E0137-02 [B-1 (5-10ft)]	B072376	1.02	50.0	05/04/13
13E0137-03 [B-2 (0-5ft)]	B072376	1.07	50.0	05/04/13
13E0137-04 [B-3 (0-5ft)]	B072376	1.01	50.0	05/04/13
13E0137-05 [B-3 (10-15ft)]	B072376	1.02	50.0	05/04/13
13E0137-06 [B-4 (0-5ft)]	B072376	1.02	50.0	05/04/13
13E0137-07 [B-4 (10-15ft)]	B072376	1.08	50.0	05/04/13
13E0137-08 [B-5 (0-5ft)]	B072376	1.02	50.0	05/04/13
13E0137-09 [B-5 (10-15ft)]	B072376	1.05	50.0	05/04/13
13E0137-10 [B-6 (0-5ft)]	B072376	1.01	50.0	05/04/13
13E0137-11 [B-6 (10-15ft)]	B072376	1.05	50.0	05/04/13
13E0137-12 [B-7 (0-5ft)]	B072376	1.06	50.0	05/04/13
13E0137-13 [B-7 (5-10ft)]	B072376	1.02	50.0	05/04/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-04 [B-3 (0-5ft)]	B072378	0.600	50.0	05/04/13
13E0137-05 [B-3 (10-15ft)]	B072378	0.610	50.0	05/04/13
13E0137-06 [B-4 (0-5ft)]	B072378	0.616	50.0	05/04/13
13E0137-07 [B-4 (10-15ft)]	B072378	0.605	50.0	05/04/13
13E0137-08 [B-5 (0-5ft)]	B072378	0.602	50.0	05/04/13
13E0137-09 [B-5 (10-15ft)]	B072378	0.615	50.0	05/04/13
13E0137-10 [B-6 (0-5ft)]	B072378	0.616	50.0	05/04/13
13E0137-11 [B-6 (10-15ft)]	B072378	0.609	50.0	05/04/13
13E0137-12 [B-7 (0-5ft)]	B072378	0.605	50.0	05/04/13
13E0137-13 [B-7 (5-10ft)]	B072378	0.610	50.0	05/04/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072383	0.616	50.0	05/06/13
13E0137-02 [B-1 (5-10ft)]	B072383	0.610	50.0	05/06/13
13E0137-03 [B-2 (0-5ft)]	B072383	0.607	50.0	05/06/13

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-05 [B-3 (10-15ft)]	B072417	6.95	10.0	05/06/13



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
Blank (B072417-BLK1)				Prepared & Analyzed: 05/06/13						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							L-04, V-05
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.010	mg/Kg wet							V-05



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
Blank (B072417-BLK1)										
Prepared & Analyzed: 05/06/13										
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							V-05
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.010	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.0040	mg/Kg wet							R-05, V-05
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0586		mg/Kg wet	0.0500		117	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0458		mg/Kg wet	0.0500		91.5	70-130			
LCS (B072417-BS1)										
Prepared & Analyzed: 05/06/13										
Acetone	0.278	0.10	mg/Kg wet	0.200		139	40-160			L-14, V-20 †
tert-Amyl Methyl Ether (TAME)	0.0190	0.0010	mg/Kg wet	0.0200		95.2	70-130			
Benzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130			
Bromochloromethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
Bromoform	0.0114	0.0020	mg/Kg wet	0.0200		57.1	70-130			L-04, V-05
Bromomethane	0.0113	0.010	mg/Kg wet	0.0200		56.5	40-160			L-14, V-20 †
2-Butanone (MEK)	0.196	0.040	mg/Kg wet	0.200		98.2	40-160			†
n-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
sec-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
tert-Butylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0198	0.0010	mg/Kg wet	0.0200		98.8	70-130			
Carbon Disulfide	0.0220	0.0060	mg/Kg wet	0.0200		110	70-130			
Carbon Tetrachloride	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130			
Chlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
Chlorodibromomethane	0.0153	0.0010	mg/Kg wet	0.0200		76.5	70-130			
Chloroethane	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
Chloroform	0.0207	0.0040	mg/Kg wet	0.0200		104	70-130			
Chloromethane	0.0166	0.010	mg/Kg wet	0.0200		82.8	40-160			†
2-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
4-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0145	0.0020	mg/Kg wet	0.0200		72.6	70-130			V-05
1,2-Dibromoethane (EDB)	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130			
Dibromomethane	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
1,3-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,4-Dichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS (B072417-BS1)				Prepared & Analyzed: 05/06/13						
Dichlorodifluoromethane (Freon 12)	0.0107	0.010	mg/Kg wet	0.0200		53.4	40-160			L-14 †
1,1-Dichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1-Dichloroethylene	0.0218	0.0040	mg/Kg wet	0.0200		109	70-130			
cis-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
trans-1,2-Dichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
1,3-Dichloropropane	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130			
2,2-Dichloropropane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130			
1,1-Dichloropropene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
cis-1,3-Dichloropropene	0.0167	0.0010	mg/Kg wet	0.0200		83.3	70-130			
trans-1,3-Dichloropropene	0.0169	0.0010	mg/Kg wet	0.0200		84.4	70-130			
Diethyl Ether	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
Diisopropyl Ether (DIPE)	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130			
1,4-Dioxane	0.168	0.10	mg/Kg wet	0.200		83.8	40-160			V-16 †
Ethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
Hexachlorobutadiene	0.0159	0.0020	mg/Kg wet	0.0200		79.7	70-130			
2-Hexanone (MBK)	0.175	0.020	mg/Kg wet	0.200		87.7	40-160			†
Isopropylbenzene (Cumene)	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
4-Methyl-2-pentanone (MIBK)	0.177	0.020	mg/Kg wet	0.200		88.5	40-160			†
Naphthalene	0.0128	0.010	mg/Kg wet	0.0200		64.1	70-130			L-07, V-05
n-Propylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Styrene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
1,1,1,2-Tetrachloroethane	0.0157	0.0020	mg/Kg wet	0.0200		78.6	70-130			V-05
1,1,2,2-Tetrachloroethane	0.0167	0.0010	mg/Kg wet	0.0200		83.7	70-130			
Tetrachloroethylene	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
Tetrahydrofuran	0.0199	0.010	mg/Kg wet	0.0200		99.3	70-130			
Toluene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
1,2,3-Trichlorobenzene	0.0140	0.010	mg/Kg wet	0.0200		70.1	70-130			V-05
1,2,4-Trichlorobenzene	0.0129	0.0040	mg/Kg wet	0.0200		64.7	70-130			L-07A, R-05, V-05
1,1,1-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,1,2-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130			
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Trichlorofluoromethane (Freon 11)	0.0217	0.010	mg/Kg wet	0.0200		108	70-130			
1,2,3-Trichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
1,2,4-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,3,5-Trimethylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
Vinyl Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.6	70-130			
m+p Xylene	0.0385	0.0040	mg/Kg wet	0.0400		96.2	70-130			
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0534		mg/Kg wet	0.0500		111	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0470		mg/Kg wet	0.0500		94.0	70-130			



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS Dup (B072417-BSD1)										
Prepared & Analyzed: 05/06/13										
Acetone	0.273	0.10	mg/Kg wet	0.200		137	40-160	1.95	20	L-14, V-20 †
tert-Amyl Methyl Ether (TAME)	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130	9.41	20	
Benzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	7.37	20	
Bromobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	8.11	20	
Bromochloromethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	8.67	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130	9.70	20	
Bromoform	0.0124	0.0020	mg/Kg wet	0.0200		61.8	70-130	7.91	20	L-04, V-05
Bromomethane	0.0138	0.010	mg/Kg wet	0.0200		68.8	40-160	19.6	20	L-14, V-20 †
2-Butanone (MEK)	0.214	0.040	mg/Kg wet	0.200		107	40-160	8.78	20	†
n-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	11.7	20	
sec-Butylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	7.94	20	
tert-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	7.93	20	
tert-Butyl Ethyl Ether (TBEE)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	7.88	20	
Carbon Disulfide	0.0231	0.0060	mg/Kg wet	0.0200		116	70-130	4.78	20	
Carbon Tetrachloride	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	6.89	20	
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	7.94	20	
Chlorodibromomethane	0.0166	0.0010	mg/Kg wet	0.0200		83.1	70-130	8.27	20	
Chloroethane	0.0208	0.010	mg/Kg wet	0.0200		104	70-130	0.289	20	
Chloroform	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130	7.71	20	
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	40-160	5.75	20	†
2-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	11.1	20	
4-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	9.95	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0163	0.0020	mg/Kg wet	0.0200		81.4	70-130	11.4	20	V-05
1,2-Dibromoethane (EDB)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	9.92	20	
Dibromomethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	8.92	20	
1,2-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	10.6	20	
1,3-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	9.62	20	
1,4-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	7.17	20	
Dichlorodifluoromethane (Freon 12)	0.0114	0.010	mg/Kg wet	0.0200		57.2	40-160	6.87	20	L-14 †
1,1-Dichloroethane	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	5.39	20	
1,2-Dichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	5.92	20	
1,1-Dichloroethylene	0.0229	0.0040	mg/Kg wet	0.0200		114	70-130	4.83	20	
cis-1,2-Dichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.12	20	
trans-1,2-Dichloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	8.53	20	
1,2-Dichloropropane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	9.18	20	
1,3-Dichloropropane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	13.0	20	
2,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130	6.47	20	
1,1-Dichloropropene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	6.24	20	
cis-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130	9.49	20	
trans-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130	11.4	20	
Diethyl Ether	0.0209	0.010	mg/Kg wet	0.0200		104	70-130	3.61	20	
Diisopropyl Ether (DIPE)	0.0241	0.0010	mg/Kg wet	0.0200		120	70-130	9.13	20	
1,4-Dioxane	0.174	0.10	mg/Kg wet	0.200		87.2	40-160	3.99	20	V-16 †
Ethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	8.38	20	
Hexachlorobutadiene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	13.3	20	
2-Hexanone (MBK)	0.196	0.020	mg/Kg wet	0.200		97.9	40-160	10.9	20	†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.63	20	
p-Isopropyltoluene (p-Cymene)	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	8.52	20	
Methyl tert-Butyl Ether (MTBE)	0.0229	0.0040	mg/Kg wet	0.0200		115	70-130	11.6	20	
Methylene Chloride	0.0214	0.010	mg/Kg wet	0.0200		107	70-130	6.25	20	
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101	40-160	13.6	20	†
Naphthalene	0.0148	0.010	mg/Kg wet	0.0200		74.2	70-130	14.6	20	V-05

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS Dup (B072417-BSDI)				Prepared & Analyzed: 05/06/13						
n-Propylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	10.2	20	
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	9.12	20	
1,1,1,2-Tetrachloroethane	0.0166	0.0020	mg/Kg wet	0.0200		83.1	70-130	5.57	20	V-05
1,1,2,2-Tetrachloroethane	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130	11.8	20	
Tetrachloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	10.6	20	
Tetrahydrofuran	0.0232	0.010	mg/Kg wet	0.0200		116	70-130	15.4	20	
Toluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.01	20	
1,2,3-Trichlorobenzene	0.0166	0.010	mg/Kg wet	0.0200		82.8	70-130	16.6	20	V-05
1,2,4-Trichlorobenzene	0.0162	0.0040	mg/Kg wet	0.0200		80.8	70-130	22.1 *	20	V-05, R-05
1,1,1-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	6.65	20	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	12.8	20	
Trichloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	8.24	20	
Trichlorofluoromethane (Freon 11)	0.0234	0.010	mg/Kg wet	0.0200		117	70-130	7.71	20	
1,2,3-Trichloropropane	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	8.12	20	
1,2,4-Trimethylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	6.87	20	
1,3,5-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	11.8	20	
Vinyl Chloride	0.0182	0.010	mg/Kg wet	0.0200		91.2	70-130	5.17	20	
m+p Xylene	0.0415	0.0040	mg/Kg wet	0.0400		104	70-130	7.60	20	
o-Xylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	6.73	20	
Surrogate: 1,2-Dichloroethane-d4	0.0577		mg/Kg wet	0.0500		115	70-130			
Surrogate: Toluene-d8	0.0516		mg/Kg wet	0.0500		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.0483		mg/Kg wet	0.0500		96.7	70-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072491 - SW-846 3546

Blank (B072491-BLK1)

Prepared: 05/07/13 Analyzed: 05/08/13

C9-C18 Aliphatics	ND	10	mg/Kg wet							L-04
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							L-04
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							

Surrogate: Chlorooctadecane (COD)	4.26		mg/Kg wet	4.99		85.4	40-140
Surrogate: o-Terphenyl (OTP)	3.83		mg/Kg wet	5.00		76.6	40-140
Surrogate: 2-Bromonaphthalene	3.58		mg/Kg wet	5.00		71.6	40-140
Surrogate: 2-Fluorobiphenyl	3.59		mg/Kg wet	5.00		71.9	40-140

LCS (B072491-BS1)

Prepared: 05/07/13 Analyzed: 05/08/13

Acenaphthene	3.89	0.10	mg/Kg wet	5.00		77.8	40-140
Acenaphthylene	3.75	0.10	mg/Kg wet	5.00		75.0	40-140
Anthracene	4.02	0.10	mg/Kg wet	5.00		80.5	40-140
Benzo(a)anthracene	4.18	0.10	mg/Kg wet	5.00		83.5	40-140
Benzo(a)pyrene	4.05	0.10	mg/Kg wet	5.00		81.1	40-140
Benzo(b)fluoranthene	4.19	0.10	mg/Kg wet	5.00		83.9	40-140
Benzo(g,h,i)perylene	4.43	0.10	mg/Kg wet	5.00		88.7	40-140
Benzo(k)fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.3	40-140
Chrysene	3.94	0.10	mg/Kg wet	5.00		78.8	40-140

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072491 - SW-846 3546										
LCS (B072491-BS1)					Prepared: 05/07/13 Analyzed: 05/08/13					
Dibenz(a,h)anthracene	4.40	0.10	mg/Kg wet	5.00		88.1	40-140			
Fluoranthene	4.10	0.10	mg/Kg wet	5.00		82.0	40-140			
Fluorene	4.00	0.10	mg/Kg wet	5.00		80.0	40-140			
Indeno(1,2,3-cd)pyrene	4.46	0.10	mg/Kg wet	5.00		89.1	40-140			
2-Methylnaphthalene	3.72	0.10	mg/Kg wet	5.00		74.5	40-140			
Naphthalene	3.32	0.10	mg/Kg wet	5.00		66.5	40-140			
Phenanthrene	4.07	0.10	mg/Kg wet	5.00		81.5	40-140			
Pyrene	4.00	0.10	mg/Kg wet	5.00		80.1	40-140			
n-Decane	2.22	0.10	mg/Kg wet	5.00		44.5	40-140			
n-Docosane	4.15	0.10	mg/Kg wet	5.00		83.0	40-140			
n-Dodecane	3.33	0.10	mg/Kg wet	5.00		66.6	40-140			
n-Eicosane	4.12	0.10	mg/Kg wet	5.00		82.3	40-140			
n-Hexacosane	3.90	0.10	mg/Kg wet	5.00		78.0	40-140			
n-Hexadecane	4.22	0.10	mg/Kg wet	5.00		84.3	40-140			
n-Hexatriacontane	3.69	0.10	mg/Kg wet	5.00		73.9	40-140			
n-Nonadecane	4.16	0.10	mg/Kg wet	5.00		83.2	40-140			
n-Nonane	1.19	0.10	mg/Kg wet	5.00		23.7	30-140			L-04
n-Octacosane	3.79	0.10	mg/Kg wet	5.00		75.9	40-140			
n-Octadecane	4.18	0.10	mg/Kg wet	5.00		83.6	40-140			
n-Tetracosane	3.99	0.10	mg/Kg wet	5.00		79.9	40-140			
n-Tetradecane	3.94	0.10	mg/Kg wet	5.00		78.8	40-140			
n-Triacontane	3.81	0.10	mg/Kg wet	5.00		76.1	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.09		mg/Kg wet	4.99		82.0	40-140			
Surrogate: o-Terphenyl (OTP)	3.81		mg/Kg wet	5.00		76.1	40-140			
Surrogate: 2-Bromonaphthalene	3.63		mg/Kg wet	5.00		72.6	40-140			
Surrogate: 2-Fluorobiphenyl	3.75		mg/Kg wet	5.00		75.0	40-140			
LCS Dup (B072491-BS1)					Prepared: 05/07/13 Analyzed: 05/08/13					
Acenaphthene	3.85	0.10	mg/Kg wet	5.00		77.0	40-140	1.04	25	
Acenaphthylene	3.70	0.10	mg/Kg wet	5.00		74.1	40-140	1.18	25	
Anthracene	4.03	0.10	mg/Kg wet	5.00		80.6	40-140	0.216	25	
Benzo(a)anthracene	4.26	0.10	mg/Kg wet	5.00		85.3	40-140	2.12	25	
Benzo(a)pyrene	4.15	0.10	mg/Kg wet	5.00		82.9	40-140	2.24	25	
Benzo(b)fluoranthene	4.31	0.10	mg/Kg wet	5.00		86.3	40-140	2.84	25	
Benzo(g,h,i)perylene	4.55	0.10	mg/Kg wet	5.00		90.9	40-140	2.54	25	
Benzo(k)fluoranthene	4.25	0.10	mg/Kg wet	5.00		85.0	40-140	1.92	25	
Chrysene	4.03	0.10	mg/Kg wet	5.00		80.5	40-140	2.18	25	
Dibenz(a,h)anthracene	4.52	0.10	mg/Kg wet	5.00		90.5	40-140	2.68	25	
Fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.4	40-140	1.61	25	
Fluorene	3.96	0.10	mg/Kg wet	5.00		79.2	40-140	0.937	25	
Indeno(1,2,3-cd)pyrene	4.57	0.10	mg/Kg wet	5.00		91.5	40-140	2.62	25	
2-Methylnaphthalene	3.66	0.10	mg/Kg wet	5.00		73.2	40-140	1.74	25	
Naphthalene	3.27	0.10	mg/Kg wet	5.00		65.4	40-140	1.64	25	
Phenanthrene	4.09	0.10	mg/Kg wet	5.00		81.7	40-140	0.284	25	
Pyrene	4.06	0.10	mg/Kg wet	5.00		81.2	40-140	1.41	25	
n-Decane	2.16	0.10	mg/Kg wet	5.00		43.1	40-140	3.03	25	
n-Docosane	4.35	0.10	mg/Kg wet	5.00		87.0	40-140	4.68	25	
n-Dodecane	3.40	0.10	mg/Kg wet	5.00		68.0	40-140	1.99	25	
n-Eicosane	4.33	0.10	mg/Kg wet	5.00		86.6	40-140	5.03	25	
n-Hexacosane	4.08	0.10	mg/Kg wet	5.00		81.6	40-140	4.54	25	



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072491 - SW-846 3546

LCS Dup (B072491-BSD1)

Prepared: 05/07/13 Analyzed: 05/08/13

n-Hexadecane	4.39	0.10	mg/Kg wet	5.00		87.7	40-140	4.00	25	
n-Hexatriacontane	4.04	0.10	mg/Kg wet	5.00		80.9	40-140	9.03	25	
n-Nonadecane	4.36	0.10	mg/Kg wet	5.00		87.3	40-140	4.82	25	
n-Nonane	1.05	0.10	mg/Kg wet	5.00		21.0 *	30-140	12.0	25	L-04
n-Octacosane	3.97	0.10	mg/Kg wet	5.00		79.3	40-140	4.46	25	
n-Octadecane	4.39	0.10	mg/Kg wet	5.00		87.8	40-140	4.86	25	
n-Tetracosane	4.19	0.10	mg/Kg wet	5.00		83.8	40-140	4.83	25	
n-Tetradecane	4.08	0.10	mg/Kg wet	5.00		81.5	40-140	3.36	25	
n-Triacontane	3.98	0.10	mg/Kg wet	5.00		79.5	40-140	4.38	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.11		mg/Kg wet	4.99		82.3	40-140			
Surrogate: o-Terphenyl (OTP)	3.61		mg/Kg wet	5.00		72.2	40-140			
Surrogate: 2-Bromonaphthalene	3.49		mg/Kg wet	5.00		69.8	40-140			
Surrogate: 2-Fluorobiphenyl	3.60		mg/Kg wet	5.00		72.0	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072480 - MA VPH										
Blank (B072480-BLK1)				Prepared & Analyzed: 05/07/13						
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
Naphthalene	ND	0.25	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
o-Xylene	ND	0.050	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0348		mg/Kg wet	0.0400		87.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0377		mg/Kg wet	0.0400		94.1	70-130			
LCS (B072480-BS1)				Prepared & Analyzed: 05/07/13						
Benzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Butylcyclohexane	0.0879	0.0010	mg/Kg wet	0.100		87.9	70-130			
Decane	0.0931	0.0010	mg/Kg wet	0.100		93.1	70-130			
Ethylbenzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.0979	0.0050	mg/Kg wet	0.100		97.9	70-130			
Nonane	0.0882	0.0010	mg/Kg wet	0.100		88.2	30-130			
Pentane	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
Toluene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
2,2,4-Trimethylpentane	0.0928	0.0010	mg/Kg wet	0.100		92.8	70-130			
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		106	70-130			
o-Xylene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0376		mg/Kg wet	0.0400		94.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0384		mg/Kg wet	0.0400		95.9	70-130			
LCS Dup (B072480-BSD1)				Prepared & Analyzed: 05/07/13						
Benzene	0.106	0.0010	mg/Kg wet	0.100		106	70-130	2.96	25	
Butylcyclohexane	0.0911	0.0010	mg/Kg wet	0.100		91.1	70-130	3.60	25	
Decane	0.0981	0.0010	mg/Kg wet	0.100		98.1	70-130	5.21	25	
Ethylbenzene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.20	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.96	25	
2-Methylpentane	0.103	0.0010	mg/Kg wet	0.100		103	70-130	2.73	25	
Naphthalene	0.105	0.0050	mg/Kg wet	0.100		105	70-130	6.88	25	
Nonane	0.0918	0.0010	mg/Kg wet	0.100		91.8	30-130	3.93	25	
Pentane	0.108	0.0010	mg/Kg wet	0.100		108	70-130	2.67	25	
Toluene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.08	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.10	25	
2,2,4-Trimethylpentane	0.0950	0.0010	mg/Kg wet	0.100		95.0	70-130	2.34	25	
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130	3.06	25	
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.09	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0432		mg/Kg wet	0.0400		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0388		mg/Kg wet	0.0400		96.9	70-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072481 - MA VPH										
Blank (B072481-BLK1) Prepared & Analyzed: 05/07/13										
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0348		mg/Kg wet	0.0400		87.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0377		mg/Kg wet	0.0400		94.1	70-130			
LCS (B072481-BS1) Prepared & Analyzed: 05/07/13										
Benzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Butylcyclohexane	0.0879	0.0010	mg/Kg wet	0.100		87.9	70-130			
Decane	0.0931	0.0010	mg/Kg wet	0.100		93.1	70-130			
Ethylbenzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.0979	0.010	mg/Kg wet	0.100		97.9	70-130			
Nonane	0.0882	0.0010	mg/Kg wet	0.100		88.2	30-130			
Pentane	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
Toluene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
2,2,4-Trimethylpentane	0.0928	0.0010	mg/Kg wet	0.100		92.8	70-130			
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		106	70-130			
o-Xylene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0376		mg/Kg wet	0.0400		94.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0384		mg/Kg wet	0.0400		95.9	70-130			
LCS Dup (B072481-BS1) Prepared & Analyzed: 05/07/13										
Benzene	0.106	0.0010	mg/Kg wet	0.100		106	70-130	2.96	25	
Butylcyclohexane	0.0911	0.0010	mg/Kg wet	0.100		91.1	70-130	3.60	25	
Decane	0.0981	0.0010	mg/Kg wet	0.100		98.1	70-130	5.21	25	
Ethylbenzene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.20	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.96	25	
2-Methylpentane	0.103	0.0010	mg/Kg wet	0.100		103	70-130	2.73	25	
Naphthalene	0.105	0.010	mg/Kg wet	0.100		105	70-130	6.88	25	
Nonane	0.0918	0.0010	mg/Kg wet	0.100		91.8	30-130	3.93	25	
Pentane	0.108	0.0010	mg/Kg wet	0.100		108	70-130	2.67	25	
Toluene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.08	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.10	25	
2,2,4-Trimethylpentane	0.0950	0.0010	mg/Kg wet	0.100		95.0	70-130	2.34	25	
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130	3.06	25	
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.09	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0432		mg/Kg wet	0.0400		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0388		mg/Kg wet	0.0400		96.9	70-130			



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072376 - SW-846 3050B										
Blank (B072376-BLK1) Prepared: 05/04/13 Analyzed: 05/06/13										
Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B072376-BS1) Prepared: 05/04/13 Analyzed: 05/06/13										
Antimony	82.0	5.0	mg/Kg wet	106		77.4	8.2-218.9			
Arsenic	178	5.0	mg/Kg wet	182		97.9	83-117.6			
Barium	142	5.0	mg/Kg wet	143		99.2	83.2-117.5			
Beryllium	101	0.50	mg/Kg wet	98.3		103	83.9-116			
Cadmium	61.7	0.50	mg/Kg wet	60.4		102	83.1-116.9			
Chromium	125	1.0	mg/Kg wet	125		99.7	81.6-117.6			
Lead	125	1.5	mg/Kg wet	136		91.7	82.4-117.8			
Nickel	126	1.0	mg/Kg wet	128		98.3	84.4-115.6			
Selenium	73.1	10	mg/Kg wet	85.9		85.1	80-120			
Silver	56.8	1.0	mg/Kg wet	61.3		92.6	66.2-133.8			
Thallium	133	5.0	mg/Kg wet	144		92.4	81.2-118.8			
Vanadium	106	2.0	mg/Kg wet	104		102	75.5-124			
Zinc	186	2.0	mg/Kg wet	204		90.9	81.9-117.6			
LCS Dup (B072376-BSD1) Prepared: 05/04/13 Analyzed: 05/06/13										
Antimony	76.5	5.0	mg/Kg wet	106		72.1	8.2-218.9	7.05	30	
Arsenic	176	5.0	mg/Kg wet	182		96.8	83-117.6	1.18	30	
Barium	137	5.0	mg/Kg wet	143		95.9	83.2-117.5	3.42	30	
Beryllium	98.0	0.50	mg/Kg wet	98.3		99.7	83.9-116	3.25	30	
Cadmium	59.7	0.50	mg/Kg wet	60.4		98.9	83.1-116.9	3.33	30	
Chromium	122	1.0	mg/Kg wet	125		97.5	81.6-117.6	2.29	30	
Lead	122	1.5	mg/Kg wet	136		89.6	82.4-117.8	2.40	30	
Nickel	122	1.0	mg/Kg wet	128		95.3	84.4-115.6	3.15	30	
Selenium	71.0	10	mg/Kg wet	85.9		82.7	80-120	2.80	30	
Silver	54.9	1.0	mg/Kg wet	61.3		89.6	66.2-133.8	3.30	30	
Thallium	133	5.0	mg/Kg wet	144		92.4	81.2-118.8	0.0333	30	
Vanadium	103	2.0	mg/Kg wet	104		99.2	75.5-124	2.29	30	
Zinc	184	2.0	mg/Kg wet	204		90.4	81.9-117.6	0.579	30	



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072376 - SW-846 3050B

Duplicate (B072376-DUP1)		Source: 13E0137-04			Prepared: 05/04/13		Analyzed: 05/06/13			
Antimony	ND	2.5	mg/Kg dry		ND		NC	35		
Arsenic	3.95	2.5	mg/Kg dry		4.13		4.40	35		
Barium	25.3	2.5	mg/Kg dry		25.0		0.918	35		
Beryllium	0.281	0.25	mg/Kg dry		ND		NC	35		
Cadmium	ND	0.25	mg/Kg dry		ND		NC	35		
Chromium	8.88	0.49	mg/Kg dry		10.2		13.6	35		
Lead	25.4	0.74	mg/Kg dry		30.6		18.7	35		
Nickel	5.06	0.49	mg/Kg dry		5.11		0.997	35		
Selenium	ND	4.9	mg/Kg dry		ND		NC	35		
Silver	ND	0.49	mg/Kg dry		ND		NC	35		
Thallium	ND	2.5	mg/Kg dry		ND		NC	35		
Vanadium	11.3	0.98	mg/Kg dry		11.6		2.14	35		
Zinc	33.0	0.98	mg/Kg dry		32.7		0.888	35		

MRL Check (B072376-MRL1)

Prepared: 05/04/13 Analyzed: 05/06/13

Lead	0.723	0.71	mg/Kg wet	0.711	102	80-120				
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Matrix Spike (B072376-MS1)

Source: 13E0137-04

Prepared: 05/04/13 Analyzed: 05/06/13

Antimony	8.90	2.4	mg/Kg dry	24.5	ND	36.4	* 75-125			MS-07
Arsenic	25.3	2.4	mg/Kg dry	24.5	4.13	86.5	75-125			
Barium	39.7	2.4	mg/Kg dry	24.5	25.0	59.9	* 75-125			MS-07
Beryllium	23.6	0.24	mg/Kg dry	24.5	0.245	95.6	75-125			
Cadmium	22.3	0.24	mg/Kg dry	24.5	ND	91.2	75-125			
Chromium	32.8	0.49	mg/Kg dry	24.5	10.2	92.3	75-125			
Lead	39.4	0.73	mg/Kg dry	24.5	30.6	35.9	* 75-125			MS-07
Nickel	27.0	0.49	mg/Kg dry	24.5	5.11	89.3	75-125			
Selenium	20.0	4.9	mg/Kg dry	24.5	ND	81.7	75-125			
Silver	20.9	0.49	mg/Kg dry	24.5	ND	85.6	75-125			
Thallium	21.1	2.4	mg/Kg dry	24.5	ND	86.2	75-125			
Vanadium	34.7	0.98	mg/Kg dry	24.5	11.6	94.5	75-125			
Zinc	45.1	0.98	mg/Kg dry	24.5	32.7	50.8	* 75-125			MS-07

Batch B072378 - SW-846 7471

Blank (B072378-BLK1)

Prepared: 05/04/13 Analyzed: 05/06/13

Mercury	ND	0.025	mg/Kg wet							
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LCS (B072378-BS1)

Prepared: 05/04/13 Analyzed: 05/06/13

Mercury	4.61	0.33	mg/Kg wet	4.05	114	71.6-128.1				
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LCS Dup (B072378-BSD1)

Prepared: 05/04/13 Analyzed: 05/06/13

Mercury	5.59	0.67	mg/Kg wet	4.05	138	* 71.6-128.1	19.3	30		L-07
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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072378 - SW-846 7471										
Duplicate (B072378-DUP1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Mercury	0.0460	0.027	mg/Kg dry		0.0426			7.80	35	
Matrix Spike (B072378-MS1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Mercury	0.219	0.026	mg/Kg dry	0.176	0.0426	100	75-125			
Batch B072383 - SW-846 7471										
Blank (B072383-BLK1)		Prepared & Analyzed: 05/06/13								
Mercury	ND	0.025	mg/Kg wet							
LCS (B072383-BS1)		Prepared & Analyzed: 05/06/13								
Mercury	5.50	0.66	mg/Kg wet	4.05		136	71.6-128.1			L-07
LCS Dup (B072383-BSD1)		Prepared & Analyzed: 05/06/13								
Mercury	4.50	0.34	mg/Kg wet	4.05		111	71.6-128.1	19.9	30	



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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072717 - % Solids										
Duplicate (B072717-DUP2)										
Source: 13E0137-04 Prepared: 05/09/13 Analyzed: 05/10/13										
% Solids	93.3		% Wt		93.8			0.534	20	

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
O-01	Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Soil	
C9-C18 Aliphatics	CT,NC,WA,ME,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,ME,NH-P
Acenaphthene	CT,NC,WA,ME,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,ME,NH-P
Anthracene	CT,NC,WA,ME,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,ME,NH-P
Chrysene	CT,NC,WA,ME,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,ME,NH-P
Fluoranthene	CT,NC,WA,ME,ME,NH-P
Fluorene	CT,NC,WA,ME,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME,ME
Naphthalene	CT,NC,WA,ME,ME,NH-P
Phenanthrene	CT,NC,WA,ME,ME,NH-P
Pyrene	CT,NC,WA,ME,ME,NH-P
MADEP-VPH-04-1.1 in Soil	
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,ME,NH-P
Benzene	CT,NC,WA,ME,ME,NH-P
Benzene	CT,NC,WA,ME,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,ME,NH-P
Naphthalene	CT,NC,WA,ME,ME,NH-P
Naphthalene	CT,NC,WA,ME,ME,NH-P
Toluene	CT,NC,WA,ME,ME,NH-P
Toluene	CT,NC,WA,ME,ME,NH-P
m+p Xylene	CT,NC,WA,ME,ME,NH-P
m+p Xylene	CT,NC,WA,ME,ME,NH-P
o-Xylene	CT,NC,WA,ME,ME,NH-P
o-Xylene	CT,NC,WA,ME,ME,NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,ME,NC,VA
Barium	CT,NH,NY,ME,NC,VA
Beryllium	CT,NH,NY,ME,NC,VA
Cadmium	CT,NH,NY,ME,NC,VA
Chromium	CT,NH,NY,ME,NC,VA
Lead	CT,NH,NY,AIHA,ME,NC,VA
Nickel	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,NC,VA
Silver	CT,NH,NY,ME,NC,VA
Thallium	CT,NH,NY,ME,NC,VA
Vanadium	CT,NH,NY,ME,NC,VA
Zinc	CT,NH,NY,ME,NC,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME



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CERTIFICATIONS

Certified Analyses included in this Report

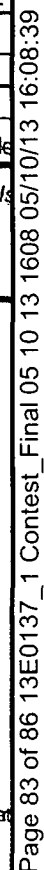
Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME



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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: GCC RECEIVED BY: JMH DATE: 5/3/13

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples?

If not, explain:

Yes No

3) Are all the samples in good condition?

If not, explain:

Yes No

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 3.0 °C

5) Are there Dissolved samples for the lab to filter?

Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples?

Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No

(Walk-in clients only) if not already approved

Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	<u>13</u>
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>15</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol 2 13

Doc# 277 # Bisulfate 2 # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____ Unpreserved

Time and Date Frozen:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory

Project #: 13E0137

Project Location: Hale St., Bridgewater

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E0137-01 thru 13E0137-13

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B ()	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A (X)	6020 Metals CAM III D ()	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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.

Signature: _____



Position: Laboratory Manager

Printed Name: Daren J. Damboragian

Date: 05/10/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 15, 2013

Mike Bradley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: 106 Hale, Bridgewater
Client Job Number:
Project Number: 1424-3020
Laboratory Work Order Number: 13E0263

Enclosed are results of analyses for samples received by the laboratory on May 8, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "James Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/15/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-3020

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0263

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 106 Hale, Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GEC-1	13E0263-01	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	
GEC-4	13E0263-02	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	
GEC-5	13E0263-03	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	
GEC-6	13E0263-04	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	



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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8270, only a select list of PAH compounds were analyzed and reported in order to achieve lower detection limits than possible with the EPH analysis.

MADEP-EPH-04-I.1

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

n-Decane, n-Nonane
B072825-BSDI

MADEP-EPH-04-I.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-I.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and 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.

Michael A. Erickson
Laboratory Director



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Surrogates	% Recovery		Recovery Limits		Flag				
o-Terphenyl (OTP)	125		30-130					5/14/13 2:21	



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Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	57.2	40-140	5/13/13 13:31
o-Terphenyl (OTP)	66.0	40-140	5/13/13 13:31
2-Bromonaphthalene	65.2	40-140	5/13/13 13:31
2-Fluorobiphenyl	69.0	40-140	5/13/13 13:31



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	95.7		70-130				5/9/13 23:12		
2,5-Dibromotoluene (PID)	101		70-130				5/9/13 23:12		



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Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Arsenic	3.2	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Barium	72	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:35	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Zinc	22	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM

Surrogates	% Recovery	Recovery Limits	Flag
o-Terphenyl (OTP)	125	30-130	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	55.9	40-140	5/13/13 13:50
o-Terphenyl (OTP)	68.7	40-140	5/13/13 13:50
2-Bromonaphthalene	86.6	40-140	5/13/13 13:50
2-Fluorobiphenyl	89.0	40-140	5/13/13 13:50



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	87.9	70-130							
2,5-Dibromotoluene (PID)	87.4	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Barium	83	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Chromium	1.1	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:36	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Zinc	26	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Surrogates		% Recovery	Recovery Limits		Flag				
o-Terphenyl (OTP)		108	30-130					5/14/13 3:19	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	150	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
C19-C36 Aliphatics	240	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Unadjusted C11-C22 Aromatics	200	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
C11-C22 Aromatics	200	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	49.5	40-140	5/13/13 14:10
o-Terphenyl (OTP)	61.0	40-140	5/13/13 14:10
2-Bromonaphthalene	78.0	40-140	5/13/13 14:10
2-Fluorobiphenyl	81.9	40-140	5/13/13 14:10

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	86.9	70-130							
2,5-Dibromotoluene (PID)	88.6	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Barium	19	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:38	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Zinc	27	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(a)pyrene	ND	0.10	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Chrysene	ND	0.20	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	I		SW-846 8270D	5/11/13	5/14/13 3:48	CJM

Surrogates	% Recovery	Recovery Limits	Flag
o-Terphenyl (OTP)	115	30-130	



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Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	58.7	40-140	5/13/13 14:30
o-Terphenyl (OTP)	67.8	40-140	5/13/13 14:30
2-Bromonaphthalene	87.4	40-140	5/13/13 14:30
2-Fluorobiphenyl	89.1	40-140	5/13/13 14:30



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Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	100		70-130				5/10/13 1:01		
2,5-Dibromotoluene (PID)	98.0		70-130				5/10/13 1:01		



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Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Arsenic	1.7	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Barium	72	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Cadmium	1.0	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Chromium	3.2	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Lead	1.7	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:40	SAJ
Nickel	11	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Zinc	880	100	µg/L	10		SW-846 6020A	5/9/13	5/10/13 14:44	KSH



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Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072825	1000	2.00	05/11/13
13E0263-02 [GEC-4]	B072825	1000	2.00	05/11/13
13E0263-03 [GEC-5]	B072825	1000	2.00	05/11/13
13E0263-04 [GEC-6]	B072825	1000	2.00	05/11/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072697	5	5.00	05/09/13
13E0263-02 [GEC-4]	B072697	5	5.00	05/09/13
13E0263-03 [GEC-5]	B072697	5	5.00	05/09/13
13E0263-04 [GEC-6]	B072697	5	5.00	05/09/13

Prep Method: SW-846 3005A Dissolved-SW-846 6020A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072716	50.0	50.0	05/09/13
13E0263-02 [GEC-4]	B072716	50.0	50.0	05/09/13
13E0263-03 [GEC-5]	B072716	50.0	50.0	05/09/13
13E0263-04 [GEC-6]	B072716	50.0	50.0	05/09/13

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072651	6.00	6.00	05/09/13
13E0263-02 [GEC-4]	B072651	6.00	6.00	05/09/13
13E0263-03 [GEC-5]	B072651	6.00	6.00	05/09/13
13E0263-04 [GEC-6]	B072651	6.00	6.00	05/09/13

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072882	1000	2.00	05/11/13
13E0263-02 [GEC-4]	B072882	1000	2.00	05/11/13
13E0263-03 [GEC-5]	B072882	1000	2.00	05/11/13
13E0263-04 [GEC-6]	B072882	1000	2.00	05/11/13



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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072882 - SW-846 3510C										
Blank (B072882-BLK1)				Prepared: 05/11/13 Analyzed: 05/14/13						
Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(g,h,i)perylene	ND	0.50	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Surrogate: o-Terphenyl (OTP)	114		µg/L	100		114	30-130			
LCS (B072882-BS1)				Prepared: 05/11/13 Analyzed: 05/14/13						
Benzo(a)anthracene	88.4	1.2	µg/L	100		88.4	40-140			
Benzo(a)pyrene	88.8	2.5	µg/L	100		88.8	40-140			
Benzo(b)fluoranthene	90.3	1.2	µg/L	100		90.3	40-140			
Benzo(g,h,i)perylene	94.5	12	µg/L	100		94.5	40-140			
Benzo(k)fluoranthene	92.0	5.0	µg/L	100		92.0	40-140			
Chrysene	90.3	5.0	µg/L	100		90.3	40-140			
Dibenz(a,h)anthracene	97.8	5.0	µg/L	100		97.8	40-140			
Indeno(1,2,3-cd)pyrene	97.2	5.0	µg/L	100		97.2	40-140			
Surrogate: o-Terphenyl (OTP)	73.3		µg/L	100		73.3	30-130			
LCS Dup (B072882-BSD1)				Prepared: 05/11/13 Analyzed: 05/14/13						
Benzo(a)anthracene	87.2	1.2	µg/L	100		87.2	40-140	1.42	20	
Benzo(a)pyrene	87.7	2.5	µg/L	100		87.7	40-140	1.19	20	
Benzo(b)fluoranthene	89.7	1.2	µg/L	100		89.7	40-140	0.667	20	
Benzo(g,h,i)perylene	92.3	12	µg/L	100		92.3	40-140	2.36	20	
Benzo(k)fluoranthene	92.0	5.0	µg/L	100		92.0	40-140	0.0543	20	
Chrysene	89.3	5.0	µg/L	100		89.3	40-140	1.11	20	
Dibenz(a,h)anthracene	95.5	5.0	µg/L	100		95.5	40-140	2.43	20	
Indeno(1,2,3-cd)pyrene	94.4	5.0	µg/L	100		94.4	40-140	2.92	20	
Surrogate: o-Terphenyl (OTP)	69.2		µg/L	100		69.2	30-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072825 - SW-846 3510C										
Blank (B072825-BLK1)					Prepared: 05/11/13 Analyzed: 05/13/13					
C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	69.6		µg/L	99.8		69.7	40-140			
Surrogate: o-Terphenyl (OTP)	69.5		µg/L	100		69.5	40-140			
Surrogate: 2-Bromonaphthalene	80.5		µg/L	100		80.5	40-140			
Surrogate: 2-Fluorobiphenyl	83.0		µg/L	100		83.0	40-140			
LCS (B072825-BS1)					Prepared: 05/11/13 Analyzed: 05/13/13					
Acenaphthene	70.7	2.0	µg/L	100		70.7	40-140			
Acenaphthylene	67.3	2.0	µg/L	100		67.3	40-140			
Anthracene	74.8	2.0	µg/L	100		74.8	40-140			
Benzo(a)anthracene	76.3	2.0	µg/L	100		76.3	40-140			
Benzo(a)pyrene	74.9	2.0	µg/L	100		74.9	40-140			
Benzo(b)fluoranthene	77.6	2.0	µg/L	100		77.6	40-140			
Benzo(g,h,i)perylene	82.8	2.0	µg/L	100		82.8	40-140			
Benzo(k)fluoranthene	76.2	2.0	µg/L	100		76.2	40-140			
Chrysene	72.3	2.0	µg/L	100		72.3	40-140			
Dibenz(a,h)anthracene	81.5	2.0	µg/L	100		81.5	40-140			
Fluoranthene	74.7	2.0	µg/L	100		74.7	40-140			
Fluorene	72.2	2.0	µg/L	100		72.2	40-140			
Indeno(1,2,3-cd)pyrene	82.8	2.0	µg/L	100		82.8	40-140			
2-Methylnaphthalene	65.2	2.0	µg/L	100		65.2	40-140			
Naphthalene	57.9	2.0	µg/L	100		57.9	40-140			
Phenanthrene	73.8	2.0	µg/L	100		73.8	40-140			
Pyrene	73.0	2.0	µg/L	100		73.0	40-140			
n-Decane	43.6	2.0	µg/L	100		43.6	40-140			
n-Docosane	81.1	2.0	µg/L	100		81.1	40-140			
n-Dodecane	60.6	2.0	µg/L	100		60.6	40-140			
n-Eicosane	81.4	2.0	µg/L	100		81.4	40-140			
n-Hexacosane	78.2	2.0	µg/L	100		78.2	40-140			
n-Hexadecane	79.5	2.0	µg/L	100		79.5	40-140			
n-Hexatriacontane	83.9	2.0	µg/L	100		83.9	40-140			
n-Nonadecane	81.7	2.0	µg/L	100		81.7	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072825 - SW-846 3510C										
LCS (B072825-BS1)										
Prepared: 05/11/13 Analyzed: 05/13/13										
n-Nonane	33.3	2.0	µg/L	100		33.3	30-140			
n-Octacosane	77.0	2.0	µg/L	100		77.0	40-140			
n-Octadecane	81.1	2.0	µg/L	100		81.1	40-140			
n-Tetracosane	79.4	2.0	µg/L	100		79.4	40-140			
n-Tetradecane	74.2	2.0	µg/L	100		74.2	40-140			
n-Triacontane	78.9	2.0	µg/L	100		78.9	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	73.4		µg/L	99.8		73.5	40-140			
Surrogate: o-Terphenyl (OTP)	70.1		µg/L	100		70.1	40-140			
Surrogate: 2-Bromonaphthalene	79.5		µg/L	100		79.5	40-140			
Surrogate: 2-Fluorobiphenyl	83.6		µg/L	100		83.6	40-140			
LCS Dup (B072825-BS1)										
Prepared: 05/11/13 Analyzed: 05/13/13										
Acenaphthene	66.5	2.0	µg/L	100		66.5	40-140	6.11	25	
Acenaphthylene	63.3	2.0	µg/L	100		63.3	40-140	6.15	25	
Anthracene	72.1	2.0	µg/L	100		72.1	40-140	3.64	25	
Benzo(a)anthracene	74.5	2.0	µg/L	100		74.5	40-140	2.45	25	
Benzo(a)pyrene	73.0	2.0	µg/L	100		73.0	40-140	2.61	25	
Benzo(b)fluoranthene	75.4	2.0	µg/L	100		75.4	40-140	2.86	25	
Benzo(g,h,i)perylene	80.4	2.0	µg/L	100		80.4	40-140	2.89	25	
Benzo(k)fluoranthene	74.6	2.0	µg/L	100		74.6	40-140	2.15	25	
Chrysene	70.5	2.0	µg/L	100		70.5	40-140	2.56	25	
Dibenz(a,h)anthracene	79.9	2.0	µg/L	100		79.9	40-140	1.95	25	
Fluoranthene	72.3	2.0	µg/L	100		72.3	40-140	3.26	25	
Fluorene	68.3	2.0	µg/L	100		68.3	40-140	5.51	25	
Indeno(1,2,3-cd)pyrene	80.8	2.0	µg/L	100		80.8	40-140	2.39	25	
2-Methylnaphthalene	60.9	2.0	µg/L	100		60.9	40-140	6.79	25	
Naphthalene	54.1	2.0	µg/L	100		54.1	40-140	6.66	25	
Phenanthrene	70.7	2.0	µg/L	100		70.7	40-140	4.32	25	
Pyrene	70.5	2.0	µg/L	100		70.5	40-140	3.53	25	
n-Decane	34.9	2.0	µg/L	100		34.9	40-140	22.2	25	L-07
n-Docosane	73.0	2.0	µg/L	100		73.0	40-140	10.5	25	
n-Dodecane	52.1	2.0	µg/L	100		52.1	40-140	15.2	25	
n-Eicosane	72.9	2.0	µg/L	100		72.9	40-140	11.0	25	
n-Hexacosane	70.2	2.0	µg/L	100		70.2	40-140	10.8	25	
n-Hexadecane	70.9	2.0	µg/L	100		70.9	40-140	11.4	25	
n-Hexatriacontane	74.5	2.0	µg/L	100		74.5	40-140	11.8	25	
n-Nonadecane	73.7	2.0	µg/L	100		73.7	40-140	10.3	25	
n-Nonane	25.9	2.0	µg/L	100		25.9	30-140	24.8	25	L-07
n-Octacosane	68.9	2.0	µg/L	100		68.9	40-140	11.1	25	
n-Octadecane	73.0	2.0	µg/L	100		73.0	40-140	10.6	25	
n-Tetracosane	71.1	2.0	µg/L	100		71.1	40-140	11.0	25	
n-Tetradecane	64.9	2.0	µg/L	100		64.9	40-140	13.4	25	
n-Triacontane	70.6	2.0	µg/L	100		70.6	40-140	11.2	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	63.0		µg/L	99.8		63.1	40-140			
Surrogate: o-Terphenyl (OTP)	65.6		µg/L	100		65.6	40-140			
Surrogate: 2-Bromonaphthalene	82.2		µg/L	100		82.2	40-140			
Surrogate: 2-Fluorobiphenyl	86.4		µg/L	100		86.4	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072697 - MA VPH										
Blank (B072697-BLK1)				Prepared & Analyzed: 05/09/13						
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	39.1		µg/L	40.0		97.7	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	33.8		µg/L	40.0		89.5	70-130			
LCS (B072697-BS1)				Prepared & Analyzed: 05/09/13						
Benzene	104	1.0	µg/L	100		104	70-130			
Butylcyclohexane	89.3	1.0	µg/L	100		89.3	70-130			
Decane	96.7	1.0	µg/L	100		96.7	70-130			
Ethylbenzene	105	1.0	µg/L	100		105	70-130			
Methyl tert-Butyl Ether (MTBE)	100	1.0	µg/L	100		100	70-130			
2-Methylpentane	105	1.0	µg/L	100		105	70-130			
Naphthalene	101	5.0	µg/L	100		101	70-130			
Nonane	90.5	1.0	µg/L	100		90.5	30-130			
Pentane	109	1.0	µg/L	100		109	70-130			
Toluene	105	1.0	µg/L	100		105	70-130			
1,2,4-Trimethylbenzene	105	1.0	µg/L	100		105	70-130			
2,2,4-Trimethylpentane	96.9	1.0	µg/L	100		96.9	70-130			
m+p Xylene	214	2.0	µg/L	200		107	70-130			
o-Xylene	104	1.0	µg/L	100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	41.0		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.0		µg/L	40.0		95.0	70-130			
LCS Dup (B072697-BSD1)				Prepared & Analyzed: 05/09/13						
Benzene	103	1.0	µg/L	100		103	70-130	0.544	25	
Butylcyclohexane	91.5	1.0	µg/L	100		91.5	70-130	2.44	25	
Decane	99.7	1.0	µg/L	100		99.7	70-130	3.09	25	
Ethylbenzene	105	1.0	µg/L	100		105	70-130	0.0611	25	
Methyl tert-Butyl Ether (MTBE)	99.7	1.0	µg/L	100		99.7	70-130	0.377	25	
2-Methylpentane	102	1.0	µg/L	100		102	70-130	3.10	25	
Naphthalene	102	5.0	µg/L	100		102	70-130	0.860	25	
Nonane	92.3	1.0	µg/L	100		92.3	30-130	1.95	25	
Pentane	106	1.0	µg/L	100		106	70-130	2.74	25	
Toluene	105	1.0	µg/L	100		105	70-130	0.0959	25	
1,2,4-Trimethylbenzene	105	1.0	µg/L	100		105	70-130	0.0961	25	
2,2,4-Trimethylpentane	95.0	1.0	µg/L	100		95.0	70-130	1.98	25	
m+p Xylene	214	2.0	µg/L	200		107	70-130	0.200	25	
o-Xylene	105	1.0	µg/L	100		105	70-130	0.114	25	
Surrogate: 2,5-Dibromotoluene (FID)	43.3		µg/L	40.0		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	39.7		µg/L	40.0		99.4	70-130			



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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072651 - SW-846 7470A Prep										
Blank (B072651-BLK1) Prepared & Analyzed: 05/09/13										
Mercury	ND	0.00010	mg/L							
LCS (B072651-BS1) Prepared & Analyzed: 05/09/13										
Mercury	0.00204	0.00010	mg/L	0.00200		102	80-120			
LCS Dup (B072651-BSD1) Prepared & Analyzed: 05/09/13										
Mercury	0.00204	0.00010	mg/L	0.00200		102	80-120	0.0873	20	
Batch B072716 - SW-846 3005A Dissolved										
Blank (B072716-BLK1) Prepared: 05/09/13 Analyzed: 05/10/13										
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							
LCS (B072716-BS1) Prepared: 05/09/13 Analyzed: 05/10/13										
Antimony	259	5.0	µg/L	250		104	80-120			
Arsenic	253	2.0	µg/L	250		101	80-120			
Barium	247	50	µg/L	250		98.9	80-120			
Beryllium	255	2.0	µg/L	250		102	80-120			
Cadmium	260	2.5	µg/L	250		104	80-120			
Chromium	246	5.0	µg/L	250		98.2	80-120			
Lead	251	5.0	µg/L	250		100	80-120			
Nickel	250	25	µg/L	250		99.9	80-120			
Selenium	259	25	µg/L	250		104	80-120			
Silver	265	2.5	µg/L	250		106	80-120			
Thallium	244	1.0	µg/L	250		97.5	80-120			
Vanadium	250	25	µg/L	250		100	80-120			
Zinc	277	50	µg/L	250		111	80-120			
LCS Dup (B072716-BSD1) Prepared: 05/09/13 Analyzed: 05/10/13										
Antimony	260	5.0	µg/L	250		104	80-120	0.236	20	
Arsenic	255	2.0	µg/L	250		102	80-120	0.807	20	
Barium	247	50	µg/L	250		98.9	80-120	0.0153	20	
Beryllium	258	2.0	µg/L	250		103	80-120	1.05	20	
Cadmium	260	2.5	µg/L	250		104	80-120	0.0575	20	
Chromium	251	5.0	µg/L	250		100	80-120	2.20	20	
Lead	254	5.0	µg/L	250		102	80-120	1.17	20	
Nickel	250	25	µg/L	250		100	80-120	0.279	20	
Selenium	263	25	µg/L	250		105	80-120	1.48	20	
Silver	265	2.5	µg/L	250		106	80-120	0.0747	20	
Thallium	247	1.0	µg/L	250		99.0	80-120	1.52	20	
Vanadium	255	25	µg/L	250		102	80-120	1.69	20	
Zinc	272	50	µg/L	250		109	80-120	1.53	20	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072716 - SW-846 3005A Dissolved

Duplicate (B072716-DUP1)

Source: 13E0263-02

Prepared: 05/09/13 Analyzed: 05/10/13

Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	0.550	0.40	µg/L		ND			NC	20	
Barium	86.0	10	µg/L		83.5			2.93	20	
Beryllium	ND	0.40	µg/L		ND			NC	20	
Cadmium	ND	0.50	µg/L		ND			NC	20	
Chromium	1.10	1.0	µg/L		1.10			0.423	20	
Lead	ND	1.0	µg/L		ND			NC	20	
Nickel	ND	5.0	µg/L		ND			NC	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.50	µg/L		ND			NC	20	
Thallium	ND	0.20	µg/L		ND			NC	20	
Vanadium	ND	5.0	µg/L		ND			NC	20	
Zinc	27.4	10	µg/L		26.3			4.33	20	

Matrix Spike (B072716-MS1)

Source: 13E0263-02

Prepared: 05/09/13 Analyzed: 05/10/13

Antimony	268	10	µg/L	250	ND	107	75-125
Arsenic	261	4.0	µg/L	250	0.373	104	75-125
Barium	333	100	µg/L	250	83.5	99.7	75-125
Beryllium	260	4.0	µg/L	250	ND	104	75-125
Cadmium	262	5.0	µg/L	250	0.0354	105	75-125
Chromium	245	10	µg/L	250	1.10	97.6	75-125
Lead	260	10	µg/L	250	0.214	104	75-125
Nickel	250	50	µg/L	250	4.69	98.2	75-125
Selenium	267	50	µg/L	250	0.860	106	75-125
Silver	260	5.0	µg/L	250	ND	104	75-125
Thallium	251	2.0	µg/L	250	ND	100	75-125
Vanadium	258	50	µg/L	250	ND	103	75-125
Zinc	298	100	µg/L	250	26.3	109	75-125



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FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
- † Wide recovery limits established for difficult compound.
- ‡ Wide RPD limits established for difficult compound.
- # Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Water	
C9-C18 Aliphatics	CT,NC,WA,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,NH-P
Acenaphthene	CT,NC,WA,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,NH-P
Anthracene	CT,NC,WA,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,NH-P
Chrysene	CT,NC,WA,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,NH-P
Fluoranthene	CT,NC,WA,ME,NH-P
Fluorene	CT,NC,WA,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME
Naphthalene	CT,NC,WA,ME,NH-P
Phenanthrene	CT,NC,WA,ME,NH-P
Pyrene	CT,NC,WA,ME,NH-P

MADEP-VPH-04-1.1 in Water	
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P

SW-846 6020A in Water	
Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Beryllium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
Thallium	CT,NH,NY,NC,ME,VA



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6020A in Water</i>	
Vanadium	CT,NH,NY,NC,ME,VA
Zinc	CT,NH,NY,NC,ME,VA

SW-846 7470A in Water

Mercury	CT,NH,NY,NC,ME,VA
---------	-------------------

SW-846 8270D in Water

Acenaphthene	ME,NC,NY,CT,NH,VA
Acenaphthylene	ME,NC,NY,CT,NH,VA
Anthracene	ME,NC,NY,CT,NH,VA
Benzo(a)anthracene	ME,NC,NY,CT,NH,VA
Benzo(a)pyrene	ME,NC,NY,CT,NH,VA
Benzo(b)fluoranthene	ME,NC,NY,CT,NH,VA
Benzo(g,h,i)perylene	ME,NC,NY,CT,NH,VA
Benzo(k)fluoranthene	ME,NC,NY,CT,NH,VA
Chrysene	ME,NC,NY,CT,NH,VA
Dibenz(a,h)anthracene	ME,NC,NY,CT,NH,VA
Fluoranthene	ME,NC,NY,CT,NH,VA
Fluorene	ME,NC,NY,CT,NH,VA
Indeno(1,2,3-cd)pyrene	ME,NC,NY,CT,NH,VA
2-Methylnaphthalene	ME,NC
Naphthalene	ME,NC,NY,CT,NH,VA
Phenanthrene	ME,NC,NY,CT,NH,VA
Pyrene	ME,NC,NY,CT,NH,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



con-test
ANALYTICAL LABORATORY

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

1350263
Rev 04.05.12

Company Name: GEC

Telephone: _____

Address: 60 BROOKS DRIVE

Project # _____

BRAINREE, MA 02184

Client PO# 1424-3020

Attention: _____

DATA DELIVERY (check all that apply)

☐ FAX ☒ EMAIL ☐ WEBSITE

Project Location: 1016 HALE, BRIDGEWATER

Fax # _____

Sampled By: M BRADLEY

Email: _____

Project Proposal Provided? (for billing purposes)

☐ yes ☐ proposal date _____

Format:

☒ PDF ☐ EXCEL ☐ GIS

☐ OTHER _____

☐ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection		Composite	Grab	*Matrix Code	Conc Code												
		Beginning Date/Time	Ending Date/Time																
01	GEC-1	5-7-13	0950		X	U	GW	X	X	X									
02	GEC-4	5-7-13	0955		X	U	GW	X	X	X									
03	GEC-5	5-7-13	1200		X	U	GW	X	X	X									
04	GEC-6	5-7-13	1050		X	U	GW	X	X	X									

Comments: _____

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) _____

Date/Time: 5-8-13 0935

Turnaround ^{††}

☐ 7-Day

☐ 10-Day

☒ Other S

Received by: (signature) _____

Date/Time: 5/8/13 9:40

Relinquished by: (signature) _____

Date/Time: 5/8/13 3:40

RUSH [†]

☐ 24-Hr ☐ 48-Hr

☐ 72-Hr ☐ 4-Day

[†] Require lab approval

Received by: (signature) Rebecca

Date/Time: 5/8/13 15:40

Detection Limit Requirements

Massachusetts: RLS-1

Connecticut: _____

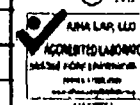
Other: _____

Is your project MCP or RCP?

☒ MCP Form Required

☐ RCP Form Required

☐ MA State DW Form Required PWSID # _____



NELAC & AIHA-LAP, LLC
Accredited

WBE/DBE Certified

^{††} TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Page 30 of 32 13E0263_1 Contest_Final 05 15 13 1533 05/15/13 15:34:01

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: GEC RECEIVED BY: RLF DATE: 5/8/13

1) Was the chain(s) of custody relinquished and signed? ☒ Yes ☐ No No CoC Included

2) Does the chain agree with the samples? ☒ Yes ☐ No

If not, explain:

3) Are all the samples in good condition? ☒ Yes ☐ No

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? ☒ Yes ☐ No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 5.9°C

5) Are there Dissolved samples for the lab to filter? Yes ☒ No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes ☒ No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: ☒ Yes ☐ No N/A

9) Do all samples have the proper Base pH: Yes ☐ No ☒ N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No ☒ N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	<u>8</u>	8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic	<u>4</u>	Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>12</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl 6 # Methanol _____

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____

Time and Date Frozen:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory

Project #: 13E0263

Project Location: 106 Hale, Bridgewater

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E0263-01 thru 13E0263-04

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A ()	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A ()	6020 Metals CAM III D (X)	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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.

Signature: 

Position: Laboratory Director

Printed Name: Michael A. Erickson

Date: 05/15/13



August 19, 2013

Goldman
Environmental
Consultants, Inc.

60 Brooks Drive
Braintree, MA 02184

781-356-9140
Fax 781-356-9147
www.goldmanenvironmental.com

Ms. Thatiana J. Gibson, Project Manager
Division of Capital Asset Management and Maintenance
One Ashburton Place
Boston, MA 02108

**RE: Limited Subsurface Investigation
106 Hale Street
Bridgewater, Massachusetts
GEC Project No. 1424-3020**

Dear Ms. Gibson:

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts has completed a limited subsurface investigation at the above-referenced property (the "Site"). The purpose of GEC's investigation was to: (1) locate and assess the condition of existing groundwater monitoring wells on the Site, and (2) installing test borings/monitoring wells to evaluate potential adverse Site impacts associated with historical on-Site manufacturing operations and sampling groundwater monitoring wells to assess groundwater conditions associated with historically identified petroleum contamination related to former on-Site UST systems.

BACKGROUND

In our *Environmental Site Assessment* report for the Site, dated December 12, 2012, GEC identified historical records that indicated a historic nail manufacturer located on-Site utilized up to 14 USTs, containing fuels and process chemicals such as gasoline, fuel oil, quench oil, and xylenes. Many of these USTs were removed; however, several were abandoned in-place. No UST closure documentation (which should have indicated the environmental conditions of soil and groundwater around the USTs) was identified for all but one UST. Additionally, the Site was listed as an ERNS Site after 11,000 gallons of hazardous waste was left behind in drums when Independent Nail, Inc. vacated the Site on December 12, 1993, and the adjacent MBTA commuter rail right-of-way was identified as an ERNS site after a release of quench oil from USTs associated with the former Independent Nail, Inc. were observed on the MBTA property and reported to the National Response Center. Also, the Site is listed as State Disposal Site (RTNs 4-1187 and 4-12138), and as a State Spill Site. Response actions for RTN 4-12138 were completed (for a UST) and a condition of No Significant Risk was documented; however, a portion of the Site is considered to be part of a disposal site that originates on an adjacent property (under RTN 4-1187, for which a Class C RAO Statement was submitted to achieve a Temporary Solution under the MCP), which will remain under assessment until a Permanent Solution is achieved under the MCP.

SCOPE OF WORK

Based on the foregoing, GEC recommended performing a limited subsurface investigation that included the installation of soil test borings and groundwater monitoring wells and the collection of soil and groundwater samples for laboratory analysis. The scope of work described herein was developed by John M. O'Donnell, P.E., L.S.P. of DCAMM and included: determining whether any groundwater monitoring wells are presently located on-Site and gauging said wells, if any, to determine the depth to groundwater and presence/thickness of petroleum NAPL floating on the groundwater surface; performing a total of seven test borings inside and outside the Site building and completing up to four test borings as groundwater monitoring wells (located in the exterior of the Site, at GEC's direction); collecting soil and groundwater samples for laboratory analysis; and preparing a letter report documenting the work conducted and providing recommendations for additional subsurface investigation and/or remediation work, if any, to bring the Site to regulatory closure. The work proposed is in accordance with M.G.L. c. 21E and the MCP, 310 CMR 40.0000, and is described below.

LIMITED SUBSURFACE INVESTIGATION

GEC's limited subsurface investigation included performing seven soil test borings, four of which were completed as groundwater monitoring wells, throughout the Site. Refer to Figure 2 for a Site Plan depicting test boring and monitoring well locations. A total of thirteen soil samples and four groundwater samples were submitted to Contest Analytical Laboratory of East Longmeadow, Massachusetts, a state-certified laboratory, for laboratory analysis for Volatile Petroleum Hydrocarbons (VPH), including target volatile organic compounds (VOCs), and/or Extractable Petroleum Hydrocarbons (EPH), including target polycyclic aromatic hydrocarbons (PAHs), via the MADEP Methods, VOCs via USEPA Method 8260C and/or 14 Massachusetts Metals (MM14 Metals) via USEPA Method 6020A/7470A. The laboratory certificates of analysis are attached hereto.

Test Boring, Soil Screening, and Monitoring Well Installation

On May 2, 2013, New England Geotech, LLC (NEG), under the supervision of GEC personnel, performed seven soil test borings (B-1 through B-7) and installed four groundwater monitoring wells (GEC-1, GEC-4, GEC-5 and GEC-6) on-Site. Test borings were advanced using a truck-mounted, direct-push GeoProbe® 7726 drill rig. Soil samples were collected continuously utilizing clean five foot acetate sleeves inside hollow steel rods. A new, clean, acetate sleeve was used for each sample collected.

Test borings B-1 through B-6 were performed within the footprint of the former Site building that was located on the eastern portion of the Site. Test boring B-1 was performed approximately 20 feet from the northeast corner of the existing Site building to assess the potential for vapor intrusion into the existing Site building resulting from the known and possible unknown releases of OHM at this location. Test borings B-2 through B-6 were advanced to depth throughout the footprint of the former Site building to assess current subsurface conditions in relation to known releases of OHM in this area. Test

boring B-7 was advanced to depth within the western portion the existing Site building to evaluate current subsurface conditions. All soil test borings, except B-2, were advanced to a depth of 15 feet below surface grade (BSG). At B-2, drilling refusal was encountered between 2.5 and 7 feet BSG on four attempts to install this test boring.

Soil from each sampling interval was headspace screened for total ionizable compounds using a MiniRae 2000 photoionization detector (PID) equipped with a 10.6 eV lamp. PID readings ranged from 0.0 to 13.0 parts per million (ppm). During test boring activities, wet soils, indicative of the approximate depth of the groundwater table, were encountered approximately nine to eleven feet BSG.

Groundwater monitoring wells were installed in test borings B-1, B-4, B-5 and B-6 and designated GEC-1, GEC-4, GEC-5 and GEC-6, respectively. The monitoring wells were constructed of ten feet of 2-inch I.D schedule 40 PVC ten-slot (0.010" slots) screen followed by varying lengths of solid PVC riser pipe to the ground surface. The borings were backfilled with clean silica sand to one foot above the screen, followed by a bentonite seal and finished with a flush-mounted road box. Monitoring wells GEC-1 and GEC-4 were installed to a depth of 15 feet BSG and monitoring wells GEC-5 and GEC-6 were installed to a depth of 17 feet BSG.

To ensure an acceptable hydrologic connection between the well and surrounding substrata and to remove fines, the wells were developed using dedicated hand-bailers following installation. Approximately three well volumes were removed indicating good communication with the surrounding aquifer. Please refer to the attached Boring Logs for additional test boring and monitoring well installation information.

Soil Sampling

On May 2, 2013 GEC collected soil samples from test borings B-1 through B-7 for laboratory analysis for laboratory analysis for VPH, including target VOCs, EPH, including target PAHs, VOCs and/or MM14 Metals. In addition, because a headspace reading exceeding 10 ppmv was observed for the soil sample collected from the 10-15 foot sampling interval of test boring B-3, a sample was submitted for VOCs via USEPA Method 8260C. Where feasible, two soil samples from each test boring were submitted for laboratory analysis. Samples were collected from the 0-5 foot sampling interval and from the sampling interval that intersected the groundwater interface. At B-2, GEC did not encounter the groundwater interface since drilling refusal was encountered at 7 feet BSG.

Groundwater Sampling

On May 7, 2013, GEC returned to the Site and gauged depth to groundwater at the four newly installed monitoring wells. The depth to water ranged from 9.54 to 9.70 feet BSG. Groundwater samples were collected utilizing low-flow sampling methodology. A 1.75 inch QED bladder pump with a QED MP-15 controller was used to purge monitoring wells at a rate that allowed the groundwater level to stabilize if possible. Inorganic parameters, including temperature, conductivity, dissolved oxygen, pH and oxidation/reduction potential were monitored while purging. When these

parameters stabilized, indicating good communication between the well and surrounding aquifer samples were collected. In addition, groundwater samples submitted for dissolved metals analysis were field filtered with 0.45µm filter. Groundwater samples from each monitoring well were submitted for laboratory analysis for VPH including target VOCs, EPH, including target PAHs, VOCs and dissolved MM14 Metals.

Monitoring Well Inventory and Well Survey

On May 7, 2013, GEC attempted to locate pre-existing monitoring wells located on the Site including MW-5, MW-6, MW-8, and RIZ 8 through RIZ-10. GEC was only able to locate MW-5, which is located on the sidewalk along Plymouth Street.

GEC also conducted an elevation survey to determine the well head elevation of the newly installed monitoring wells at the Site. This survey included all the newly installed monitoring wells and MW-5. Elevation of the top of the PVC riser pipe was determined via rod and level survey. MW-5 according to previous MCP reports has an elevation of 58.92 feet; therefore, this elevation was applied to the survey to tie the newly installed monitoring wells into the existing network, which includes several monitoring wells located off-Site. Well head elevations ranged 58.92 at GEC-5 to 62.99 feet at GEC-4. Based on the surveyed well head elevations and measured depth to groundwater, GEC determined that groundwater at the Site appears to flow in a northeasterly direction. Refer to Table 1 for a summary of the groundwater elevation data.

DATA EVALUATION

Soil Data

Ten metals including arsenic, barium, beryllium, cadmium, chromium, lead, nickel, vanadium, zinc and mercury were detected in one or more soil samples at concentrations above laboratory sample detection limits. The C9-C18 aliphatic, C19-C36 aliphatic and C11-C22 aromatic subsets of EPH and several PAHs were detected in one or more the soil samples from the 0-5 foot sampling interval from B-2, B-3, B-4 and B-5 and from the 10-15 foot sampling interval at B-5 at concentrations above laboratory sample detection limits. No VPH or VOCs were detected in any of the samples submitted for laboratory analysis above laboratory detection limits, except for xylenes which was detected at a low concentration, near sample detection limits, in B-2 (0-5 feet). Refer to Tables 2 through 4 for a summary of the soil analytical data.

Groundwater Data

Seven metals including arsenic, barium, cadmium, chromium, lead, nickel and zinc were detected in one or more groundwater samples at concentrations above laboratory sample detection limits. The C9-C18 aliphatic, C19-C36 aliphatic and C11-C22 aromatic subsets of EPH were detected above laboratory sample detection limits in the groundwater sample from GEC-5 only. No VPH or target VOCs were detected above laboratory sample detection limits in any groundwater samples submitted for analysis. Refer to Table 5 and 6 for a summary of the groundwater analytical data.

Data Evaluation Relative to Historic Data

GEC was unable to locate any pre-existing monitoring wells within the Site boundaries although several wells were observed adjacent to the Site. Wells identified on a Site Plan dated August 2003 prepared by Weston and Sampson (W&S) as part of the Class C RAO for RTN 4-1187 has monitoring wells MW-8, RIZ-8, RIZ-9 and RIZ-10 located within the Site boundaries; GEC was not able to identify any evidence of these wells on-Site. None of these pre-existing on-Site monitoring wells were reported by W&S to contain a measurable thickness of LNAPL; however, it should be noted that on May 22, 2003, W&S reported that sumps S-1 and S-2 had greater than one foot of LNAPL, and off-Site wells RIZ-14, RIZ-16, and RIZ-17 had measurable thicknesses of LNAPL.

Based upon GEC's Site Plan, attached as Figure 2, it appears that test borings B-3 through B-6 and groundwater monitoring wells GEC-4 through GEC-6 were installed proximal to the former monitoring wells; however, it should be noted as well that the W&S Site Plan was not scaled properly and historical well locations may not be reliable. B-5/GEC-5 appears to be the only sampling location installed downgradient of the pre-existing monitoring wells on the Site and is also slightly upgradient of the former quench oil USTs. Soil and groundwater samples collected from B-5/GEC-5 had low concentrations of petroleum-related compounds. RIZ-8, which is the closest upgradient well to GEC-5 for which historic data are available, had lower previously detected concentrations of petroleum compounds than noted in GEC-5.

MassDEP REPORTING REQUIREMENTS

M.G.L. Chapter 21E and the MCP provide requirements for evaluating whether a release of OHM must be reported to the Massachusetts Department of Environmental Protection (MassDEP). Reporting Categories for soil and groundwater, and Reportable Concentrations for oil and/or hazardous materials (OHM) in soils and groundwater, have been promulgated within the MCP for this purpose. The applicable soil and groundwater reporting categories for a site are based on site characteristics and nearby actual and potential land and water usage. GEC has determined that the applicable Reporting Category is "RCS-1" for soil and "RCGW-2" for groundwater. The rationale for selecting the Reporting Category is provided below.

Soil Category - Soil Category 1 (RCS-1) was determined to be applicable to the Site because the Site is situated within 500 feet of a residential dwelling.

Groundwater Category - Groundwater Category 2 (RCGW-2) was determined to be applicable to the Site because the Site is not situated within a Current or Potential Drinking Water Source Area.

The applicable soil Reporting Category and OHM detected at the Site dictates the applicable Reportable Concentration. The level of OHM present in each sample is compared to the applicable Reportable Concentration to determine whether the release is

reportable. A comparison of OHM detected in the samples collected from the Site to Reportable Concentrations, is described below.

Although OHM were detected in both in the soil and the groundwater above laboratory sample detection limits, none of the detected concentrations exceed MCP Reportable Concentrations for the categories described above.

CONCLUSIONS

Although several metals and petroleum related compounds were detected in soil and groundwater samples, none of the detected concentrations exceeded MCP Reportable Concentrations. Test boring B-5 and monitoring well GEC-5 had the highest detectable concentrations of petroleum-related compounds, which was expected due to its close proximity to the former quench oil USTs. GEC determined the apparent direction of groundwater flow at the Site is to the northeast, which is consistent with the findings documented in previous MassDEP submittals for the quench oil release. Therefore, it is unlikely that subsurface conditions at the Site will worsen over time, as the petroleum release occurred downgradient of the Site. However, it is possible that petroleum-related contaminant concentrations in soil and groundwater may increase with proximity to the northeastern property boundary (i.e., where the quench oil tanks from which the petroleum release occurred were formerly located).

RECOMMENDATIONS

GEC has no further recommendations at this time.

GEC understands that reports of this nature often raise more questions than they answer. Please do not hesitate to contact Parrish C. Smolcha at (781) 356-9140 x116 with any questions or comments.

Sincerely,
Goldman Environmental Consultants, Inc.



Mike Bradley
Environmental Field Scientist

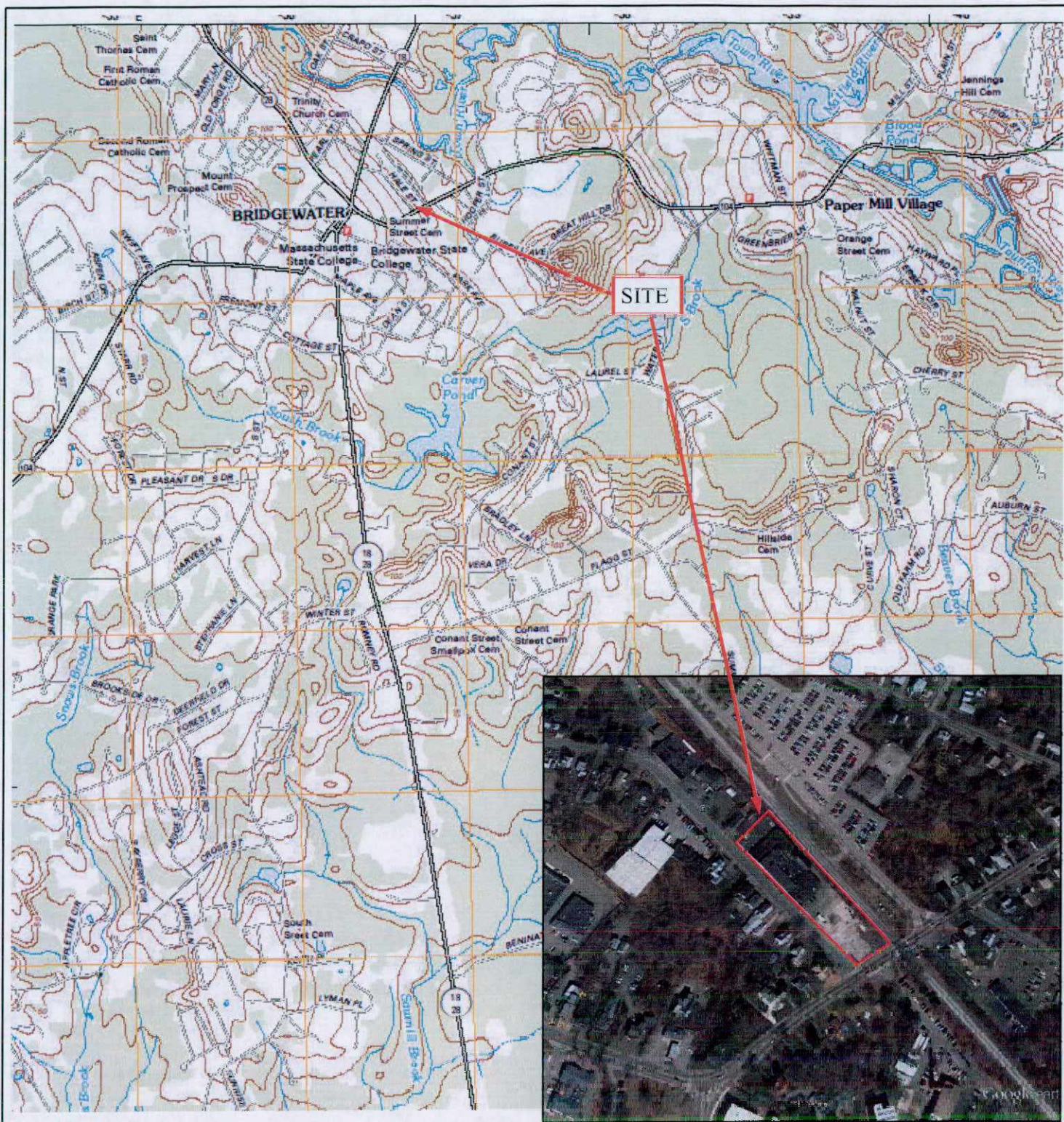


Parrish C. Smolcha
Senior Project Manager

cc: John M. O'Donnell, DCAMM (john.odonnell@state.ma.us)

Attachments -Figures
-Tables
-Boring Logs
-Laboratory Certificates of Analysis

Figures



USGS 7.5 Minute Topographic & 2012 Google Aerial

Bridgewater
Massachusetts Quadrangle



Goldman Environmental Consultants, Inc.
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Braintree, MA 02184
(781)356-9140 Fax: (781)356-9147
www.goldmanenvironmental.com

SITE LOCUS

106 Hale Street
Bridgewater, Massachusetts

GEC Project #: 1424-3020

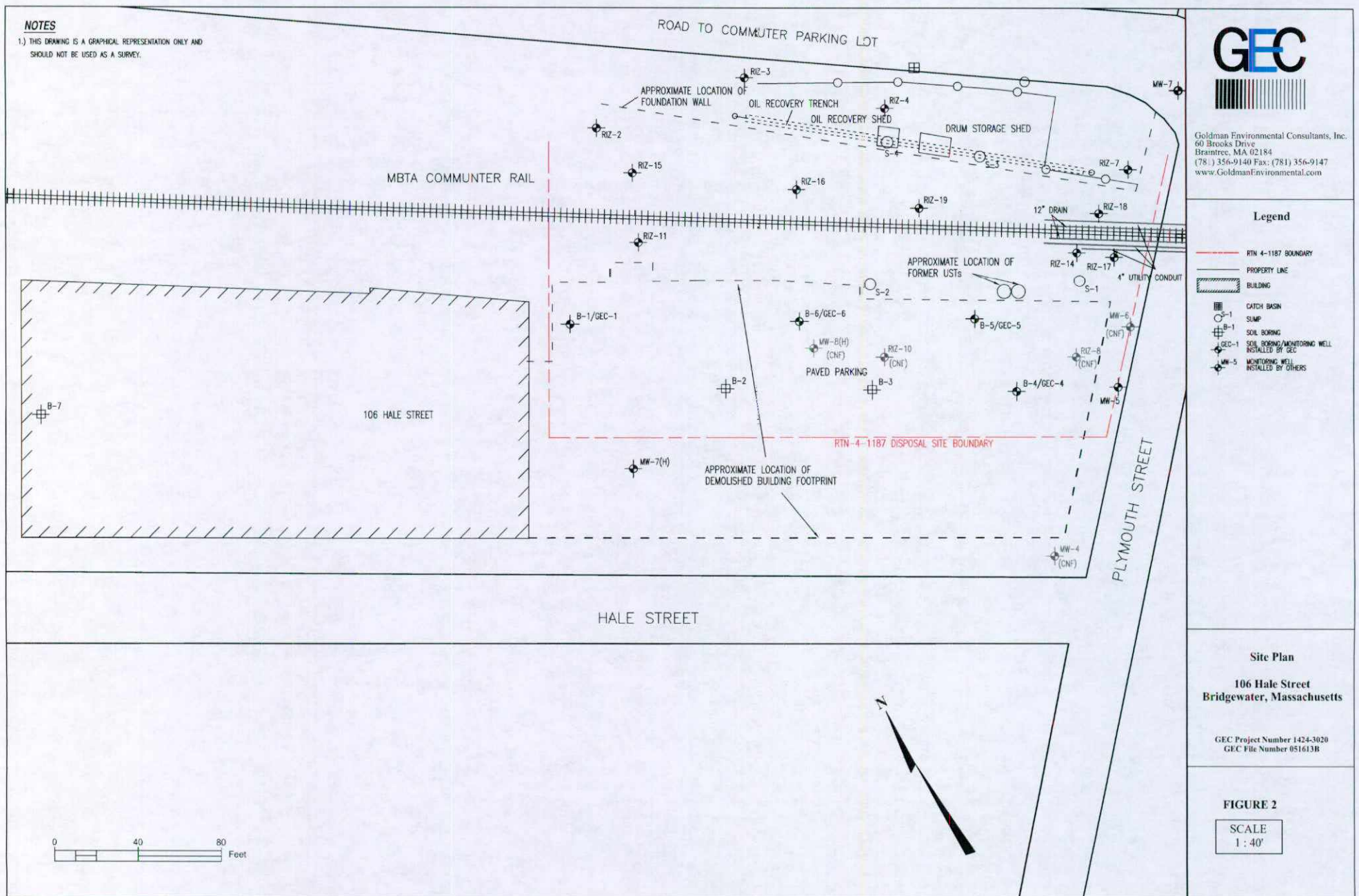
Figure 1

Scale
1 : 24,000



NOTES

1.) THIS DRAWING IS A GRAPHICAL REPRESENTATION ONLY AND SHOULD NOT BE USED AS A SURVEY.



MassDEP - Bureau of Waste Site Cleanup

Site Information: MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

106 HALE STREET BRIDGEWATER, MA

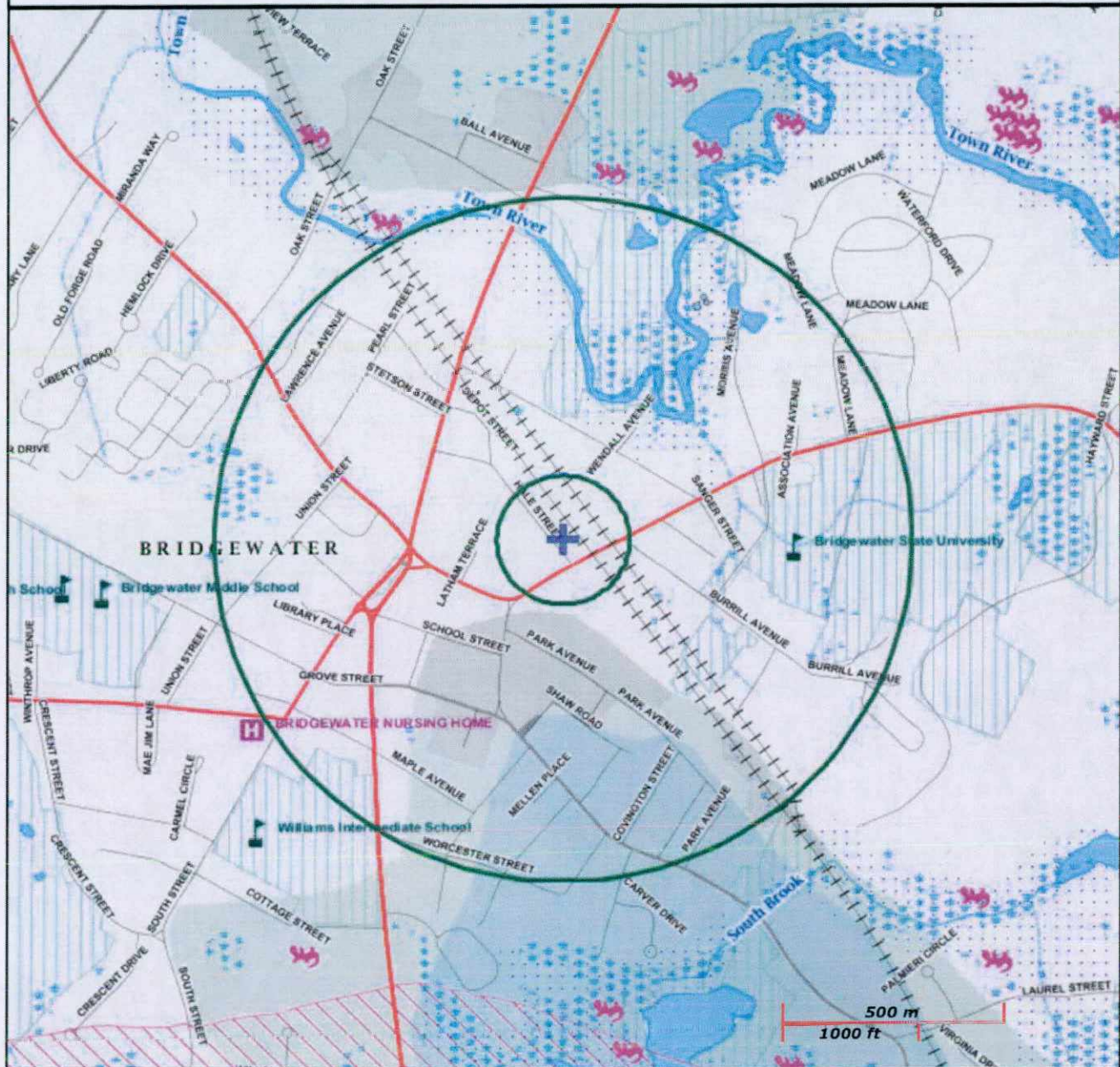
NAD83 UTM Meters:
4650580mN, 336727mE (Zone: 19)
May 21, 2013

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert, Potential
	Solid Waste Landfill; PWS: Com, GW, SW, Emerg, Non-Com

Figure 3: MassGIS Map
106 Hale Street, Bridgewater, MA

GEC Project No. 1424-3020

Tables

Table 1:
Summary of Groundwater Elevations
106 Hale Street, Bridgewater, MA
(unit, feet)

Well ID	Date	Screened Interval	Well Elevation	Depth to Groundwater	Groundwater Elevation
GEC-1	5/7/2013	5-15'	62.92	9.54	53.38
GEC-4	5/7/2013	5-15'	62.99	9.90	53.09
GEC-5	5/7/2013	5-17'	62.76	9.70	53.06
GEC-6	5/7/2013	5-17'	62.85	9.61	53.24
MW-5	5/7/2013	NA	58.92	NA	NA

Notes:

(1) In order to tie newly installed monitoring wells into the existing monitoring well network GEC calculated the well elevations based on the reported elevation of MW-5, which is 58.92

(2) On 5/7/2013 MW-5 was only surveyed and not gauged.

NA= Not Available

Table 2:
Summary of Soil Analytical Data for Metals
 106 Hale Street, Bridgewater, MA
 (unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	Arsenic	RDL	Barium	RDL	Beryllium	RDL	Cadmium	RDL	Chromium	RDL	Lead	RDL	Nickel	RDL	Vanadium	RDL	Zinc	RDL	Mercury	RDL
B-1	0-5	5/2/2013	6010C/7417B	3.1	2.6	30	2.6	BRL	0.26	BRL	0.26	6.7	0.53	28	0.79	4.4	0.53	13	1.1	31	1.1	0.061	0.027
B-1	5-10	5/2/2013	6010C/7417B	4.2	2.7	9.4	2.7	BRL	0.27	BRL	0.27	5.0	0.54	6.2	0.81	4.3	0.54	7.5	1.1	16	1.1	BRL	0.027
B-2	0-5	5/2/2013	6010C/7417B	BRL	2.4	37	2.4	BRL	0.24	BRL	0.24	12	0.48	31	0.72	10	0.48	19	0.95	87	0.95	0.066	0.025
B-3	0-5	5/2/2013	6010C/7417B	4.1	2.6	25	2.6	BRL	0.26	BRL	0.26	10	0.53	31	0.79	5.1	0.53	12	1.1	33	1.1	0.043	0.027
B-3	10-15	5/2/2013	6010C/7417B	3.4	2.9	9.1	2.9	BRL	0.29	BRL	0.29	4.2	0.58	4.1	0.88	6.1	0.58	7.2	1.2	27	1.2	BRL	0.029
B-4	0-5	5/2/2013	6010C/7417B	BRL	2.7	48	2.7	0.32	0.27	BRL	0.27	8.1	0.55	27	0.82	4.7	0.55	16	1.1	32	1.1	0.075	0.027
B-4	10-15	5/2/2013	6010C/7417B	3.0	2.6	7.2	2.6	BRL	0.26	BRL	0.26	6.3	0.52	5.1	0.78	4.2	0.52	8.2	1.0	16	1.0	BRL	0.028
B-5	0-5	5/2/2013	6010C/7417B	4.7	2.7	17	2.7	0.29	0.27	0.50	0.27	7.0	0.53	13	0.80	5.4	0.53	13	1.1	240	1.1	BRL	0.027
B-5	10-15	5/2/2013	6010C/7417B	3.4	2.9	50	2.9	BRL	0.29	BRL	0.29	6.7	0.58	200	0.87	4.8	0.58	12	1.2	220	1.2	0.11	0.030
B-6	0-5	5/2/2013	6010C/7417B	3.2	2.8	39	2.8	BRL	0.28	BRL	0.28	8.1	0.56	23	0.83	4.1	0.56	16	1.1	44	1.1	BRL	0.027
B-6	10-15	5/2/2013	6010C/7417B	3.1	2.8	12	2.8	BRL	0.28	BRL	0.28	5.4	0.56	4.8	0.84	5.2	0.56	8.3	1.1	55	1.1	BRL	0.039
B-7	0-5	5/2/2013	6010C/7417B	BRL	2.4	8.8	2.4	BRL	0.24	BRL	0.24	4.2	0.48	7.1	0.72	2.6	0.48	7.1	0.96	35	0.96	BRL	0.025
B-7	5-10	5/2/2013	6010C/7417B	BRL	2.7	18	2.7	BRL	0.27	BRL	0.27	2.2	0.54	7.6	0.81	1.3	0.54	3.5	1.1	18	1.1	0.036	0.027
Selected Soil Standards																							
MA RCS-1				20		1000		100		2		30		300		20		600		2500		20	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 3:
Summary of Soil Analytical Data for EPH and target PAHs
106 Hale Street, Bridgewater, MA
(unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	ALIPHATIC	RDL	ALIPHATIC	RDL	AROMATIC	RDL	ANTHRACEN	RDL	BENZO(A) PYRENE	RDL	FLUORANTHEN	RDL	BENZO(C,H,I) PERYLENE	RDL	FLUORANTHEN	RDL	CHRYSEN	RDL	FLUORANTHEN	RDL	INDENO(1,2,3-CD) PYRENE	RDL	PHENANTHREN	RDL	PYREN	RDL	
B-1	0-5	5-2-2013	MADHP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-1	5-10	5-2-2013	MADHP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-2	0-5	5-2-2013	MADHP EPH	BRL	10	46	10	66	10	0.20	0.10	0.25	0.10	0.35	0.10	0.18	0.10	0.11	0.10	0.23	0.10	0.44	0.10	0.18	0.10	0.22	0.10	0.44	0.10	
B-3	0-5	5-2-2013	MADHP EPH	BRL	10	BRL	10	21	10	0.19	0.10	0.19	0.10	0.33	0.10	0.21	0.10	0.11	0.10	0.25	0.10	0.37	0.10	0.16	0.10	0.14	0.10	0.34	0.10	
B-3	10-15	5-2-2013	MADHP EPH	BRL	12	BRL	12	BRL	12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	
B-4	0-5	5-2-2013	MADHP EPH	BRL	11	14	11	24	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-4	10-15	5-2-2013	MADHP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-5	0-5	5-2-2013	MADHP EPH	BRL	11	36	11	21	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-5	10-15	5-2-2013	MADHP EPH	190	11	800	11	370	11	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	
B-6	0-5	5-2-2013	MADHP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-6	10-15	5-2-2013	MADHP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-7	0-5	5-2-2013	MADHP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	
B-7	5-10	5-2-2013	MADHP EPH	BRL	11	BRL	11	12	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.12		0.25	0.11	BRL	0.11	BRL	0.11	BRL	0.11
Selected Soil Standards																														
MA RCS-1				1000		3000		1000		7		2		7		1000		70		70		1000		7		10		1000		

Notes:
RDL = Reported Detection Limit
BRL = Below Reporting Limit

Table 4:
Summary of Soil Analytical Data for VPH and target VOCs
 106 Hale Street, Bridgewater, MA
(unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	m/p-Xylenes	RDL	o-Xylenes	RDL
B-1	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.057
B-1	5-10	5-2-2013	MADEP VPH	BRL	0.096	BRL	0.048
B-2	0-5	5-2-2013	MADEP VPH	0.18	0.069	0.86	0.034
B-3	0-5	5-2-2013	MADEP VPH	BRL	0.27	BRL	0.055
B-3	10-15	5-2-2013	8260B	BRL	0.0034	BRL	0.0017
B-4	0-5	5-2-2013	MADEP VPH	BRL	0.12	BRL	0.06
B-4	10-15	5-2-2013	MADEP VPH	BRL	0.10	BRL	0.051
B-5	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.053
B-5	10-15	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.053
B-6	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.054
B-6	10-15	5-2-2013	MADEP VPH	BRL	0.10	BRL	0.052
B-7	0-5	5-2-2013	MADEP VPH	BRL	0.088	BRL	0.044
B-7	5-10	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.055
<i>Selected Soil Standards</i>							
<i>MA RCS-1</i>				1000		3000	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 5:
Summary of Groundwater Analytical Data for EPH
 106 Hale Street, Bridgewater, MA
 (unit: ug/L, ppb)

Well ID	Sample Date	Analytical Method	C9-C18 ALIPHATICS	RDL	C19-C36 ALIPHATICS	RDL	C11-C22 AROMATICS	RDL
GEC-1	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
GEC-4	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
GEC-5	5-7-2013	MADEP EPH	150	100	240	100	200	100
GEC-6	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
<i>Selected Groundwater Standards</i>								
<i>MA RCGW-2</i>			5000		50000		5000	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 6:
Summary of Groundwater Analytical Data for Metals
 106 Hale Street, Bridgewater, MA
 (unit: ug/L, ppb)

Well ID	Sample Date	Analytical Method	Arsenic	RDL	Barium	RDL	Cadmium	RDL	Chromium	RDL	Lead	RDL	Nickel	RDL	Zinc	RDL
GEC-1	5-7-2013	6020A	3.2	0.40	72	10	BRL	0.50	BRL	1.0	BRL	1.0	BRL	5.0	22	10
GEC-4	5-7-2013	6020A	BRL	0.40	83	10	BRL	0.50	1.1	1.0	BRL	1.0	BRL	5.0	26	10
GEC-5	5-7-2013	6020A	BRL	0.40	19	10	BRL	0.50	BRL	1.0	BRL	1.0	BRL	5.0	27	10
GEC-6	5-7-2013	6020A	BRL	0.40	72	10	1.0	0.50	3.2	1.0	1.7	1.0	11	5.0	880	10
<i>Selected Groundwater Standards</i>																
<i>MA RCGW-2</i>			900		50000		4		300		10		200		900	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Boring Logs



Goldman
Environmental
Consultants, Inc.
60 Brooks Drive
Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-1/GEC-1

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 10' South of NE building corner & 20' from building

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

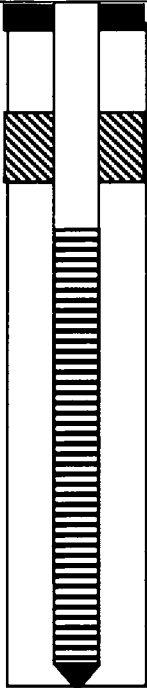
Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/37	0-5'	SILT	0-5' = 0.4 ppmv	S-1: 0"-2" ASPHALT / GRAVEL 2"-10" Brown, SILT with little fine sand & small gravel (brick) 10"-18" Brown, SILT with little fine sand & small gravel (brick), coal ash between 14"-15" 18"-25" Brown, SILT 25"-37" Light Brown, SILT with some fine sand, little medium sand & small gravel S-2: Wet @ 45" 0-32" Tan, fine to medium SAND, little small gravel, trace silt 32"-47" Tan, fine SAND 45"-52" Tan, fine SAND, some silt S-3: Wet 0-28" Tan / Brown, fine to course SAND (no odor)	Samples collected for laboratory analysis: B-1 / 0'-5' VPH/ VOC, EPH/PAH and MA 14 metals	
10'	2	60/52	5-10'	SAND	5-10' = 0.0 ppmv		B-1 / 5'-10' VPH/ VOC, EPH/PAH and MA 14 metals	
15'	3	60/28	10-15'	SAND	10-15' = 0.0 ppmv	B-1 completed as a 2" monitoring well to an approximate depth of 15' BSG with 10' of screen and 5' of riser. Completed with a flush mount roadbox . Designated GEC-1.		

**Goldman
Environmental
Consultants, Inc.
60 Brooks Drive
Braintree, MA**

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID:B-2

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 94' East of building, 40' South of North-east building corner

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY:  = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/19	0-5'	TOP SOIL	0-5' = 0.7 ppmv	S-1: 0"-11" TOP SOIL, some small to medium gravel, small root at 12" 12"-19" BRICK	Samples collected for laboratory analysis: B-2 / 0'-5' VPH/ VOC, EPH/PAH and MA 14 metals	
				BRICK				
7'	2	24/19	5-7'	BRICK, WOOD, CONCRETE	5-7' = 0.2 ppmv	S-2: 0"-3" BRICK 3"-6" WOOD 6"-12" BRICK 12"-19" CONCRETE (Refusal)	Refusal encountered in four separate attempts from 2.5'-7' BSG	
							B-2 Not completed as a Monitoring Well	



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Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-3

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location:

40' South of NE building corner and 120' east of building

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack:

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/29	0-5'	SAND	0-5' = 2.5 ppmv	S-1: 0"-6" CONCRETE 6"-10" Brown, fine SAND, trace silt 10"-15" Dark Brown, SILT, some fine to medium sand (coal, brick, coal ash) 15"-21" Brown, SILT 21"-29" Tan, medium SAND, trace coarse sand & silt	Samples collected for laboratory analysis: B-3 / 10'-15' VPH, 8260, EPH and MA 14 metals	
				SILT				
				SAND				
10'	2	60/51	5-10'	SAND	5-10' = 0.0 ppmv	S-2: Dry / No Odor 0"-4" Tan, medium SAND, trace coarse sand & silt 4"-20" Tan-brown, fine SAND 20"-46" Tan, fine to medium SAND, some small to medium gravel 46"-51" Tan, fine to medium SAND, some silt		
15'	3	60/51	10-15'	SAND	10-15' = 13.0 ppmv	S-3: Wet @ 9' / No Odor 0"-14" Tan fine to medium SAND, some silt 14"-28" Brown, fine SAND, some medium to coarse sand 28"-30" Brown, fine SAND, some silt 30"-35" Brown, fine SAND, some medium to coarse sand 35"-41" Brown, fine SAND, some silt 41"-51" Brown, fine SAND, some medium to coarse sand	B-3 Not completed as a Monitoring Well	



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Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-3

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location:

40' South of NE building corner and 120' east of building

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY:  = Interval sampled for analysis

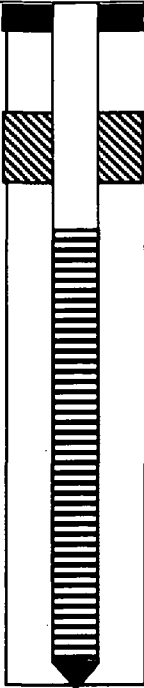
Cement Seal: 

Bentonite Seal: 

Sand Pack: 

Slotted Screen: 

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION		
	No.	Pen./Rec.	Depth							
5'	1	60/29	0-5'	SAND	0-5' = 2.5 ppmv	S-1: 0"-6" CONCRETE 6"-10" Brown, fine SAND, trace silt 10"-15" Dark Brown, SILT, some fine to medium sand (coal, brick, coal ash) 15"-21" Brown, SILT 21"-29" Tan, medium SAND, trace coarse sand & silt	Samples collected for laboratory analysis: B-3 / 10'-15' VPH, 8260, EPH and MA 14 metals			
				SILT						
				SAND						
	2	60/51	5-10'	SAND	5-10' = 0.0 ppmv	S-2: Dry / No Odor 0"-4" Tan, medium SAND, trace coarse sand & silt 4"-20" Tan-brown, fine SAND 20"-46" Tan, fine to medium SAND, some small to medium gravel 46"-51" Tan, fine to medium SAND, some silt				
10'	3	60/51	10-15'	SAND	10-15' = 13.0 ppmv	S-3: Wet @ 9' / No Odor 0"-14" Tan fine to medium SAND, some silt 14"-28" Brown, fine SAND, some medium to coarse sand 28"-30" Brown, fine SAND, some silt 30"-35" Brown, fine SAND, some medium to coarse sand 35"-41" Brown, fine SAND, some silt 41"-51" Brown, fine SAND, some medium to coarse sand				
15'									B-3 Not completed as a Monitoring Well	

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION		
	No.	Pen./Rec.	Depth							
5'	1	60/39	0-5'	SAND	0-5' = 0.4 ppmv	S-1: 0"-7" CONCRETE 7"-13" Tan, medium SAND, some silt and small to medium gravel 13"-36" Brown, SILT, trace fine sand, stiff (coal & coal ash) 36"-39" Tan, fine SAND	Samples collected for laboratory analysis: B-4 / 0'-5' VPH, EPH and MA 14 metals B-4 / 10'-15' VPH, EPH and MA 14 metals			
				SILT						
				SAND						
	2	60/52	5-10'	SAND						
10'					5-10' = 0.7 ppmv	S-2: No Odor 0-37" Tan-brown, fine to medium SAND, trace silt 37"-52" Brown, fine SAND, some silt, mottling start at 46"				
15'	3	60/32	10-15'	SAND	10-15' = 0.0 ppmv	S-3: Wet / No Odor 0-32" Tan-brown, medium to coarse SAND, trace medium gravel, mottling throughout sample			B-4 completed as a 2" monitoring well to an approximate depth of 15' BSG with 10' of screen and 5' of riser. Completed with a flush mount roadbox . Designated GEC-4.	

[illegible]



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Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-6/GEC-6

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 130' East of building, 10' South of North-east corner.

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

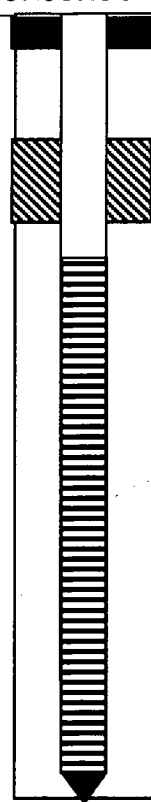
Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY:  = Interval sampled for analysis

Cement Seal:  Bentonite Seal:  Sand Pack:  Slotted Screen: 

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/42	0-5'	SAND	0-5' = 0.0 ppmv	S-1: 0"-17" Tan, fine SAND, little silt and small to medium gravel 17"-33" Brown, SILT, little fine sand, moderately stiff 33"-42" Light brown, SILT, little fine sand, moderately stiff S-2: 0"-33" Brown, SILT, some fine sand 33"-52" Brown, SILT, some fine to medium sand, some mottling S-3: Wet 0"-7" Red-orange, medium to coarse SAND 7"-27" Brown, SILT, some fine sand 27"-35" Brown, fine SAND, some silt 35"-40" Brown, medium to coarse SAND 40"-52" Tan, SILT, some fine sand	Samples collected for laboratory analysis: B-6 / 10'-15' VPH, EPH and MA 14 metals	
				SILT				
	2	60/52	5-10'	SILT	5-10' = 0.2 ppmv			
10'								
	3	60/52	10-15'	SAND	10-15' = 0.4 ppmv			
15'				SILT				
				SAND				
				SILT				
							B-6 completed as a 2" monitoring well to an approximate depth of 17' BSG with 12' of screen and 5' of riser. Completed with a flush mount roadbox . Designated GEC-6.	

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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID:B-7

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

**Boring Location: 9' in and 4' to left of overhead door
(inside building)**

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/32	0-5'	SAND	0-5' = N/A ppmv	S-1: 0"-17" Gray, fine to coarse SAND, some small gravel 17"-32" Reddish-brown, SILT, some fine sand and small to medium gravel	Samples collected for laboratory analysis: B-7 / 5'-10' VPH, EPH and MA 14 metals	
				SILT				
10'	2	60/43	5-10'	SILT	5-7' = 0.4 ppmv	S-2: Wet at 36" 0"-17" Reddish-brown, SILT, some fine sand and small to medium gravel 17"-23" Black, SILT, some fine sand 23"-43" Reddish-gray, fine SAND, some silt		
				SAND				
15'	3	60/30	10-15'	SILT	10-15' = 0.2 ppmv	S-3: Wet 0"-30" Brownish-red, SILT, some fine to coarse sand		
							B-7 Not completed as a Monitoring Well	

Laboratory Certificates of Analysis



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 10, 2013

Mike Bradley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: Hale St., Bridgewater
Client Job Number:
Project Number: 1424-2350
Laboratory Work Order Number: 13E0137

Enclosed are results of analyses for samples received by the laboratory on May 3, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Georgantas'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/10/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-2350

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0137

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Hale St., Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-1 (0-5ft)	13E0137-01	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-1 (5-10ft)	13E0137-02	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-2 (0-5ft)	13E0137-03	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-3 (0-5ft)	13E0137-04	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-3 (10-15ft)	13E0137-05	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B SW-846 8260C	
B-4 (0-5ft)	13E0137-06	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-4 (10-15ft)	13E0137-07	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-5 (0-5ft)	13E0137-08	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	



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Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/10/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-2350

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0137

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Hale St., Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-5 (10-15ft)	13E0137-09	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-6 (0-5ft)	13E0137-10	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-6 (10-15ft)	13E0137-11	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-7 (0-5ft)	13E0137-12	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	
B-7 (5-10ft)	13E0137-13	Soil		MADEP-EPH-04-I.I MADEP-VPH-04-I.I SM 2540G SW-846 6010C SW-846 7471B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method MA VPH, only hydrocarbon ranges were requested and reported for sample B-3(10-15ft)



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MADEP-EPH-04-1.1

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

C9-C18 Aliphatics, n-Nonane
B072491-BLK1, B072491-BS1, B072491-BSD1

MADEP-VPH-04-1.1

Qualifications:

Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.

Analyte & Samples(s) Qualified:

13E0137-02[B-1 (5-10ft)], 13E0137-03[B-2 (0-5ft)], 13E0137-05[B-3 (10-15ft)], 13E0137-11[B-6 (10-15ft)]

SW-846 6010C

Qualifications:

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Antimony, Barium, Lead, Zinc
13E0137-04[B-3 (0-5ft)], B072376-MS1

SW-846 7471B

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Mercury
B072378-BSD1, B072383-BS1

SW-846 8260C

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Bromoform
13E0137-05[B-3 (10-15ft)], B072417-BLK1, B072417-BS1, B072417-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Naphthalene
B072417-BS1



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Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

B072417-BS1

Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane, Dichlorodifluoromethane (Freon 12)

B072417-BS1, B072417-BSD1

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

13E0137-05[B-3 (10-15ft)], B072417-BLK1, B072417-BS1, B072417-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,1,1,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane (DBCP), Bromoform, Naphthalene

13E0137-05[B-3 (10-15ft)], B072417-BLK1, B072417-BS1, B072417-BSD1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane

13E0137-05[B-3 (10-15ft)], B072417-BLK1, B072417-BS1, B072417-BSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane

B072417-BS1, B072417-BSD1



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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly in methanol with a soil/methanol ratio of 1:1 +/- 25% completely covered by methanol in the proper containers specified on the chain-of-custody form unless specified in this narrative.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and 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.

A handwritten signature in black ink, appearing to read "Daren J. Damboragian", is written over a horizontal line.

Daren J. Damboragian
Laboratory Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Surrogates	% Recovery	Recovery Limits	Flag						
Chlorooctadecane (COD)	65.8	40-140							
o-Terphenyl (OTP)	65.1	40-140							
2-Bromonaphthalene	71.6	40-140							
2-Fluorobiphenyl	74.1	40-140							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.05

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Benzene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Ethylbenzene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Naphthalene	ND	0.29	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Toluene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
o-Xylene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	104	70-130							
2,5-Dibromotoluene (PID)	104	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Arsenic	3.1	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Barium	30	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Chromium	6.7	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Lead	28	0.79	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Mercury	0.061	0.027	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:20	SAJ
Nickel	4.4	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Vanadium	13	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Zinc	31	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	73.9		40-140				5/8/13 14:34		
o-Terphenyl (OTP)	66.2		40-140				5/8/13 14:34		
2-Bromonaphthalene	73.1		40-140				5/8/13 14:34		
2-Fluorobiphenyl	73.8		40-140				5/8/13 14:34		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.28

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.6	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C5-C8 Aliphatics	ND	9.6	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Unadjusted C9-C12 Aliphatics	ND	9.6	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C9-C12 Aliphatics	ND	9.6	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C9-C10 Aromatics	ND	9.6	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Benzene	ND	0.048	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Ethylbenzene	ND	0.048	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.048	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Naphthalene	ND	0.24	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Toluene	ND	0.048	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
m+p Xylene	ND	0.096	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
o-Xylene	ND	0.048	mg/Kg dry	I		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	97.5	70-130							
2,5-Dibromotoluene (PID)	100	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Arsenic	4.2	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Barium	9.4	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Chromium	5.0	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Lead	6.2	0.81	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:22	SAJ
Nickel	4.3	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Vanadium	7.5	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Zinc	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.0		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
C19-C36 Aliphatics	46	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Unadjusted C11-C22 Aromatics	68	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
C11-C22 Aromatics	66	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(a)anthracene	0.20	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(a)pyrene	0.25	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(b)fluoranthene	0.35	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(g,h,i)perylene	0.18	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(k)fluoranthene	0.11	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Chrysene	0.23	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Fluoranthene	0.44	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Indeno(1,2,3-cd)pyrene	0.18	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Phenanthrene	0.22	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Pyrene	0.44	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	63.9	40-140	
o-Terphenyl (OTP)	60.6	40-140	
2-Bromonaphthalene	66.1	40-140	
2-Fluorobiphenyl	70.6	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.55

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C5-C8 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Unadjusted C9-C12 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C9-C12 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C9-C10 Aromatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Benzene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Ethylbenzene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Naphthalene	ND	0.17	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Toluene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
m+p Xylene	0.18	0.069	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
o-Xylene	0.086	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	109		70-130				5/7/13 18:48		
2,5-Dibromotoluene (PID)	106		70-130				5/7/13 18:48		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Arsenic	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Barium	37	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Beryllium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Cadmium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Chromium	12	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Lead	31	0.72	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Mercury	0.066	0.025	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:24	SAJ
Nickel	10	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Vanadium	19	0.95	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Zinc	87	0.95	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Unadjusted C11-C22 Aromatics	23	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
C11-C22 Aromatics	21	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(a)anthracene	0.19	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(a)pyrene	0.19	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(b)fluoranthene	0.33	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(g,h,i)perylene	0.21	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(k)fluoranthene	0.11	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Chrysene	0.25	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Fluoranthene	0.37	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Indeno(1,2,3-cd)pyrene	0.16	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Phenanthrene	0.14	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Pyrene	0.34	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	69.5		40-140				5/8/13 15:15		
o-Terphenyl (OTP)	68.5		40-140				5/8/13 15:15		
2-Bromonaphthalene	76.8		40-140				5/8/13 15:15		
2-Fluorobiphenyl	79.1		40-140				5/8/13 15:15		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.04

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Benzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Ethylbenzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Toluene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
o-Xylene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	98.9	70-130							
2,5-Dibromotoluene (PID)	99.0	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/6/13 19:29	OP
Arsenic	4.1	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Barium	25	2.6	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/7/13 15:35	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Chromium	10	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Lead	31	0.79	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/6/13 19:29	OP
Mercury	0.043	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:22	SAJ
Nickel	5.1	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/7/13 15:35	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Vanadium	12	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Zinc	33	1.1	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/7/13 15:35	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromoform	ND	0.0017	mg/Kg dry	1	L-04, V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,4-Dioxane	ND	0.085	mg/Kg dry	1	V-16	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Naphthalene	ND	0.0085	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,3-Trichlorobenzene	ND	0.0085	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,4-Trichlorobenzene	ND	0.0034	mg/Kg dry	1	R-05, V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	116	70-130	5/6/13 14:20
Toluene-d8	101	70-130	5/6/13 14:20
4-Bromofluorobenzene	89.2	70-130	5/6/13 14:20



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-I.1	5/7/13	5/8/13 15:36	SCS
Surrogates	% Recovery	Recovery Limits	Flag						
Chlorooctadecane (COD)	75.4	40-140							
o-Terphenyl (OTP)	70.5	40-140							
2-Bromonaphthalene	69.6	40-140							
2-Fluorobiphenyl	71.5	40-140							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.31

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	88.2		70-130				5/7/13 20:00		
2,5-Dibromotoluene (PID)	90.6		70-130				5/7/13 20:00		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Arsenic	3.4	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Barium	9.1	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Chromium	4.2	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Lead	4.1	0.88	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:24	SAJ
Nickel	6.1	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Vanadium	7.2	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Zinc	27	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.2		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
C19-C36 Aliphatics	14	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Unadjusted C11-C22 Aromatics	24	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
C11-C22 Aromatics	24	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	63.4		40-140				5/8/13 17:41		
o-Terphenyl (OTP)	60.1		40-140				5/8/13 17:41		
2-Bromonaphthalene	62.1		40-140				5/8/13 17:41		
2-Fluorobiphenyl	63.6		40-140				5/8/13 17:41		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.04

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C5-C8 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Unadjusted C9-C12 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C9-C12 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C9-C10 Aromatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Benzene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Ethylbenzene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Naphthalene	ND	0.30	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Toluene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
m+p Xylene	ND	0.12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
o-Xylene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Surrogates	% Recovery	Recovery Limits		Flag					
2,5-Dibromotoluene (FID)	89.0	70-130						5/7/13 20:36	
2,5-Dibromotoluene (PID)	91.5	70-130						5/7/13 20:36	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Barium	48	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Beryllium	0.32	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Chromium	8.1	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Lead	27	0.82	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Mercury	0.075	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:25	SAJ
Nickel	4.7	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Vanadium	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Zinc	32	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.2		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	76.5		40-140				5/8/13 18:02		
o-Terphenyl (OTP)	71.4		40-140				5/8/13 18:02		
2-Bromonaphthalene	73.5		40-140				5/8/13 18:02		
2-Fluorobiphenyl	75.6		40-140				5/8/13 18:02		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.23

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Benzene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Ethylbenzene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Toluene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
o-Xylene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	101	70-130							
2,5-Dibromotoluene (PID)	102	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Arsenic	3.0	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Barium	7.2	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Chromium	6.3	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Lead	5.1	0.78	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:27	SAJ
Nickel	4.2	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Vanadium	8.2	1.0	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Zinc	16	1.0	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
C19-C36 Aliphatics	36	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Unadjusted C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Surrogates	% Recovery	Recovery Limits	Flag						
Chlorooctadecane (COD)	72.4	40-140							
o-Terphenyl (OTP)	65.2	40-140							
2-Bromonaphthalene	74.2	40-140							
2-Fluorobiphenyl	76.9	40-140							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.11

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Benzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Ethylbenzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Toluene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
o-Xylene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	91.9	70-130							
2,5-Dibromotoluene (PID)	91.6	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Arsenic	4.7	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Barium	17	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Beryllium	0.29	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Cadmium	0.50	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Chromium	7.0	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Lead	13	0.80	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:29	SAJ
Nickel	5.4	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Vanadium	13	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Zinc	240	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.1		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	190	61	mg/Kg dry	5		MADEP-EPH-04-1.1	5/7/13	5/9/13 8:58	SCS
C19-C36 Aliphatics	800	61	mg/Kg dry	5		MADEP-EPH-04-1.1	5/7/13	5/9/13 8:58	SCS
Unadjusted C11-C22 Aromatics	370	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
C11-C22 Aromatics	370	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	71.9		40-140				5/8/13 18:43		
o-Terphenyl (OTP)	74.6		40-140				5/8/13 18:43		
2-Bromonaphthalene	65.9		40-140				5/8/13 18:43		
2-Fluorobiphenyl	74.0		40-140				5/8/13 18:43		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 0.87

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Unadjusted C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C9-C10 Aromatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Benzene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Ethylbenzene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Naphthalene	ND	0.41	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Toluene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
m+p Xylene	ND	0.16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
o-Xylene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Surrogates	% Recovery	Recovery Limits		Flag					
2,5-Dibromotoluene (FID)	82.5	70-130						5/8/13 0:49	
2,5-Dibromotoluene (PID)	83.7	70-130						5/8/13 0:49	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Arsenic	3.4	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Barium	50	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Chromium	6.7	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Lead	200	0.87	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Mercury	0.11	0.030	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:30	SAJ
Nickel	4.8	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Vanadium	12	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Zinc	220	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	70.0		40-140				5/8/13 19:04		
o-Terphenyl (OTP)	66.9		40-140				5/8/13 19:04		
2-Bromonaphthalene	74.7		40-140				5/8/13 19:04		
2-Fluorobiphenyl	79.0		40-140				5/8/13 19:04		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.17

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Benzene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Ethylbenzene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Toluene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
o-Xylene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	93.4	70-130							
2,5-Dibromotoluene (PID)	95.4	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Arsenic	3.2	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Barium	39	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Chromium	8.1	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Lead	23	0.83	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:32	SAJ
Nickel	4.1	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Vanadium	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Zinc	44	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.4		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Surrogates		% Recovery	Recovery Limits		Flag				
Chlorooctadecane (COD)		77.5	40-140					5/8/13 19:25	
o-Terphenyl (OTP)		68.8	40-140					5/8/13 19:25	
2-Bromonaphthalene		74.7	40-140					5/8/13 19:25	
2-Fluorobiphenyl		76.2	40-140					5/8/13 19:25	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.35

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Benzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Ethylbenzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Toluene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
o-Xylene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	93.9	70-130							
2,5-Dibromotoluene (PID)	95.7	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Arsenic	3.1	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Barium	12	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Chromium	5.4	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Lead	4.8	0.84	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:38	SAJ
Nickel	5.2	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Vanadium	8.3	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Zinc	55	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.3		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	75.4	40-140	
o-Terphenyl (OTP)	71.0	40-140	
2-Bromonaphthalene	76.3	40-140	
2-Fluorobiphenyl	77.3	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.19

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C5-C8 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Unadjusted C9-C12 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C9-C12 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C9-C10 Aromatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Benzene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Ethylbenzene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Naphthalene	ND	0.22	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Toluene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
m+p Xylene	ND	0.088	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
o-Xylene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	85.0	70-130							
2,5-Dibromotoluene (PID)	84.4	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Arsenic	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Barium	8.8	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Beryllium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Cadmium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Chromium	4.2	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Lead	7.1	0.72	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:39	SAJ
Nickel	2.6	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Vanadium	7.1	0.96	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Zinc	35	0.96	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Unadjusted C11-C22 Aromatics	13	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
C11-C22 Aromatics	12	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Chrysene	0.12	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Fluoranthene	0.25	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Phenanthrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Pyrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	122		40-140				5/8/13 20:07		
o-Terphenyl (OTP)	110		40-140				5/8/13 20:07		
2-Bromonaphthalene	68.5		40-140				5/8/13 20:07		
2-Fluorobiphenyl	71.5		40-140				5/8/13 20:07		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.10

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Benzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Ethylbenzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Naphthalene	ND	0.28	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Toluene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
o-Xylene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	109		70-130				5/8/13 0:13		
2,5-Dibromotoluene (PID)	107		70-130				5/8/13 0:13		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (S-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Barium	18	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Chromium	2.2	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Lead	7.6	0.81	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Mercury	0.036	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:41	SAJ
Nickel	1.3	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Vanadium	3.5	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Zinc	18	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072491	20.4	2.00	05/07/13
13E0137-02 [B-1 (5-10ft)]	B072491	20.3	2.00	05/07/13
13E0137-03 [B-2 (0-5ft)]	B072491	20.1	2.00	05/07/13
13E0137-04 [B-3 (0-5ft)]	B072491	20.6	2.00	05/07/13
13E0137-05 [B-3 (10-15ft)]	B072491	20.0	2.00	05/07/13
13E0137-06 [B-4 (0-5ft)]	B072491	20.1	2.00	05/07/13
13E0137-07 [B-4 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-08 [B-5 (0-5ft)]	B072491	20.0	2.00	05/07/13
13E0137-09 [B-5 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-10 [B-6 (0-5ft)]	B072491	20.5	2.00	05/07/13
13E0137-11 [B-6 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-12 [B-7 (0-5ft)]	B072491	20.4	2.00	05/07/13
13E0137-13 [B-7 (5-10ft)]	B072491	20.1	2.00	05/07/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072480	15.7	16.4	05/07/13
13E0137-02 [B-1 (5-10ft)]	B072480	19.2	16.7	05/07/13
13E0137-03 [B-2 (0-5ft)]	B072480	23.2	15.6	05/07/13
13E0137-04 [B-3 (0-5ft)]	B072480	15.6	16.0	05/07/13
13E0137-06 [B-4 (0-5ft)]	B072480	15.6	16.7	05/07/13
13E0137-07 [B-4 (10-15ft)]	B072480	18.4	16.9	05/07/13
13E0137-08 [B-5 (0-5ft)]	B072480	16.6	16.3	05/07/13
13E0137-09 [B-5 (10-15ft)]	B072480	13.1	17.4	05/07/13
13E0137-10 [B-6 (0-5ft)]	B072480	17.6	16.9	05/07/13
13E0137-11 [B-6 (10-15ft)]	B072480	20.2	18.0	05/07/13
13E0137-12 [B-7 (0-5ft)]	B072480	17.9	15.4	05/07/13
13E0137-13 [B-7 (5-10ft)]	B072480	16.5	16.5	05/07/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-05 [B-3 (10-15ft)]	B072481	19.7	18.1	05/07/13

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13E0137-01 [B-1 (0-5ft)]	B072717	05/09/13
13E0137-02 [B-1 (5-10ft)]	B072717	05/09/13
13E0137-03 [B-2 (0-5ft)]	B072717	05/09/13
13E0137-04 [B-3 (0-5ft)]	B072717	05/09/13
13E0137-05 [B-3 (10-15ft)]	B072717	05/09/13
13E0137-06 [B-4 (0-5ft)]	B072717	05/09/13
13E0137-07 [B-4 (10-15ft)]	B072717	05/09/13
13E0137-08 [B-5 (0-5ft)]	B072717	05/09/13
13E0137-09 [B-5 (10-15ft)]	B072717	05/09/13
13E0137-10 [B-6 (0-5ft)]	B072717	05/09/13
13E0137-11 [B-6 (10-15ft)]	B072717	05/09/13
13E0137-12 [B-7 (0-5ft)]	B072717	05/09/13
13E0137-13 [B-7 (5-10ft)]	B072717	05/09/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072376	1.04	50.0	05/04/13
13E0137-02 [B-1 (5-10ft)]	B072376	1.02	50.0	05/04/13
13E0137-03 [B-2 (0-5ft)]	B072376	1.07	50.0	05/04/13
13E0137-04 [B-3 (0-5ft)]	B072376	1.01	50.0	05/04/13
13E0137-05 [B-3 (10-15ft)]	B072376	1.02	50.0	05/04/13
13E0137-06 [B-4 (0-5ft)]	B072376	1.02	50.0	05/04/13
13E0137-07 [B-4 (10-15ft)]	B072376	1.08	50.0	05/04/13
13E0137-08 [B-5 (0-5ft)]	B072376	1.02	50.0	05/04/13
13E0137-09 [B-5 (10-15ft)]	B072376	1.05	50.0	05/04/13
13E0137-10 [B-6 (0-5ft)]	B072376	1.01	50.0	05/04/13
13E0137-11 [B-6 (10-15ft)]	B072376	1.05	50.0	05/04/13
13E0137-12 [B-7 (0-5ft)]	B072376	1.06	50.0	05/04/13
13E0137-13 [B-7 (5-10ft)]	B072376	1.02	50.0	05/04/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-04 [B-3 (0-5ft)]	B072378	0.600	50.0	05/04/13
13E0137-05 [B-3 (10-15ft)]	B072378	0.610	50.0	05/04/13
13E0137-06 [B-4 (0-5ft)]	B072378	0.616	50.0	05/04/13
13E0137-07 [B-4 (10-15ft)]	B072378	0.605	50.0	05/04/13
13E0137-08 [B-5 (0-5ft)]	B072378	0.602	50.0	05/04/13
13E0137-09 [B-5 (10-15ft)]	B072378	0.615	50.0	05/04/13
13E0137-10 [B-6 (0-5ft)]	B072378	0.616	50.0	05/04/13
13E0137-11 [B-6 (10-15ft)]	B072378	0.609	50.0	05/04/13
13E0137-12 [B-7 (0-5ft)]	B072378	0.605	50.0	05/04/13
13E0137-13 [B-7 (5-10ft)]	B072378	0.610	50.0	05/04/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072383	0.616	50.0	05/06/13
13E0137-02 [B-1 (5-10ft)]	B072383	0.610	50.0	05/06/13
13E0137-03 [B-2 (0-5ft)]	B072383	0.607	50.0	05/06/13

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-05 [B-3 (10-15ft)]	B072417	6.95	10.0	05/06/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
Blank (B072417-BLK1)				Prepared & Analyzed: 05/06/13						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							L-04, V-05
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.010	mg/Kg wet							V-05



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
Blank (B072417-BLK1)										
Prepared & Analyzed: 05/06/13										
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							V-05
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.010	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.0040	mg/Kg wet							R-05, V-05
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0586		mg/Kg wet	0.0500		117	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0458		mg/Kg wet	0.0500		91.5	70-130			
LCS (B072417-BS1)										
Prepared & Analyzed: 05/06/13										
Acetone	0.278	0.10	mg/Kg wet	0.200		139	40-160			L-14, V-20 †
tert-Amyl Methyl Ether (TAME)	0.0190	0.0010	mg/Kg wet	0.0200		95.2	70-130			
Benzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130			
Bromochloromethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
Bromoform	0.0114	0.0020	mg/Kg wet	0.0200		57.1	70-130			L-04, V-05
Bromomethane	0.0113	0.010	mg/Kg wet	0.0200		56.5	40-160			L-14, V-20 †
2-Butanone (MEK)	0.196	0.040	mg/Kg wet	0.200		98.2	40-160			†
n-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
sec-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
tert-Butylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0198	0.0010	mg/Kg wet	0.0200		98.8	70-130			
Carbon Disulfide	0.0220	0.0060	mg/Kg wet	0.0200		110	70-130			
Carbon Tetrachloride	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130			
Chlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
Chlorodibromomethane	0.0153	0.0010	mg/Kg wet	0.0200		76.5	70-130			
Chloroethane	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
Chloroform	0.0207	0.0040	mg/Kg wet	0.0200		104	70-130			
Chloromethane	0.0166	0.010	mg/Kg wet	0.0200		82.8	40-160			†
2-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
4-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0145	0.0020	mg/Kg wet	0.0200		72.6	70-130			V-05
1,2-Dibromoethane (EDB)	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130			
Dibromomethane	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
1,3-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,4-Dichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS (B072417-BS1)				Prepared & Analyzed: 05/06/13						
Dichlorodifluoromethane (Freon 12)	0.0107	0.010	mg/Kg wet	0.0200		53.4	40-160			L-14 †
1,1-Dichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1-Dichloroethylene	0.0218	0.0040	mg/Kg wet	0.0200		109	70-130			
cis-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
trans-1,2-Dichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
1,3-Dichloropropane	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130			
2,2-Dichloropropane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130			
1,1-Dichloropropene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
cis-1,3-Dichloropropene	0.0167	0.0010	mg/Kg wet	0.0200		83.3	70-130			
trans-1,3-Dichloropropene	0.0169	0.0010	mg/Kg wet	0.0200		84.4	70-130			
Diethyl Ether	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
Diisopropyl Ether (DIPE)	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130			
1,4-Dioxane	0.168	0.10	mg/Kg wet	0.200		83.8	40-160			V-16 †
Ethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
Hexachlorobutadiene	0.0159	0.0020	mg/Kg wet	0.0200		79.7	70-130			
2-Hexanone (MBK)	0.175	0.020	mg/Kg wet	0.200		87.7	40-160			†
Isopropylbenzene (Cumene)	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
4-Methyl-2-pentanone (MIBK)	0.177	0.020	mg/Kg wet	0.200		88.5	40-160			†
Naphthalene	0.0128	0.010	mg/Kg wet	0.0200		64.1	70-130			L-07, V-05
n-Propylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Styrene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
1,1,1,2-Tetrachloroethane	0.0157	0.0020	mg/Kg wet	0.0200		78.6	70-130			V-05
1,1,2,2-Tetrachloroethane	0.0167	0.0010	mg/Kg wet	0.0200		83.7	70-130			
Tetrachloroethylene	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
Tetrahydrofuran	0.0199	0.010	mg/Kg wet	0.0200		99.3	70-130			
Toluene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
1,2,3-Trichlorobenzene	0.0140	0.010	mg/Kg wet	0.0200		70.1	70-130			V-05
1,2,4-Trichlorobenzene	0.0129	0.0040	mg/Kg wet	0.0200		64.7	70-130			L-07A, R-05, V-05
1,1,1-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,1,2-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130			
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Trichlorofluoromethane (Freon 11)	0.0217	0.010	mg/Kg wet	0.0200		108	70-130			
1,2,3-Trichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
1,2,4-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,3,5-Trimethylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
Vinyl Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.6	70-130			
m+p Xylene	0.0385	0.0040	mg/Kg wet	0.0400		96.2	70-130			
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0554		mg/Kg wet	0.0500		111	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0470		mg/Kg wet	0.0500		94.0	70-130			



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS Dup (B072417-BSD1)					Prepared & Analyzed: 05/06/13					
Acetone	0.273	0.10	mg/Kg wet	0.200		137	40-160	1.95	20	L-14, V-20 †
tert-Amyl Methyl Ether (TAME)	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130	9.41	20	
Benzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	7.37	20	
Bromobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	8.11	20	
Bromochloromethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	8.67	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130	9.70	20	
Bromoform	0.0124	0.0020	mg/Kg wet	0.0200		61.8	70-130	7.91	20	L-04, V-05
Bromomethane	0.0138	0.010	mg/Kg wet	0.0200		68.8	40-160	19.6	20	L-14, V-20 †
2-Butanone (MEK)	0.214	0.040	mg/Kg wet	0.200		107	40-160	8.78	20	†
n-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	11.7	20	
sec-Butylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	7.94	20	
tert-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	7.93	20	
tert-Butyl Ethyl Ether (TBEE)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	7.88	20	
Carbon Disulfide	0.0231	0.0060	mg/Kg wet	0.0200		116	70-130	4.78	20	
Carbon Tetrachloride	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	6.89	20	
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	7.94	20	
Chlorodibromomethane	0.0166	0.0010	mg/Kg wet	0.0200		83.1	70-130	8.27	20	
Chloroethane	0.0208	0.010	mg/Kg wet	0.0200		104	70-130	0.289	20	
Chloroform	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130	7.71	20	
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	40-160	5.75	20	†
2-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	11.1	20	
4-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	9.95	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0163	0.0020	mg/Kg wet	0.0200		81.4	70-130	11.4	20	V-05
1,2-Dibromoethane (EDB)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	9.92	20	
Dibromomethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	8.92	20	
1,2-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	10.6	20	
1,3-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	9.62	20	
1,4-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	7.17	20	
Dichlorodifluoromethane (Freon 12)	0.0114	0.010	mg/Kg wet	0.0200		57.2	40-160	6.87	20	L-14 †
1,1-Dichloroethane	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	5.39	20	
1,2-Dichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	5.92	20	
1,1-Dichloroethylene	0.0229	0.0040	mg/Kg wet	0.0200		114	70-130	4.83	20	
cis-1,2-Dichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.12	20	
trans-1,2-Dichloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	8.53	20	
1,2-Dichloropropane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	9.18	20	
1,3-Dichloropropane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	13.0	20	
2,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130	6.47	20	
1,1-Dichloropropene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	6.24	20	
cis-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130	9.49	20	
trans-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130	11.4	20	
Diethyl Ether	0.0209	0.010	mg/Kg wet	0.0200		104	70-130	3.61	20	
Diisopropyl Ether (DIPE)	0.0241	0.0010	mg/Kg wet	0.0200		120	70-130	9.13	20	
1,4-Dioxane	0.174	0.10	mg/Kg wet	0.200		87.2	40-160	3.99	20	V-16 †
Ethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	8.38	20	
Hexachlorobutadiene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	13.3	20	
2-Hexanone (MBK)	0.196	0.020	mg/Kg wet	0.200		97.9	40-160	10.9	20	†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.63	20	
p-Isopropyltoluene (p-Cymene)	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	8.52	20	
Methyl tert-Butyl Ether (MTBE)	0.0229	0.0040	mg/Kg wet	0.0200		115	70-130	11.6	20	
Methylene Chloride	0.0214	0.010	mg/Kg wet	0.0200		107	70-130	6.25	20	
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101	40-160	13.6	20	†
Naphthalene	0.0148	0.010	mg/Kg wet	0.0200		74.2	70-130	14.6	20	V-05

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS Dup (B072417-BSD1)				Prepared & Analyzed: 05/06/13						
n-Propylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	10.2	20	
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	9.12	20	
1,1,1,2-Tetrachloroethane	0.0166	0.0020	mg/Kg wet	0.0200		83.1	70-130	5.57	20	V-05
1,1,2,2-Tetrachloroethane	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130	11.8	20	
Tetrachloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	10.6	20	
Tetrahydrofuran	0.0232	0.010	mg/Kg wet	0.0200		116	70-130	15.4	20	
Toluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.01	20	
1,2,3-Trichlorobenzene	0.0166	0.010	mg/Kg wet	0.0200		82.8	70-130	16.6	20	V-05
1,2,4-Trichlorobenzene	0.0162	0.0040	mg/Kg wet	0.0200		80.8	70-130	22.1	20	V-05, R-05
1,1,1-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	6.65	20	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	12.8	20	
Trichloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	8.24	20	
Trichlorofluoromethane (Freon 11)	0.0234	0.010	mg/Kg wet	0.0200		117	70-130	7.71	20	
1,2,3-Trichloropropane	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	8.12	20	
1,2,4-Trimethylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	6.87	20	
1,3,5-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	11.8	20	
Vinyl Chloride	0.0182	0.010	mg/Kg wet	0.0200		91.2	70-130	5.17	20	
m+p Xylene	0.0415	0.0040	mg/Kg wet	0.0400		104	70-130	7.60	20	
o-Xylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	6.73	20	
Surrogate: 1,2-Dichloroethane-d4	0.0577		mg/Kg wet	0.0500		115	70-130			
Surrogate: Toluene-d8	0.0516		mg/Kg wet	0.0500		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.0483		mg/Kg wet	0.0500		96.7	70-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072491 - SW-846 3546										
Blank (B072491-BLK1)										
Prepared: 05/07/13 Analyzed: 05/08/13										
C9-C18 Aliphatics	ND	10	mg/Kg wet							L-04
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							L-04
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	4.26		mg/Kg wet	4.99		85.4	40-140			
Surrogate: o-Terphenyl (OTP)	3.83		mg/Kg wet	5.00		76.6	40-140			
Surrogate: 2-Bromonaphthalene	3.38		mg/Kg wet	5.00		71.6	40-140			
Surrogate: 2-Fluorobiphenyl	3.39		mg/Kg wet	5.00		71.9	40-140			
LCS (B072491-BS1)										
Prepared: 05/07/13 Analyzed: 05/08/13										
Acenaphthene	3.89	0.10	mg/Kg wet	5.00		77.8	40-140			
Acenaphthylene	3.75	0.10	mg/Kg wet	5.00		75.0	40-140			
Anthracene	4.02	0.10	mg/Kg wet	5.00		80.5	40-140			
Benzo(a)anthracene	4.18	0.10	mg/Kg wet	5.00		83.5	40-140			
Benzo(a)pyrene	4.05	0.10	mg/Kg wet	5.00		81.1	40-140			
Benzo(b)fluoranthene	4.19	0.10	mg/Kg wet	5.00		83.9	40-140			
Benzo(g,h,i)perylene	4.43	0.10	mg/Kg wet	5.00		88.7	40-140			
Benzo(k)fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.3	40-140			
Chrysene	3.94	0.10	mg/Kg wet	5.00		78.8	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072491 - SW-846 3546										
LCS (B072491-BS1)					Prepared: 05/07/13 Analyzed: 05/08/13					
Dibenz(a,h)anthracene	4.40	0.10	mg/Kg wet	5.00		88.1	40-140			
Fluoranthene	4.10	0.10	mg/Kg wet	5.00		82.0	40-140			
Fluorene	4.00	0.10	mg/Kg wet	5.00		80.0	40-140			
Indeno(1,2,3-cd)pyrene	4.46	0.10	mg/Kg wet	5.00		89.1	40-140			
2-Methylnaphthalene	3.72	0.10	mg/Kg wet	5.00		74.5	40-140			
Naphthalene	3.32	0.10	mg/Kg wet	5.00		66.5	40-140			
Phenanthrene	4.07	0.10	mg/Kg wet	5.00		81.5	40-140			
Pyrene	4.00	0.10	mg/Kg wet	5.00		80.1	40-140			
n-Decane	2.22	0.10	mg/Kg wet	5.00		44.5	40-140			
n-Docosane	4.15	0.10	mg/Kg wet	5.00		83.0	40-140			
n-Dodecane	3.33	0.10	mg/Kg wet	5.00		66.6	40-140			
n-Eicosane	4.12	0.10	mg/Kg wet	5.00		82.3	40-140			
n-Hexacosane	3.90	0.10	mg/Kg wet	5.00		78.0	40-140			
n-Hexadecane	4.22	0.10	mg/Kg wet	5.00		84.3	40-140			
n-Hexatriacontane	3.69	0.10	mg/Kg wet	5.00		73.9	40-140			
n-Nonadecane	4.16	0.10	mg/Kg wet	5.00		83.2	40-140			
n-Nonane	1.19	0.10	mg/Kg wet	5.00		23.7	30-140			L-04
n-Octacosane	3.79	0.10	mg/Kg wet	5.00		75.9	40-140			
n-Octadecane	4.18	0.10	mg/Kg wet	5.00		83.6	40-140			
n-Tetracosane	3.99	0.10	mg/Kg wet	5.00		79.9	40-140			
n-Tetradecane	3.94	0.10	mg/Kg wet	5.00		78.8	40-140			
n-Triacontane	3.81	0.10	mg/Kg wet	5.00		76.1	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.09		mg/Kg wet	4.99		82.0	40-140			
Surrogate: o-Terphenyl (OTP)	3.81		mg/Kg wet	5.00		76.1	40-140			
Surrogate: 2-Bromonaphthalene	3.63		mg/Kg wet	5.00		72.6	40-140			
Surrogate: 2-Fluorobiphenyl	3.75		mg/Kg wet	5.00		75.0	40-140			
LCS Dup (B072491-BS1)					Prepared: 05/07/13 Analyzed: 05/08/13					
Acenaphthene	3.85	0.10	mg/Kg wet	5.00		77.0	40-140	1.04	25	
Acenaphthylene	3.70	0.10	mg/Kg wet	5.00		74.1	40-140	1.18	25	
Anthracene	4.03	0.10	mg/Kg wet	5.00		80.6	40-140	0.216	25	
Benzo(a)anthracene	4.26	0.10	mg/Kg wet	5.00		85.3	40-140	2.12	25	
Benzo(a)pyrene	4.15	0.10	mg/Kg wet	5.00		82.9	40-140	2.24	25	
Benzo(b)fluoranthene	4.31	0.10	mg/Kg wet	5.00		86.3	40-140	2.84	25	
Benzo(g,h,i)perylene	4.55	0.10	mg/Kg wet	5.00		90.9	40-140	2.54	25	
Benzo(k)fluoranthene	4.25	0.10	mg/Kg wet	5.00		85.0	40-140	1.92	25	
Chrysene	4.03	0.10	mg/Kg wet	5.00		80.5	40-140	2.18	25	
Dibenz(a,h)anthracene	4.52	0.10	mg/Kg wet	5.00		90.5	40-140	2.68	25	
Fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.4	40-140	1.61	25	
Fluorene	3.96	0.10	mg/Kg wet	5.00		79.2	40-140	0.937	25	
Indeno(1,2,3-cd)pyrene	4.57	0.10	mg/Kg wet	5.00		91.5	40-140	2.62	25	
2-Methylnaphthalene	3.66	0.10	mg/Kg wet	5.00		73.2	40-140	1.74	25	
Naphthalene	3.27	0.10	mg/Kg wet	5.00		65.4	40-140	1.64	25	
Phenanthrene	4.09	0.10	mg/Kg wet	5.00		81.7	40-140	0.284	25	
Pyrene	4.06	0.10	mg/Kg wet	5.00		81.2	40-140	1.41	25	
n-Decane	2.16	0.10	mg/Kg wet	5.00		43.1	40-140	3.03	25	
n-Docosane	4.35	0.10	mg/Kg wet	5.00		87.0	40-140	4.68	25	
n-Dodecane	3.40	0.10	mg/Kg wet	5.00		68.0	40-140	1.99	25	
n-Eicosane	4.33	0.10	mg/Kg wet	5.00		86.6	40-140	5.03	25	
n-Hexacosane	4.08	0.10	mg/Kg wet	5.00		81.6	40-140	4.54	25	



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072491 - SW-846 3546										
LCS Dup (B072491-BS01)				Prepared: 05/07/13 Analyzed: 05/08/13						
n-Hexadecane	4.39	0.10	mg/Kg wet	5.00		87.7	40-140	4.00	25	
n-Hexatriacontane	4.04	0.10	mg/Kg wet	5.00		80.9	40-140	9.03	25	
n-Nonadecane	4.36	0.10	mg/Kg wet	5.00		87.3	40-140	4.82	25	
n-Nonane	1.05	0.10	mg/Kg wet	5.00		21.0	30-140	12.0	25	L-04
n-Octacosane	3.97	0.10	mg/Kg wet	5.00		79.3	40-140	4.46	25	
n-Octadecane	4.39	0.10	mg/Kg wet	5.00		87.8	40-140	4.86	25	
n-Tetracosane	4.19	0.10	mg/Kg wet	5.00		83.8	40-140	4.83	25	
n-Tetradecane	4.08	0.10	mg/Kg wet	5.00		81.5	40-140	3.36	25	
n-Triacontane	3.98	0.10	mg/Kg wet	5.00		79.5	40-140	4.38	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.11		mg/Kg wet	4.99		82.3	40-140			
Surrogate: o-Terphenyl (OTP)	3.61		mg/Kg wet	5.00		72.2	40-140			
Surrogate: 2-Bromonaphthalene	3.49		mg/Kg wet	5.00		69.8	40-140			
Surrogate: 2-Fluorobiphenyl	3.60		mg/Kg wet	5.00		72.0	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072480 - MA VPH										
Blank (B072480-BLK1)				Prepared & Analyzed: 05/07/13						
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
Naphthalene	ND	0.25	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
o-Xylene	ND	0.050	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0348		mg/Kg wet	0.0400		87.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0377		mg/Kg wet	0.0400		94.1	70-130			
LCS (B072480-BS1)				Prepared & Analyzed: 05/07/13						
Benzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Butylcyclohexane	0.0879	0.0010	mg/Kg wet	0.100		87.9	70-130			
Decane	0.0931	0.0010	mg/Kg wet	0.100		93.1	70-130			
Ethylbenzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.0979	0.0050	mg/Kg wet	0.100		97.9	70-130			
Nonane	0.0882	0.0010	mg/Kg wet	0.100		88.2	30-130			
Pentane	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
Toluene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
2,2,4-Trimethylpentane	0.0928	0.0010	mg/Kg wet	0.100		92.8	70-130			
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		106	70-130			
o-Xylene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0376		mg/Kg wet	0.0400		94.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0384		mg/Kg wet	0.0400		95.9	70-130			
LCS Dup (B072480-BSD1)				Prepared & Analyzed: 05/07/13						
Benzene	0.106	0.0010	mg/Kg wet	0.100		106	70-130	2.96	25	
Butylcyclohexane	0.0911	0.0010	mg/Kg wet	0.100		91.1	70-130	3.60	25	
Decane	0.0981	0.0010	mg/Kg wet	0.100		98.1	70-130	5.21	25	
Ethylbenzene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.20	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.96	25	
2-Methylpentane	0.103	0.0010	mg/Kg wet	0.100		103	70-130	2.73	25	
Naphthalene	0.105	0.0050	mg/Kg wet	0.100		105	70-130	6.88	25	
Nonane	0.0918	0.0010	mg/Kg wet	0.100		91.8	30-130	3.93	25	
Pentane	0.108	0.0010	mg/Kg wet	0.100		108	70-130	2.67	25	
Toluene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.08	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.10	25	
2,2,4-Trimethylpentane	0.0950	0.0010	mg/Kg wet	0.100		95.0	70-130	2.34	25	
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130	3.06	25	
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.09	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0432		mg/Kg wet	0.0400		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0388		mg/Kg wet	0.0400		96.9	70-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072481 - MA VPH										
Blank (B072481-BLK1)				Prepared & Analyzed: 05/07/13						
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0348		mg/Kg wet	0.0400		87.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0377		mg/Kg wet	0.0400		94.1	70-130			
LCS (B072481-BS1)				Prepared & Analyzed: 05/07/13						
Benzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Butylcyclohexane	0.0879	0.0010	mg/Kg wet	0.100		87.9	70-130			
Decane	0.0931	0.0010	mg/Kg wet	0.100		93.1	70-130			
Ethylbenzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.0979	0.010	mg/Kg wet	0.100		97.9	70-130			
Nonane	0.0882	0.0010	mg/Kg wet	0.100		88.2	30-130			
Pentane	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
Toluene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
2,2,4-Trimethylpentane	0.0928	0.0010	mg/Kg wet	0.100		92.8	70-130			
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		106	70-130			
o-Xylene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0376		mg/Kg wet	0.0400		94.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0384		mg/Kg wet	0.0400		95.9	70-130			
LCS Dup (B072481-BS1)				Prepared & Analyzed: 05/07/13						
Benzene	0.106	0.0010	mg/Kg wet	0.100		106	70-130	2.96	25	
Butylcyclohexane	0.0911	0.0010	mg/Kg wet	0.100		91.1	70-130	3.60	25	
Decane	0.0981	0.0010	mg/Kg wet	0.100		98.1	70-130	5.21	25	
Ethylbenzene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.20	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.96	25	
2-Methylpentane	0.103	0.0010	mg/Kg wet	0.100		103	70-130	2.73	25	
Naphthalene	0.105	0.010	mg/Kg wet	0.100		105	70-130	6.88	25	
Nonane	0.0918	0.0010	mg/Kg wet	0.100		91.8	30-130	3.93	25	
Pentane	0.108	0.0010	mg/Kg wet	0.100		108	70-130	2.67	25	
Toluene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.08	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.10	25	
2,2,4-Trimethylpentane	0.0950	0.0010	mg/Kg wet	0.100		95.0	70-130	2.34	25	
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130	3.06	25	
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.09	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0432		mg/Kg wet	0.0400		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0388		mg/Kg wet	0.0400		96.9	70-130			



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072376 - SW-846 3050B										
Blank (B072376-BLK1)										
					Prepared: 05/04/13 Analyzed: 05/06/13					
Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B072376-BS1)										
					Prepared: 05/04/13 Analyzed: 05/06/13					
Antimony	82.0	5.0	mg/Kg wet	106		77.4	8.2-218.9			
Arsenic	178	5.0	mg/Kg wet	182		97.9	83-117.6			
Barium	142	5.0	mg/Kg wet	143		99.2	83.2-117.5			
Beryllium	101	0.50	mg/Kg wet	98.3		103	83.9-116			
Cadmium	61.7	0.50	mg/Kg wet	60.4		102	83.1-116.9			
Chromium	125	1.0	mg/Kg wet	125		99.7	81.6-117.6			
Lead	125	1.5	mg/Kg wet	136		91.7	82.4-117.8			
Nickel	126	1.0	mg/Kg wet	128		98.3	84.4-115.6			
Selenium	73.1	10	mg/Kg wet	85.9		85.1	80-120			
Silver	56.8	1.0	mg/Kg wet	61.3		92.6	66.2-133.8			
Thallium	133	5.0	mg/Kg wet	144		92.4	81.2-118.8			
Vanadium	106	2.0	mg/Kg wet	104		102	75.5-124			
Zinc	186	2.0	mg/Kg wet	204		90.9	81.9-117.6			
LCS Dup (B072376-BSD1)										
					Prepared: 05/04/13 Analyzed: 05/06/13					
Antimony	76.5	5.0	mg/Kg wet	106		72.1	8.2-218.9	7.05	30	
Arsenic	176	5.0	mg/Kg wet	182		96.8	83-117.6	1.18	30	
Barium	137	5.0	mg/Kg wet	143		95.9	83.2-117.5	3.42	30	
Beryllium	98.0	0.50	mg/Kg wet	98.3		99.7	83.9-116	3.25	30	
Cadmium	59.7	0.50	mg/Kg wet	60.4		98.9	83.1-116.9	3.33	30	
Chromium	122	1.0	mg/Kg wet	125		97.5	81.6-117.6	2.29	30	
Lead	122	1.5	mg/Kg wet	136		89.6	82.4-117.8	2.40	30	
Nickel	122	1.0	mg/Kg wet	128		95.3	84.4-115.6	3.15	30	
Selenium	71.0	10	mg/Kg wet	85.9		82.7	80-120	2.80	30	
Silver	54.9	1.0	mg/Kg wet	61.3		89.6	66.2-133.8	3.30	30	
Thallium	133	5.0	mg/Kg wet	144		92.4	81.2-118.8	0.0333	30	
Vanadium	103	2.0	mg/Kg wet	104		99.2	75.5-124	2.29	30	
Zinc	184	2.0	mg/Kg wet	204		90.4	81.9-117.6	0.579	30	



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072376 - SW-846 3050B										
Duplicate (B072376-DUP1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Antimony	ND	2.5	mg/Kg dry		ND			NC	35	
Arsenic	3.95	2.5	mg/Kg dry		4.13			4.40	35	
Barium	25.3	2.5	mg/Kg dry		25.0			0.918	35	
Beryllium	0.281	0.25	mg/Kg dry		ND			NC	35	
Cadmium	ND	0.25	mg/Kg dry		ND			NC	35	
Chromium	8.88	0.49	mg/Kg dry		10.2			13.6	35	
Lead	25.4	0.74	mg/Kg dry		30.6			18.7	35	
Nickel	5.06	0.49	mg/Kg dry		5.11			0.997	35	
Selenium	ND	4.9	mg/Kg dry		ND			NC	35	
Silver	ND	0.49	mg/Kg dry		ND			NC	35	
Thallium	ND	2.5	mg/Kg dry		ND			NC	35	
Vanadium	11.3	0.98	mg/Kg dry		11.6			2.14	35	
Zinc	33.0	0.98	mg/Kg dry		32.7			0.888	35	
MRL Check (B072376-MRL1)		Prepared: 05/04/13 Analyzed: 05/06/13								
Lead	0.723	0.71	mg/Kg wet	0.711		102	80-120			
Matrix Spike (B072376-MS1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Antimony	8.90	2.4	mg/Kg dry	24.5	ND	36.4	* 75-125			MS-07
Arsenic	25.3	2.4	mg/Kg dry	24.5	4.13	86.5	75-125			
Barium	39.7	2.4	mg/Kg dry	24.5	25.0	59.9	* 75-125			MS-07
Beryllium	23.6	0.24	mg/Kg dry	24.5	0.245	95.6	75-125			
Cadmium	22.3	0.24	mg/Kg dry	24.5	ND	91.2	75-125			
Chromium	32.8	0.49	mg/Kg dry	24.5	10.2	92.3	75-125			
Lead	39.4	0.73	mg/Kg dry	24.5	30.6	35.9	* 75-125			MS-07
Nickel	27.0	0.49	mg/Kg dry	24.5	5.11	89.3	75-125			
Selenium	20.0	4.9	mg/Kg dry	24.5	ND	81.7	75-125			
Silver	20.9	0.49	mg/Kg dry	24.5	ND	85.6	75-125			
Thallium	21.1	2.4	mg/Kg dry	24.5	ND	86.2	75-125			
Vanadium	34.7	0.98	mg/Kg dry	24.5	11.6	94.5	75-125			
Zinc	45.1	0.98	mg/Kg dry	24.5	32.7	50.8	* 75-125			MS-07
Batch B072378 - SW-846 7471										
Blank (B072378-BLK1)		Prepared: 05/04/13 Analyzed: 05/06/13								
Mercury	ND	0.025	mg/Kg wet							
LCS (B072378-BS1)		Prepared: 05/04/13 Analyzed: 05/06/13								
Mercury	4.61	0.33	mg/Kg wet	4.05		114	71.6-128.1			
LCS Dup (B072378-BSD1)		Prepared: 05/04/13 Analyzed: 05/06/13								
Mercury	5.59	0.67	mg/Kg wet	4.05		138	* 71.6-128.1	19.3	30	L-07



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072378 - SW-846 7471										
Duplicate (B072378-DUP1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Mercury	0.0460	0.027	mg/Kg dry		0.0426			7.80	35	
Matrix Spike (B072378-MS1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Mercury	0.219	0.026	mg/Kg dry	0.176	0.0426	100	75-125			
Batch B072383 - SW-846 7471										
Blank (B072383-BLK1)		Prepared & Analyzed: 05/06/13								
Mercury	ND	0.025	mg/Kg wet							
LCS (B072383-BS1)		Prepared & Analyzed: 05/06/13								
Mercury	5.50	0.66	mg/Kg wet	4.05		136	* 71.6-128.1			L-07
LCS Dup (B072383-BSD1)		Prepared & Analyzed: 05/06/13								
Mercury	4.50	0.34	mg/Kg wet	4.05		111	71.6-128.1	19.9	30	



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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072717 - % Solids										
Duplicate (B072717-DUP2)		Source: 13E0137-04			Prepared: 05/09/13 Analyzed: 05/10/13					
% Solids	93.3		% Wt		93.8			0.534	20	

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
O-01	Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Soil	
C9-C18 Aliphatics	CT,NC,WA,ME,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,ME,NH-P
Acenaphthene	CT,NC,WA,ME,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,ME,NH-P
Anthracene	CT,NC,WA,ME,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,ME,NH-P
Chrysene	CT,NC,WA,ME,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,ME,NH-P
Fluoranthene	CT,NC,WA,ME,ME,NH-P
Fluorene	CT,NC,WA,ME,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME,ME
Naphthalene	CT,NC,WA,ME,ME,NH-P
Phenanthrene	CT,NC,WA,ME,ME,NH-P
Pyrene	CT,NC,WA,ME,ME,NH-P

MADEP-VPH-04-1.1 in Soil

Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,ME,NC,VA
Barium	CT,NH,NY,ME,NC,VA
Beryllium	CT,NH,NY,ME,NC,VA
Cadmium	CT,NH,NY,ME,NC,VA
Chromium	CT,NH,NY,ME,NC,VA
Lead	CT,NH,NY,AI,HA,ME,NC,VA
Nickel	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,NC,VA
Silver	CT,NH,NY,ME,NC,VA
Thallium	CT,NH,NY,ME,NC,VA
Vanadium	CT,NH,NY,ME,NC,VA
Zinc	CT,NH,NY,ME,NC,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



con-test
ANALYTICAL LABORATORY

Phone: 413-525-2332

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Email: info@contestlabs.com

www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East longmeadow, MA 01028

Page 1 of 2

Company Name: CCL

Telephone: 781-356-9140

Address: 60 Brooks Drive

Project #

Braintree, MA 02184

Client PO# 1424-4350

Attention:

DATA DELIVERY (check all that apply)

☐ FAX ☐ EMAIL ☐ WEBSITE

Project Location: WALE ST, DEDDLEWORTH

Fax #

Sampled By: MBRODUCY

Email:

Project Proposal Provided? (for billing purposes)

☐ yes ☐ no proposal date

Format:

☐ PDF ☐ EXCEL ☐ GIS

☐ OTHER

☐ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection		Composite	Grab	*Matrix Code	Conc Code	ANALYSIS REQUESTED											
		Beginning Date/Time	Ending Date/Time					V	H	P	ST	V	S	T	B	X	T	O	
01	B-1 0-5'	5-2-13	0935		X	S	U	X	X	X									
02	B-1 5-10'	5-2-13	0850		X	S	U	X	X	X									
03	B-2 0-5'	5-2-13	0910		X	S	U	X	X	X									
04	B-2 5-10'	5-2-13	0930		X	S	U	X	X	X									
05	B-3 10-15'	5-2-13	1010		X	S	U		X	X	X								
06	B-4 0-5'	5-2-13	1030		X	S	U	X	X	X									
07	B-4 10-15'	5-2-13	1055		X	S	U	X	X	X									
08	B-5 0-5'	5-2-13	1115		X	S	U	X	X	X									
09	B-5 10-15'	5-2-13	1130		X	S	U	X	X	X									

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)

Date/Time:

Turnaround ^{††}

☐ 7-Day

☐ 10-Day

☒ Other 5

Received by: (signature)

Date/Time:

RUSH [†]

☐ 24-Hr ☐ 48-Hr

☐ 72-Hr ☐ 4-Day

[†] Require lab approval

Relinquished by: (signature)

Date/Time:

Received by: (signature)

Date/Time:

Detection Limit Requirements

Massachusetts: PLS-1

Connecticut:

Other:

Is your project MCP or RCP?

☒ MCP Form Required

☐ RCP Form Required

☐ MA State DW Form Required PWSID #



NELAP & AIHA-LAP, LLC
Accredited

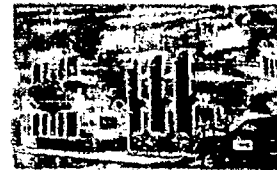
WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Page 83 of 86 13E0137_1 Contest_Final 05 10 13 1608 05/10/13 16:08:39

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: GCC RECEIVED BY: JMM DATE: 5/3/13

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples? Yes No

If not, explain:

3) Are all the samples in good condition? Yes No

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 3.0 °C

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	<u>13</u>
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>15</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol 2 13

Doc# 277 # Bisulfate 2 # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____ Unpreserved

Time and Date Frozen:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13E0137
Project Location: Hale St., Bridgewater	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E0137-01 thru 13E0137-13

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B ()	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A (X)	6020 Metals CAM III D ()	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

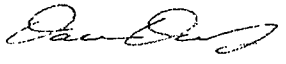
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
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Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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.

Signature:  Position: Laboratory Manager

Printed Name: Daren J. Damboragian Date: 05/10/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 15, 2013

Mike Bradley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: 106 Hale, Bridgewater
Client Job Number:
Project Number: 1424-3020
Laboratory Work Order Number: 13E0263

Enclosed are results of analyses for samples received by the laboratory on May 8, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James M. Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/15/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-3020

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0263

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 106 Hale, Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GEC-1	13E0263-01	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	
GEC-4	13E0263-02	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	
GEC-5	13E0263-03	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	
GEC-6	13E0263-04	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8270D	



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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8270, only a select list of PAH compounds were analyzed and reported in order to achieve lower detection limits than possible with the EPH analysis.

MADEP-EPH-04-1.1

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

n-Decane, n-Nonane
B072825-BSDI

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and 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.

Michael A. Erickson
Laboratory Director



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM

Surrogates	% Recovery	Recovery Limits	Flag
o-Terphenyl (OTP)	125	30-130	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	57.2	40-140	5/13/13 13:31
o-Terphenyl (OTP)	66.0	40-140	5/13/13 13:31
2-Bromonaphthalene	65.2	40-140	5/13/13 13:31
2-Fluorobiphenyl	69.0	40-140	5/13/13 13:31



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	95.7	70-130							
2,5-Dibromotoluene (PID)	101	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Arsenic	3.2	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Barium	72	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:35	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Zinc	22	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Surrogates		% Recovery	Recovery Limits		Flag				
o-Terphenyl (OTP)		125	30-130					5/14/13 2:50	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Surrogates		% Recovery	Recovery Limits		Flag				
Chlorooctadecane (COD)		55.9	40-140					5/13/13 13:50	
o-Terphenyl (OTP)		68.7	40-140					5/13/13 13:50	
2-Bromonaphthalene		86.6	40-140					5/13/13 13:50	
2-Fluorobiphenyl		89.0	40-140					5/13/13 13:50	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	87.9		70-130				5/9/13 23:49		
2,5-Dibromotoluene (PID)	87.4		70-130				5/9/13 23:49		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Barium	83	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Chromium	1.1	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:36	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Zinc	26	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Surrogates		% Recovery	Recovery Limits		Flag				
o-Terphenyl (OTP)		108	30-130					5/14/13 3:19	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	150	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
C19-C36 Aliphatics	240	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Unadjusted C11-C22 Aromatics	200	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
C11-C22 Aromatics	200	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	49.5		40-140					5/13/13 14:10	
o-Terphenyl (OTP)	61.0		40-140					5/13/13 14:10	
2-Bromonaphthalene	78.0		40-140					5/13/13 14:10	
2-Fluorobiphenyl	81.9		40-140					5/13/13 14:10	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	86.9	70-130							
2,5-Dibromotoluene (PID)	88.6	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Barium	19	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:38	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Zinc	27	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Surrogates		% Recovery		Recovery Limits	Flag				
o-Terphenyl (OTP)		115		30-130				5/14/13 3:48	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	58.7	40-140	5/13/13 14:30
o-Terphenyl (OTP)	67.8	40-140	5/13/13 14:30
2-Bromonaphthalene	87.4	40-140	5/13/13 14:30
2-Fluorobiphenyl	89.1	40-140	5/13/13 14:30



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	100	70-130							
2,5-Dibromotoluene (PID)	98.0	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Arsenic	1.7	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Barium	72	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Cadmium	1.0	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Chromium	3.2	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Lead	1.7	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:40	SAJ
Nickel	11	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Zinc	880	100	µg/L	10		SW-846 6020A	5/9/13	5/10/13 14:44	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072825	1000	2.00	05/11/13
13E0263-02 [GEC-4]	B072825	1000	2.00	05/11/13
13E0263-03 [GEC-5]	B072825	1000	2.00	05/11/13
13E0263-04 [GEC-6]	B072825	1000	2.00	05/11/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072697	5	5.00	05/09/13
13E0263-02 [GEC-4]	B072697	5	5.00	05/09/13
13E0263-03 [GEC-5]	B072697	5	5.00	05/09/13
13E0263-04 [GEC-6]	B072697	5	5.00	05/09/13

Prep Method: SW-846 3005A Dissolved-SW-846 6020A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072716	50.0	50.0	05/09/13
13E0263-02 [GEC-4]	B072716	50.0	50.0	05/09/13
13E0263-03 [GEC-5]	B072716	50.0	50.0	05/09/13
13E0263-04 [GEC-6]	B072716	50.0	50.0	05/09/13

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072651	6.00	6.00	05/09/13
13E0263-02 [GEC-4]	B072651	6.00	6.00	05/09/13
13E0263-03 [GEC-5]	B072651	6.00	6.00	05/09/13
13E0263-04 [GEC-6]	B072651	6.00	6.00	05/09/13

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072882	1000	2.00	05/11/13
13E0263-02 [GEC-4]	B072882	1000	2.00	05/11/13
13E0263-03 [GEC-5]	B072882	1000	2.00	05/11/13
13E0263-04 [GEC-6]	B072882	1000	2.00	05/11/13



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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072882 - SW-846 3510C										
Blank (B072882-BLK1)				Prepared: 05/11/13 Analyzed: 05/14/13						
Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(g,h,i)perylene	ND	0.50	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Surrogate: o-Terphenyl (OTP)	114		µg/L	100		114	30-130			
LCS (B072882-BS1)				Prepared: 05/11/13 Analyzed: 05/14/13						
Benzo(a)anthracene	88.4	1.2	µg/L	100		88.4	40-140			
Benzo(a)pyrene	88.8	2.5	µg/L	100		88.8	40-140			
Benzo(b)fluoranthene	90.3	1.2	µg/L	100		90.3	40-140			
Benzo(g,h,i)perylene	94.5	12	µg/L	100		94.5	40-140			
Benzo(k)fluoranthene	92.0	5.0	µg/L	100		92.0	40-140			
Chrysene	90.3	5.0	µg/L	100		90.3	40-140			
Dibenz(a,h)anthracene	97.8	5.0	µg/L	100		97.8	40-140			
Indeno(1,2,3-cd)pyrene	97.2	5.0	µg/L	100		97.2	40-140			
Surrogate: o-Terphenyl (OTP)	73.3		µg/L	100		73.3	30-130			
LCS Dup (B072882-BSD1)				Prepared: 05/11/13 Analyzed: 05/14/13						
Benzo(a)anthracene	87.2	1.2	µg/L	100		87.2	40-140	1.42	20	
Benzo(a)pyrene	87.7	2.5	µg/L	100		87.7	40-140	1.19	20	
Benzo(b)fluoranthene	89.7	1.2	µg/L	100		89.7	40-140	0.667	20	
Benzo(g,h,i)perylene	92.3	12	µg/L	100		92.3	40-140	2.36	20	
Benzo(k)fluoranthene	92.0	5.0	µg/L	100		92.0	40-140	0.0543	20	
Chrysene	89.3	5.0	µg/L	100		89.3	40-140	1.11	20	
Dibenz(a,h)anthracene	95.5	5.0	µg/L	100		95.5	40-140	2.43	20	
Indeno(1,2,3-cd)pyrene	94.4	5.0	µg/L	100		94.4	40-140	2.92	20	
Surrogate: o-Terphenyl (OTP)	69.2		µg/L	100		69.2	30-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072825 - SW-846 3510C										
Blank (B072825-BLK1)				Prepared: 05/11/13 Analyzed: 05/13/13						
C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	69.6		µg/L	99.8		69.7	40-140			
Surrogate: o-Terphenyl (OTP)	69.5		µg/L	100		69.5	40-140			
Surrogate: 2-Bromonaphthalene	80.5		µg/L	100		80.5	40-140			
Surrogate: 2-Fluorobiphenyl	83.0		µg/L	100		83.0	40-140			
LCS (B072825-BS1)				Prepared: 05/11/13 Analyzed: 05/13/13						
Acenaphthene	70.7	2.0	µg/L	100		70.7	40-140			
Acenaphthylene	67.3	2.0	µg/L	100		67.3	40-140			
Anthracene	74.8	2.0	µg/L	100		74.8	40-140			
Benzo(a)anthracene	76.3	2.0	µg/L	100		76.3	40-140			
Benzo(a)pyrene	74.9	2.0	µg/L	100		74.9	40-140			
Benzo(b)fluoranthene	77.6	2.0	µg/L	100		77.6	40-140			
Benzo(g,h,i)perylene	82.8	2.0	µg/L	100		82.8	40-140			
Benzo(k)fluoranthene	76.2	2.0	µg/L	100		76.2	40-140			
Chrysene	72.3	2.0	µg/L	100		72.3	40-140			
Dibenz(a,h)anthracene	81.5	2.0	µg/L	100		81.5	40-140			
Fluoranthene	74.7	2.0	µg/L	100		74.7	40-140			
Fluorene	72.2	2.0	µg/L	100		72.2	40-140			
Indeno(1,2,3-cd)pyrene	82.8	2.0	µg/L	100		82.8	40-140			
2-Methylnaphthalene	65.2	2.0	µg/L	100		65.2	40-140			
Naphthalene	57.9	2.0	µg/L	100		57.9	40-140			
Phenanthrene	73.8	2.0	µg/L	100		73.8	40-140			
Pyrene	73.0	2.0	µg/L	100		73.0	40-140			
n-Decane	43.6	2.0	µg/L	100		43.6	40-140			
n-Docosane	81.1	2.0	µg/L	100		81.1	40-140			
n-Dodecane	60.6	2.0	µg/L	100		60.6	40-140			
n-Eicosane	81.4	2.0	µg/L	100		81.4	40-140			
n-Hexacosane	78.2	2.0	µg/L	100		78.2	40-140			
n-Hexadecane	79.5	2.0	µg/L	100		79.5	40-140			
n-Hexatriacontane	83.9	2.0	µg/L	100		83.9	40-140			
n-Nonadecane	81.7	2.0	µg/L	100		81.7	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072825 - SW-846 3510C										
LCS (B072825-BS1)					Prepared: 05/11/13 Analyzed: 05/13/13					
n-Nonane	33.3	2.0	µg/L	100		33.3	30-140			
n-Octacosane	77.0	2.0	µg/L	100		77.0	40-140			
n-Octadecane	81.1	2.0	µg/L	100		81.1	40-140			
n-Tetracosane	79.4	2.0	µg/L	100		79.4	40-140			
n-Tetradecane	74.2	2.0	µg/L	100		74.2	40-140			
n-Triacontane	78.9	2.0	µg/L	100		78.9	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	73.4		µg/L	99.8		73.5	40-140			
Surrogate: o-Terphenyl (OTP)	70.1		µg/L	100		70.1	40-140			
Surrogate: 2-Bromonaphthalene	79.5		µg/L	100		79.5	40-140			
Surrogate: 2-Fluorobiphenyl	83.6		µg/L	100		83.6	40-140			
LCS Dup (B072825-BSD1)					Prepared: 05/11/13 Analyzed: 05/13/13					
Acenaphthene	66.5	2.0	µg/L	100		66.5	40-140	6.11	25	
Acenaphthylene	63.3	2.0	µg/L	100		63.3	40-140	6.15	25	
Anthracene	72.1	2.0	µg/L	100		72.1	40-140	3.64	25	
Benzo(a)anthracene	74.5	2.0	µg/L	100		74.5	40-140	2.45	25	
Benzo(a)pyrene	73.0	2.0	µg/L	100		73.0	40-140	2.61	25	
Benzo(b)fluoranthene	75.4	2.0	µg/L	100		75.4	40-140	2.86	25	
Benzo(g,h,i)perylene	80.4	2.0	µg/L	100		80.4	40-140	2.89	25	
Benzo(k)fluoranthene	74.6	2.0	µg/L	100		74.6	40-140	2.15	25	
Chrysene	70.5	2.0	µg/L	100		70.5	40-140	2.56	25	
Dibenz(a,h)anthracene	79.9	2.0	µg/L	100		79.9	40-140	1.95	25	
Fluoranthene	72.3	2.0	µg/L	100		72.3	40-140	3.26	25	
Fluorene	68.3	2.0	µg/L	100		68.3	40-140	5.51	25	
Indeno(1,2,3-cd)pyrene	80.8	2.0	µg/L	100		80.8	40-140	2.39	25	
2-Methylnaphthalene	60.9	2.0	µg/L	100		60.9	40-140	6.79	25	
Naphthalene	54.1	2.0	µg/L	100		54.1	40-140	6.66	25	
Phenanthrene	70.7	2.0	µg/L	100		70.7	40-140	4.32	25	
Pyrene	70.5	2.0	µg/L	100		70.5	40-140	3.53	25	
n-Decane	34.9	2.0	µg/L	100		34.9 *	40-140	22.2	25	L-07
n-Docosane	73.0	2.0	µg/L	100		73.0	40-140	10.5	25	
n-Dodecane	52.1	2.0	µg/L	100		52.1	40-140	15.2	25	
n-Eicosane	72.9	2.0	µg/L	100		72.9	40-140	11.0	25	
n-Hexacosane	70.2	2.0	µg/L	100		70.2	40-140	10.8	25	
n-Hexadecane	70.9	2.0	µg/L	100		70.9	40-140	11.4	25	
n-Hexatriacontane	74.5	2.0	µg/L	100		74.5	40-140	11.8	25	
n-Nonadecane	73.7	2.0	µg/L	100		73.7	40-140	10.3	25	
n-Nonane	25.9	2.0	µg/L	100		25.9 *	30-140	24.8	25	L-07
n-Octacosane	68.9	2.0	µg/L	100		68.9	40-140	11.1	25	
n-Octadecane	73.0	2.0	µg/L	100		73.0	40-140	10.6	25	
n-Tetracosane	71.1	2.0	µg/L	100		71.1	40-140	11.0	25	
n-Tetradecane	64.9	2.0	µg/L	100		64.9	40-140	13.4	25	
n-Triacontane	70.6	2.0	µg/L	100		70.6	40-140	11.2	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	63.0		µg/L	99.8		63.1	40-140			
Surrogate: o-Terphenyl (OTP)	65.6		µg/L	100		65.6	40-140			
Surrogate: 2-Bromonaphthalene	82.2		µg/L	100		82.2	40-140			
Surrogate: 2-Fluorobiphenyl	86.4		µg/L	100		86.4	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072697 - MA VPH										
Blank (B072697-BLK1)				Prepared & Analyzed: 05/09/13						
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	39.1		µg/L	40.0		97.7	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	35.8		µg/L	40.0		89.5	70-130			
LCS (B072697-BS1)				Prepared & Analyzed: 05/09/13						
Benzene	104	1.0	µg/L	100		104	70-130			
Butylcyclohexane	89.3	1.0	µg/L	100		89.3	70-130			
Decane	96.7	1.0	µg/L	100		96.7	70-130			
Ethylbenzene	105	1.0	µg/L	100		105	70-130			
Methyl tert-Butyl Ether (MTBE)	100	1.0	µg/L	100		100	70-130			
2-Methylpentane	105	1.0	µg/L	100		105	70-130			
Naphthalene	101	5.0	µg/L	100		101	70-130			
Nonane	90.5	1.0	µg/L	100		90.5	30-130			
Pentane	109	1.0	µg/L	100		109	70-130			
Toluene	105	1.0	µg/L	100		105	70-130			
1,2,4-Trimethylbenzene	105	1.0	µg/L	100		105	70-130			
2,2,4-Trimethylpentane	96.9	1.0	µg/L	100		96.9	70-130			
m+p Xylene	214	2.0	µg/L	200		107	70-130			
o-Xylene	104	1.0	µg/L	100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	41.0		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.0		µg/L	40.0		95.0	70-130			
LCS Dup (B072697-BSD1)				Prepared & Analyzed: 05/09/13						
Benzene	103	1.0	µg/L	100		103	70-130	0.544	25	
Butylcyclohexane	91.5	1.0	µg/L	100		91.5	70-130	2.44	25	
Decane	99.7	1.0	µg/L	100		99.7	70-130	3.09	25	
Ethylbenzene	105	1.0	µg/L	100		105	70-130	0.0611	25	
Methyl tert-Butyl Ether (MTBE)	99.7	1.0	µg/L	100		99.7	70-130	0.377	25	
2-Methylpentane	102	1.0	µg/L	100		102	70-130	3.10	25	
Naphthalene	102	5.0	µg/L	100		102	70-130	0.860	25	
Nonane	92.3	1.0	µg/L	100		92.3	30-130	1.95	25	
Pentane	106	1.0	µg/L	100		106	70-130	2.74	25	
Toluene	105	1.0	µg/L	100		105	70-130	0.0959	25	
1,2,4-Trimethylbenzene	105	1.0	µg/L	100		105	70-130	0.0961	25	
2,2,4-Trimethylpentane	95.0	1.0	µg/L	100		95.0	70-130	1.98	25	
m+p Xylene	214	2.0	µg/L	200		107	70-130	0.200	25	
o-Xylene	105	1.0	µg/L	100		105	70-130	0.114	25	
Surrogate: 2,5-Dibromotoluene (FID)	43.3		µg/L	40.0		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	39.7		µg/L	40.0		99.4	70-130			



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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072651 - SW-846 7470A Prep										
Blank (B072651-BLK1)				Prepared & Analyzed: 05/09/13						
Mercury	ND	0.00010	mg/L							
LCS (B072651-BS1)				Prepared & Analyzed: 05/09/13						
Mercury	0.00204	0.00010	mg/L	0.00200		102	80-120			
LCS Dup (B072651-BSD1)				Prepared & Analyzed: 05/09/13						
Mercury	0.00204	0.00010	mg/L	0.00200		102	80-120	0.0873	20	
Batch B072716 - SW-846 3005A Dissolved										
Blank (B072716-BLK1)				Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							
LCS (B072716-BS1)				Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	259	5.0	µg/L	250		104	80-120			
Arsenic	253	2.0	µg/L	250		101	80-120			
Barium	247	50	µg/L	250		98.9	80-120			
Beryllium	255	2.0	µg/L	250		102	80-120			
Cadmium	260	2.5	µg/L	250		104	80-120			
Chromium	246	5.0	µg/L	250		98.2	80-120			
Lead	251	5.0	µg/L	250		100	80-120			
Nickel	250	25	µg/L	250		99.9	80-120			
Selenium	259	25	µg/L	250		104	80-120			
Silver	265	2.5	µg/L	250		106	80-120			
Thallium	244	1.0	µg/L	250		97.5	80-120			
Vanadium	250	25	µg/L	250		100	80-120			
Zinc	277	50	µg/L	250		111	80-120			
LCS Dup (B072716-BSD1)				Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	260	5.0	µg/L	250		104	80-120	0.236	20	
Arsenic	255	2.0	µg/L	250		102	80-120	0.807	20	
Barium	247	50	µg/L	250		98.9	80-120	0.0153	20	
Beryllium	258	2.0	µg/L	250		103	80-120	1.05	20	
Cadmium	260	2.5	µg/L	250		104	80-120	0.0575	20	
Chromium	251	5.0	µg/L	250		100	80-120	2.20	20	
Lead	254	5.0	µg/L	250		102	80-120	1.17	20	
Nickel	250	25	µg/L	250		100	80-120	0.279	20	
Selenium	263	25	µg/L	250		105	80-120	1.48	20	
Silver	265	2.5	µg/L	250		106	80-120	0.0747	20	
Thallium	247	1.0	µg/L	250		99.0	80-120	1.52	20	
Vanadium	255	25	µg/L	250		102	80-120	1.69	20	
Zinc	272	50	µg/L	250		109	80-120	1.53	20	



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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072716 - SW-846 3005A Dissolved

Duplicate (B072716-DUP1)		Source: 13E0263-02		Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	0.550	0.40	µg/L		ND			NC	20	
Barium	86.0	10	µg/L		83.5			2.93	20	
Beryllium	ND	0.40	µg/L		ND			NC	20	
Cadmium	ND	0.50	µg/L		ND			NC	20	
Chromium	1.10	1.0	µg/L		1.10			0.423	20	
Lead	ND	1.0	µg/L		ND			NC	20	
Nickel	ND	5.0	µg/L		ND			NC	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.50	µg/L		ND			NC	20	
Thallium	ND	0.20	µg/L		ND			NC	20	
Vanadium	ND	5.0	µg/L		ND			NC	20	
Zinc	27.4	10	µg/L		26.3			4.33	20	

Matrix Spike (B072716-MS1)		Source: 13E0263-02		Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	268	10	µg/L	250	ND	107	75-125			
Arsenic	261	4.0	µg/L	250	0.373	104	75-125			
Barium	333	100	µg/L	250	83.5	99.7	75-125			
Beryllium	260	4.0	µg/L	250	ND	104	75-125			
Cadmium	262	5.0	µg/L	250	0.0354	105	75-125			
Chromium	245	10	µg/L	250	1.10	97.6	75-125			
Lead	260	10	µg/L	250	0.214	104	75-125			
Nickel	250	50	µg/L	250	4.69	98.2	75-125			
Selenium	267	50	µg/L	250	0.860	106	75-125			
Silver	260	5.0	µg/L	250	ND	104	75-125			
Thallium	251	2.0	µg/L	250	ND	100	75-125			
Vanadium	258	50	µg/L	250	ND	103	75-125			
Zinc	298	100	µg/L	250	26.3	109	75-125			

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
- † Wide recovery limits established for difficult compound.
- ‡ Wide RPD limits established for difficult compound.
- # Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-I.1 in Water	
C9-C18 Aliphatics	CT,NC,WA,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,NH-P
Acenaphthene	CT,NC,WA,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,NH-P
Anthracene	CT,NC,WA,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,NH-P
Chrysene	CT,NC,WA,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,NH-P
Fluoranthene	CT,NC,WA,ME,NH-P
Fluorene	CT,NC,WA,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME
Naphthalene	CT,NC,WA,ME,NH-P
Phenanthrene	CT,NC,WA,ME,NH-P
Pyrene	CT,NC,WA,ME,NH-P

MADEP-VPH-04-I.1 in Water	
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P

SW-846 6020A in Water	
Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Beryllium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
Thallium	CT,NH,NY,NC,ME,VA



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6020A in Water</i>	
Vanadium	CT,NH,NY,NC,ME,VA
Zinc	CT,NH,NY,NC,ME,VA
<i>SW-846 7470A in Water</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8270D in Water</i>	
Acenaphthene	ME,NC,NY,CT,NH,VA
Acenaphthylene	ME,NC,NY,CT,NH,VA
Anthracene	ME,NC,NY,CT,NH,VA
Benzo(a)anthracene	ME,NC,NY,CT,NH,VA
Benzo(a)pyrene	ME,NC,NY,CT,NH,VA
Benzo(b)fluoranthene	ME,NC,NY,CT,NH,VA
Benzo(g,h,i)perylene	ME,NC,NY,CT,NH,VA
Benzo(k)fluoranthene	ME,NC,NY,CT,NH,VA
Chrysene	ME,NC,NY,CT,NH,VA
Dibenz(a,h)anthracene	ME,NC,NY,CT,NH,VA
Fluoranthene	ME,NC,NY,CT,NH,VA
Fluorene	ME,NC,NY,CT,NH,VA
Indeno(1,2,3-cd)pyrene	ME,NC,NY,CT,NH,VA
2-Methylnaphthalene	ME,NC
Naphthalene	ME,NC,NY,CT,NH,VA
Phenanthrene	ME,NC,NY,CT,NH,VA
Pyrene	ME,NC,NY,CT,NH,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: GEC RECEIVED BY: RLF DATE: 5/8/13

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples? Yes No
If not, explain:

3) Are all the samples in good condition? Yes No
If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 5.9°C

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	<u>8</u>	8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic	<u>4</u>	Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>12</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl 6 # Methanol _____

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____

Time and Date Frozen:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13E0263
Project Location: 106 Hale, Bridgewater	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E0263-01 thru 13E0263-04

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A ()	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A ()	6020 Metals CAM III D (X)	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
---	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 10.1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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.

Signature: Michael A. Erickson Position: Laboratory Director

Printed Name: Michael A. Erickson Date: 05/15/13



August 19, 2013

Goldman
Environmental
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www.goldmanenvironmental.com

Ms. Thatiana J. Gibson, Project Manager
Division of Capital Asset Management and Maintenance
One Ashburton Place
Boston, MA 02108

**RE: Limited Subsurface Investigation
106 Hale Street
Bridgewater, Massachusetts
GEC Project No. 1424-3020**

Dear Ms. Gibson:

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts has completed a limited subsurface investigation at the above-referenced property (the "Site"). The purpose of GEC's investigation was to: (1) locate and assess the condition of existing groundwater monitoring wells on the Site, and (2) installing test borings/monitoring wells to evaluate potential adverse Site impacts associated with historical on-Site manufacturing operations and sampling groundwater monitoring wells to assess groundwater conditions associated with historically identified petroleum contamination related to former on-Site UST systems.

BACKGROUND

In our *Environmental Site Assessment* report for the Site, dated December 12, 2012, GEC identified historical records that indicated a historic nail manufacturer located on-Site utilized up to 14 USTs, containing fuels and process chemicals such as gasoline, fuel oil, quench oil, and xylenes. Many of these USTs were removed; however, several were abandoned in-place. No UST closure documentation (which should have indicated the environmental conditions of soil and groundwater around the USTs) was identified for all but one UST. Additionally, the Site was listed as an ERNS Site after 11,000 gallons of hazardous waste was left behind in drums when Independent Nail, Inc. vacated the Site on December 12, 1993, and the adjacent MBTA commuter rail right-of-way was identified as an ERNS site after a release of quench oil from USTs associated with the former Independent Nail, Inc. were observed on the MBTA property and reported to the National Response Center. Also, the Site is listed as State Disposal Site (RTNs 4-1187 and 4-12138), and as a State Spill Site. Response actions for RTN 4-12138 were completed (for a UST) and a condition of No Significant Risk was documented; however, a portion of the Site is considered to be part of a disposal site that originates on an adjacent property (under RTN 4-1187, for which a Class C RAO Statement was submitted to achieve a Temporary Solution under the MCP), which will remain under assessment until a Permanent Solution is achieved under the MCP.

SCOPE OF WORK

Based on the foregoing, GEC recommended performing a limited subsurface investigation that included the installation of soil test borings and groundwater monitoring wells and the collection of soil and groundwater samples for laboratory analysis. The scope of work described herein was developed by John M. O'Donnell, P.E., L.S.P. of DCAMM and included: determining whether any groundwater monitoring wells are presently located on-Site and gauging said wells, if any, to determine the depth to groundwater and presence/thickness of petroleum NAPL floating on the groundwater surface; performing a total of seven test borings inside and outside the Site building and completing up to four test borings as groundwater monitoring wells (located in the exterior of the Site, at GEC's direction); collecting soil and groundwater samples for laboratory analysis; and preparing a letter report documenting the work conducted and providing recommendations for additional subsurface investigation and/or remediation work, if any, to bring the Site to regulatory closure. The work proposed is in accordance with M.G.L. c. 21E and the MCP, 310 CMR 40.0000, and is described below.

LIMITED SUBSURFACE INVESTIGATION

GEC's limited subsurface investigation included performing seven soil test borings, four of which were completed as groundwater monitoring wells, throughout the Site. Refer to Figure 2 for a Site Plan depicting test boring and monitoring well locations. A total of thirteen soil samples and four groundwater samples were submitted to Contest Analytical Laboratory of East Longmeadow, Massachusetts, a state-certified laboratory, for laboratory analysis for Volatile Petroleum Hydrocarbons (VPH), including target volatile organic compounds (VOCs), and/or Extractable Petroleum Hydrocarbons (EPH), including target polycyclic aromatic hydrocarbons (PAHs), via the MADEP Methods, VOCs via USEPA Method 8260C and/or 14 Massachusetts Metals (MM14 Metals) via USEPA Method 6020A/7470A. The laboratory certificates of analysis are attached hereto.

Test Boring, Soil Screening, and Monitoring Well Installation

On May 2, 2013, New England Geotech, LLC (NEG), under the supervision of GEC personnel, performed seven soil test borings (B-1 through B-7) and installed four groundwater monitoring wells (GEC-1, GEC-4, GEC-5 and GEC-6) on-Site. Test borings were advanced using a truck-mounted, direct-push GeoProbe® 7726 drill rig. Soil samples were collected continuously utilizing clean five foot acetate sleeves inside hollow steel rods. A new, clean, acetate sleeve was used for each sample collected.

Test borings B-1 through B-6 were performed within the footprint of the former Site building that was located on the eastern portion of the Site. Test boring B-1 was performed approximately 20 feet from the northeast corner of the existing Site building to assess the potential for vapor intrusion into the existing Site building resulting from the known and possible unknown releases of OHM at this location. Test borings B-2 through B-6 were advanced to depth throughout the footprint of the former Site building to assess current subsurface conditions in relation to known releases of OHM in this area. Test

boring B-7 was advanced to depth within the western portion the existing Site building to evaluate current subsurface conditions. All soil test borings, except B-2, were advanced to a depth of 15 feet below surface grade (BSG). At B-2, drilling refusal was encountered between 2.5 and 7 feet BSG on four attempts to install this test boring.

Soil from each sampling interval was headspace screened for total ionizable compounds using a MiniRae 2000 photoionization detector (PID) equipped with a 10.6 eV lamp. PID readings ranged from 0.0 to 13.0 parts per million (ppm). During test boring activities, wet soils, indicative of the approximate depth of the groundwater table, were encountered approximately nine to eleven feet BSG.

Groundwater monitoring wells were installed in test borings B-1, B-4, B-5 and B-6 and designated GEC-1, GEC-4, GEC-5 and GEC-6, respectively. The monitoring wells were constructed of ten feet of 2-inch I.D schedule 40 PVC ten-slot (0.010" slots) screen followed by varying lengths of solid PVC riser pipe to the ground surface. The borings were backfilled with clean silica sand to one foot above the screen, followed by a bentonite seal and finished with a flush-mounted road box. Monitoring wells GEC-1 and GEC-4 were installed to a depth of 15 feet BSG and monitoring wells GEC-5 and GEC-6 were installed to a depth of 17 feet BSG.

To ensure an acceptable hydrologic connection between the well and surrounding substrata and to remove fines, the wells were developed using dedicated hand-bailers following installation. Approximately three well volumes were removed indicating good communication with the surrounding aquifer. Please refer to the attached Boring Logs for additional test boring and monitoring well installation information.

Soil Sampling

On May 2, 2013 GEC collected soil samples from test borings B-1 through B-7 for laboratory analysis for laboratory analysis for VPH, including target VOCs, EPH, including target PAHs, VOCs and/or MM14 Metals. In addition, because a headspace reading exceeding 10 ppmv was observed for the soil sample collected from the 10-15 foot sampling interval of test boring B-3, a sample was submitted for VOCs via USEPA Method 8260C. Where feasible, two soil samples from each test boring were submitted for laboratory analysis. Samples were collected from the 0-5 foot sampling interval and from the sampling interval that intersected the groundwater interface. At B-2, GEC did not encounter the groundwater interface since drilling refusal was encountered at 7 feet BSG.

Groundwater Sampling

On May 7, 2013, GEC returned to the Site and gauged depth to groundwater at the four newly installed monitoring wells. The depth to water ranged from 9.54 to 9.70 feet BSG. Groundwater samples were collected utilizing low-flow sampling methodology. A 1.75 inch QED bladder pump with a QED MP-15 controller was used to purge monitoring wells at a rate that allowed the groundwater level to stabilize if possible. Inorganic parameters, including temperature, conductivity, dissolved oxygen, pH and oxidation/reduction potential were monitored while purging. When these

parameters stabilized, indicating good communication between the well and surrounding aquifer samples were collected. In addition, groundwater samples submitted for dissolved metals analysis were field filtered with 0.45µm filter. Groundwater samples from each monitoring well were submitted for laboratory analysis for VPH including target VOCs, EPH, including target PAHs, VOCs and dissolved MM14 Metals.

Monitoring Well Inventory and Well Survey

On May 7, 2013, GEC attempted to locate pre-existing monitoring wells located on the Site including MW-5, MW-6, MW-8, and RIZ 8 through RIZ-10. GEC was only able to locate MW-5, which is located on the sidewalk along Plymouth Street.

GEC also conducted an elevation survey to determine the well head elevation of the newly installed monitoring wells at the Site. This survey included all the newly installed monitoring wells and MW-5. Elevation of the top of the PVC riser pipe was determined via rod and level survey. MW-5 according to previous MCP reports has an elevation of 58.92 feet; therefore, this elevation was applied to the survey to tie the newly installed monitoring wells into the existing network, which includes several monitoring wells located off-Site. Well head elevations ranged 58.92 at GEC-5 to 62.99 feet at GEC-4. Based on the surveyed well head elevations and measured depth to groundwater, GEC determined that groundwater at the Site appears to flow in a northeasterly direction. Refer to Table 1 for a summary of the groundwater elevation data.

DATA EVALUATION

Soil Data

Ten metals including arsenic, barium, beryllium, cadmium, chromium, lead, nickel, vanadium, zinc and mercury were detected in one or more soil samples at concentrations above laboratory sample detection limits. The C9-C18 aliphatic, C19-C36 aliphatic and C11-C22 aromatic subsets of EPH and several PAHs were detected in one or more the soil samples from the 0-5 foot sampling interval from B-2, B-3, B-4 and B-5 and from the 10-15 foot sampling interval at B-5 at concentrations above laboratory sample detection limits. No VPH or VOCs were detected in any of the samples submitted for laboratory analysis above laboratory detection limits, except for xylenes which was detected at a low concentration, near sample detection limits, in B-2 (0-5 feet). Refer to Tables 2 through 4 for a summary of the soil analytical data.

Groundwater Data

Seven metals including arsenic, barium, cadmium, chromium, lead, nickel and zinc were detected in one or more groundwater samples at concentrations above laboratory sample detection limits. The C9-C18 aliphatic, C19-C36 aliphatic and C11-C22 aromatic subsets of EPH were detected above laboratory sample detection limits in the groundwater sample from GEC-5 only. No VPH or target VOCs were detected above laboratory sample detection limits in any groundwater samples submitted for analysis. Refer to Table 5 and 6 for a summary of the groundwater analytical data.

Data Evaluation Relative to Historic Data

GEC was unable to locate any pre-existing monitoring wells within the Site boundaries although several wells were observed adjacent to the Site. Wells identified on a Site Plan dated August 2003 prepared by Weston and Sampson (W&S) as part of the Class C RAO for RTN 4-1187 has monitoring wells MW-8, RIZ-8, RIZ-9 and RIZ-10 located within the Site boundaries; GEC was not able to identify any evidence of these wells on-Site. None of these pre-existing on-Site monitoring wells were reported by W&S to contain a measurable thickness of LNAPL; however, it should be noted that on May 22, 2003, W&S reported that sumps S-1 and S-2 had greater than one foot of LNAPL, and off-Site wells RIZ-14, RIZ-16, and RIZ-17 had measurable thicknesses of LNAPL.

Based upon GEC's Site Plan, attached as Figure 2, it appears that test borings B-3 through B-6 and groundwater monitoring wells GEC-4 through GEC-6 were installed proximal to the former monitoring wells; however, it should be noted as well that the W&S Site Plan was not scaled properly and historical well locations may not be reliable. B-5/GEC-5 appears to be the only sampling location installed downgradient of the pre-existing monitoring wells on the Site and is also slightly upgradient of the former quench oil USTs. Soil and groundwater samples collected from B-5/GEC-5 had low concentrations of petroleum-related compounds. RIZ-8, which is the closest upgradient well to GEC-5 for which historic data are available, had lower previously detected concentrations of petroleum compounds than noted in GEC-5.

MassDEP REPORTING REQUIREMENTS

M.G.L. Chapter 21E and the MCP provide requirements for evaluating whether a release of OHM must be reported to the Massachusetts Department of Environmental Protection (MassDEP). Reporting Categories for soil and groundwater, and Reportable Concentrations for oil and/or hazardous materials (OHM) in soils and groundwater, have been promulgated within the MCP for this purpose. The applicable soil and groundwater reporting categories for a site are based on site characteristics and nearby actual and potential land and water usage. GEC has determined that the applicable Reporting Category is "RCS-1" for soil and "RCGW-2" for groundwater. The rationale for selecting the Reporting Category is provided below.

Soil Category - Soil Category 1 (RCS-1) was determined to be applicable to the Site because the Site is situated within 500 feet of a residential dwelling.

Groundwater Category - Groundwater Category 2 (RCGW-2) was determined to be applicable to the Site because the Site is not situated within a Current or Potential Drinking Water Source Area.

The applicable soil Reporting Category and OHM detected at the Site dictates the applicable Reportable Concentration. The level of OHM present in each sample is compared to the applicable Reportable Concentration to determine whether the release is

reportable. A comparison of OHM detected in the samples collected from the Site to Reportable Concentrations, is described below.

Although OHM were detected in both in the soil and the groundwater above laboratory sample detection limits, none of the detected concentrations exceed MCP Reportable Concentrations for the categories described above.

CONCLUSIONS

Although several metals and petroleum related compounds were detected in soil and groundwater samples, none of the detected concentrations exceeded MCP Reportable Concentrations. Test boring B-5 and monitoring well GEC-5 had the highest detectable concentrations of petroleum-related compounds, which was expected due to its close proximity to the former quench oil USTs. GEC determined the apparent direction of groundwater flow at the Site is to the northeast, which is consistent with the findings documented in previous MassDEP submittals for the quench oil release. Therefore, it is unlikely that subsurface conditions at the Site will worsen over time, as the petroleum release occurred downgradient of the Site. However, it is possible that petroleum-related contaminant concentrations in soil and groundwater may increase with proximity to the northeastern property boundary (i.e., where the quench oil tanks from which the petroleum release occurred were formerly located).

RECOMMENDATIONS

GEC has no further recommendations at this time.

GEC understands that reports of this nature often raise more questions than they answer. Please do not hesitate to contact Parrish C. Smolcha at (781) 356-9140 x116 with any questions or comments.

Sincerely,
Goldman Environmental Consultants, Inc.



Mike Bradley
Environmental Field Scientist

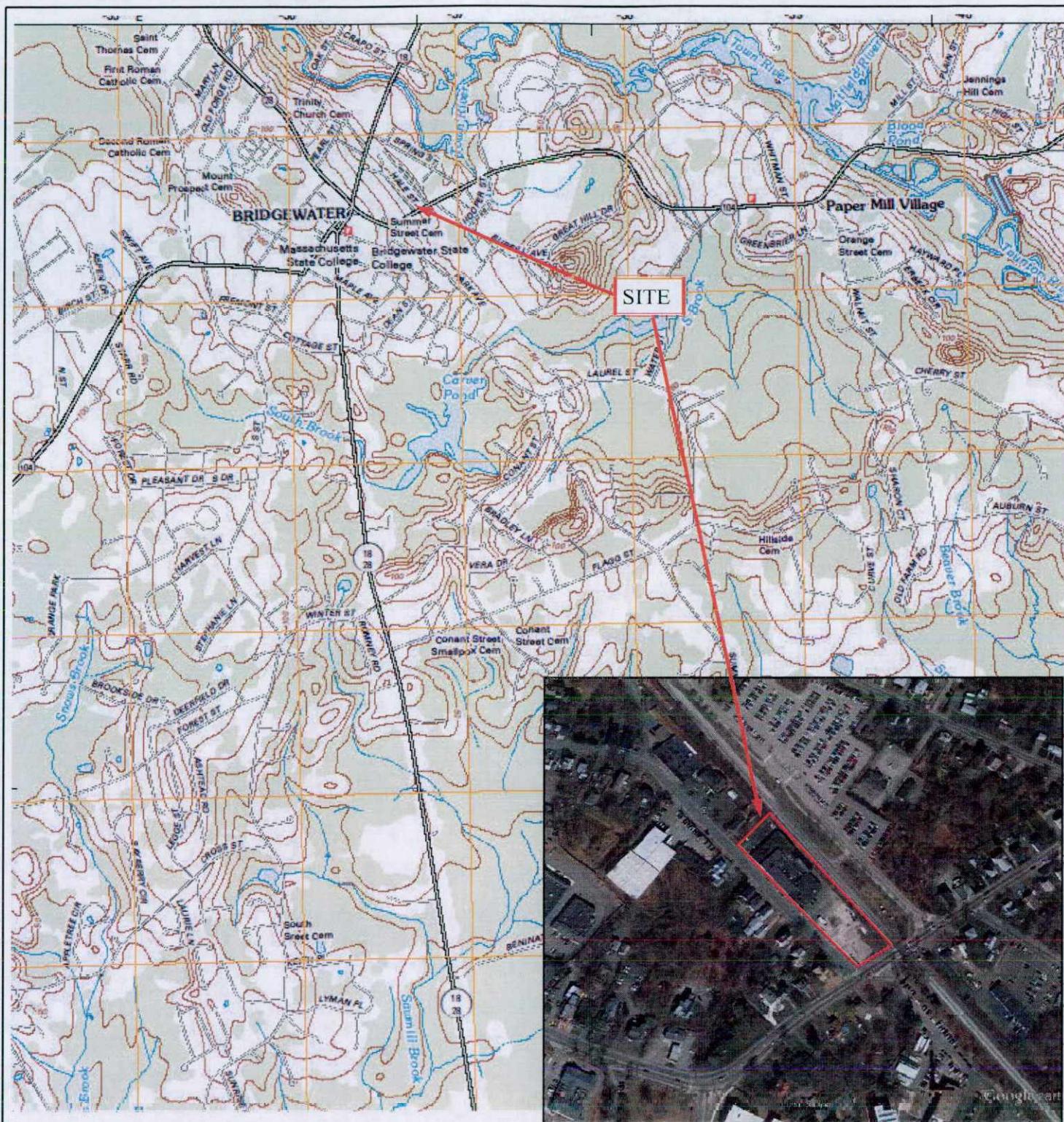


Parrish C. Smolcha
Senior Project Manager

cc: John M. O'Donnell, DCAMM (john.odonnell@state.ma.us)

Attachments -Figures
-Tables
-Boring Logs
-Laboratory Certificates of Analysis

Figures



USGS 7.5 Minute Topographic & 2012 Google Aerial

Bridgewater
Massachusetts Quadrangle



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SITE LOCUS

106 Hale Street
Bridgewater, Massachusetts

GEC Project #: 1424-3020

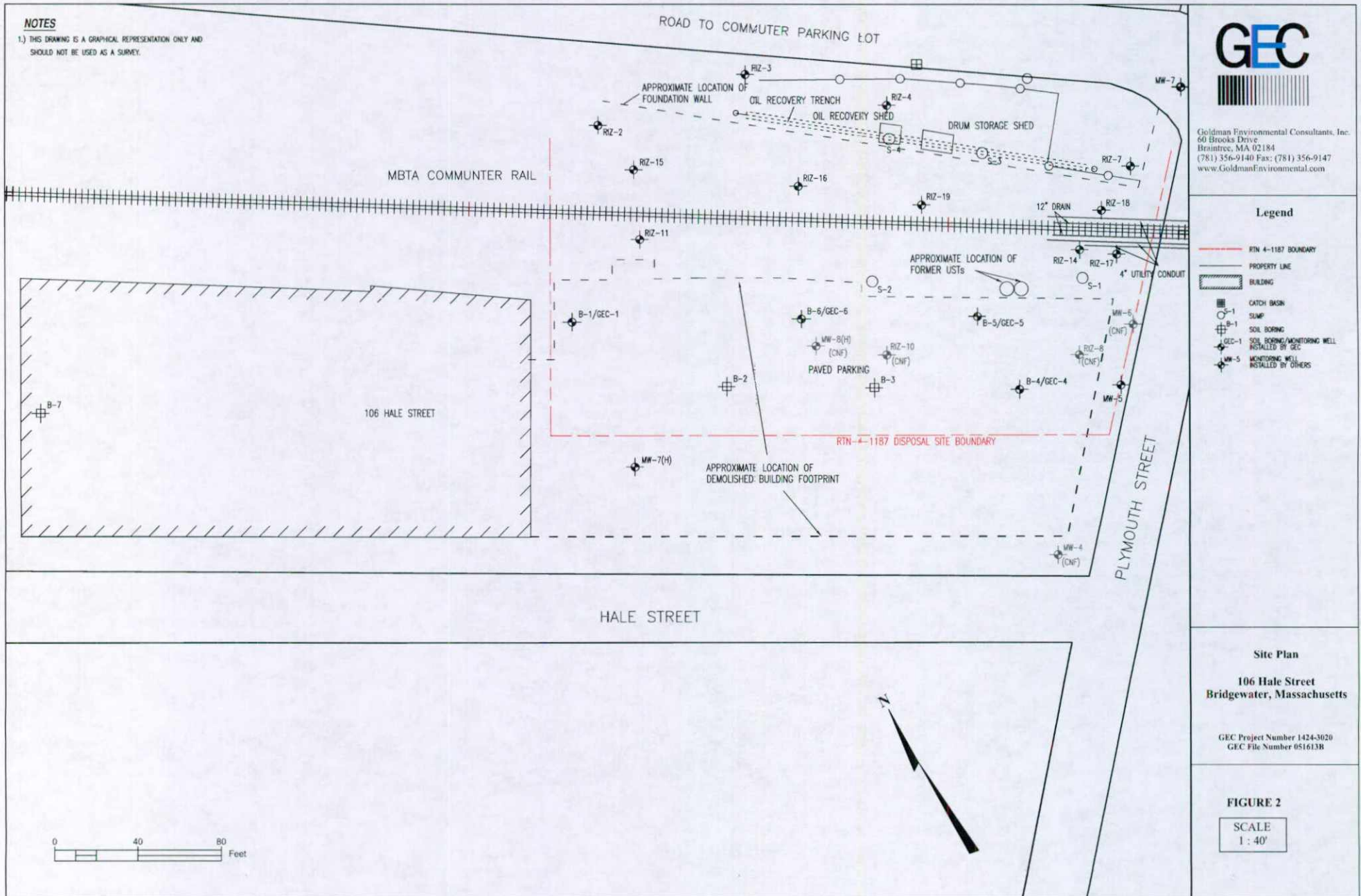
Figure 1

Scale
1 : 24,000



NOTES

1.) THIS DRAWING IS A GRAPHICAL REPRESENTATION ONLY AND SHOULD NOT BE USED AS A SURVEY.



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Legend

- RTN 4-1187 BOUNDARY
- PROPERTY LINE
- BUILDING
- CATCH BASIN
- SUMP
- B-1
- SOIL BORING
- GEC-1
- SOIL BORING/MONITORING WELL INSTALLED BY GEC
- MW-5
- MONITORING WELL INSTALLED BY OTHERS

Site Plan

106 Hale Street
Bridgewater, Massachusetts

GEC Project Number 1424-3020
GEC File Number 051613B

FIGURE 2

SCALE
1 : 40'

MassDEP - Bureau of Waste Site Cleanup

Site Information: MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

106 HALE STREET BRIDGEWATER, MA

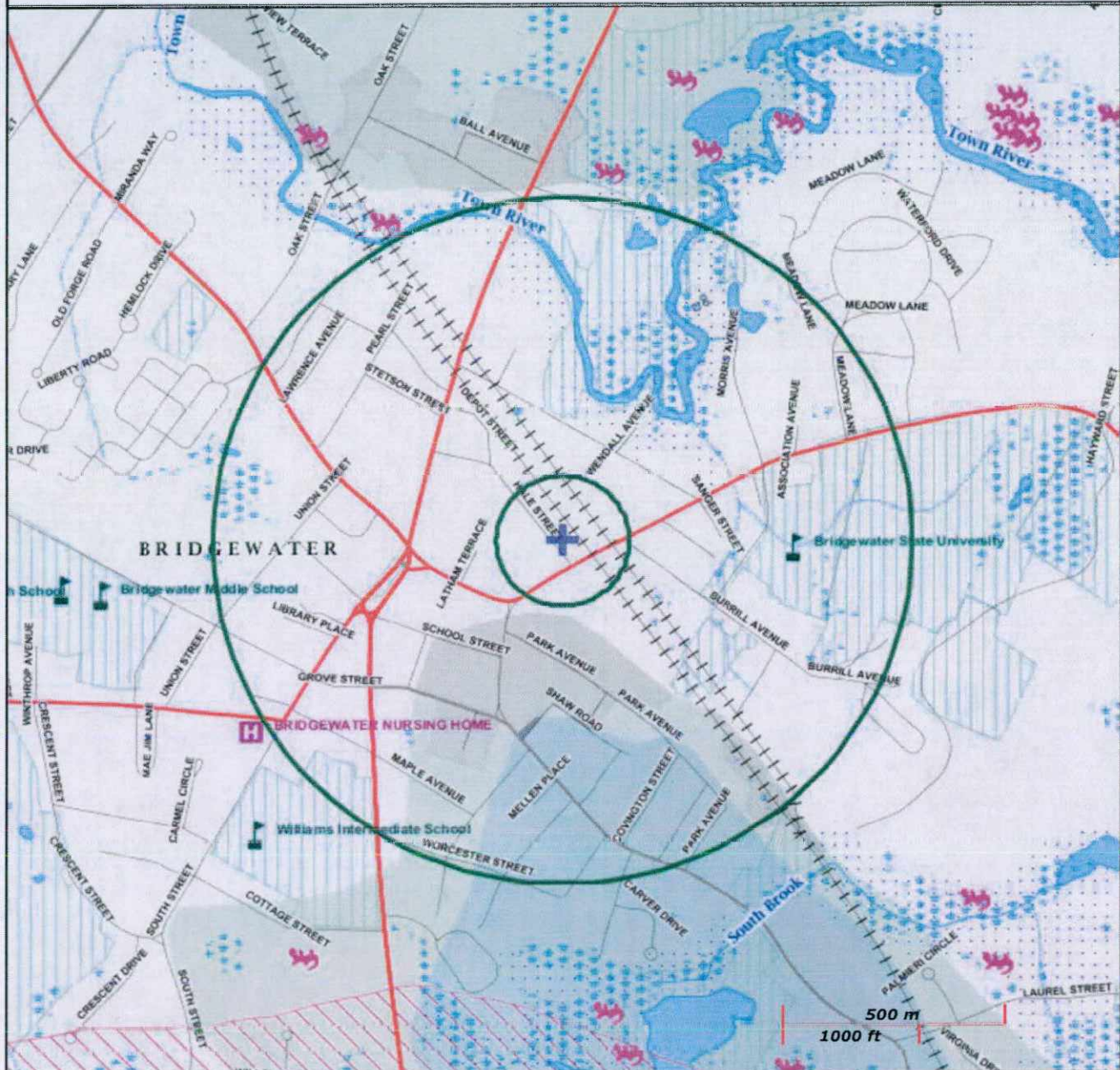
NAD83 UTM Meters:
4650580mN, 336727mE (Zone: 19)
May 21, 2013

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>.



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail
Boundaries: Town, County, DEP Region, Train, Powerline, Pipeline, Aqueduct
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam
Aquifers: Medium Yield, High Yield, EPA Sole Source
Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A
Hydrography: Open Water, PWS Reservoir, Tidal Flat
Wetlands: Freshwater, Saltwater, Cranberry Bog
FEMA 100yr Floodplain; Protected Open Space; ACEC
Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential
Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com

Figure 3: MassGIS Map
106 Hale Street, Bridgewater, MA

GEC Project No. 1424-3020

Tables

Table 1:
Summary of Groundwater Elevations
106 Hale Street, Bridgewater, MA
(unit, feet)

Well ID	Date	Screened Interval	Well Elevation	Depth to Groundwater	Groundwater Elevation
GEC-1	5/7/2013	5-15'	62.92	9.54	53.38
GEC-4	5/7/2013	5-15'	62.99	9.90	53.09
GEC-5	5/7/2013	5-17'	62.76	9.70	53.06
GEC-6	5/7/2013	5-17'	62.85	9.61	53.24
MW-5	5/7/2013	NA	58.92	NA	NA

Notes:

(1) In order to tie newly installed monitoring wells into the existing monitoring well network GEC calculated the well elevations based on the reported elevation of MW-5, which is 58.92

(2) On 5/7/2013 MW-5 was only surveyed and not gauged.

NA= Not Available

Table 2:
Summary of Soil Analytical Data for Metals
 106 Hale Street, Bridgewater, MA
 (unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	Arsenic	RDL	Barium	RDL	Beryllium	RDL	Cadmium	RDL	Chromium	RDL	Lead	RDL	Nickel	RDL	Vanadium	RDL	Zinc	RDL	Mercury	RDL
B-1	0-5	5/2/2013	6010C/7417B	3.1	2.6	30	2.6	BRL	0.26	BRL	0.26	6.7	0.53	28	0.79	4.4	0.53	13	1.1	31	1.1	0.061	0.027
B-1	5-10	5/2/2013	6010C/7417B	4.2	2.7	9.4	2.7	BRL	0.27	BRL	0.27	5.0	0.54	6.2	0.81	4.3	0.54	7.5	1.1	16	1.1	BRL	0.027
B-2	0-5	5/2/2013	6010C/7417B	BRL	2.4	37	2.4	BRL	0.24	BRL	0.24	12	0.48	31	0.72	10	0.48	19	0.95	87	0.95	0.066	0.025
B-3	0-5	5/2/2013	6010C/7417B	4.1	2.6	25	2.6	BRL	0.26	BRL	0.26	10	0.53	31	0.79	5.1	0.53	12	1.1	33	1.1	0.043	0.027
B-3	10-15	5/2/2013	6010C/7417B	3.4	2.9	9.1	2.9	BRL	0.29	BRL	0.29	4.2	0.58	4.1	0.88	6.1	0.58	7.2	1.2	27	1.2	BRL	0.029
B-4	0-5	5/2/2013	6010C/7417B	BRL	2.7	48	2.7	0.32	0.27	BRL	0.27	8.1	0.55	27	0.82	4.7	0.55	16	1.1	32	1.1	0.075	0.027
B-4	10-15	5/2/2013	6010C/7417B	3.0	2.6	7.2	2.6	BRL	0.26	BRL	0.26	6.3	0.52	5.1	0.78	4.2	0.52	8.2	1.0	16	1.0	BRL	0.028
B-5	0-5	5/2/2013	6010C/7417B	4.7	2.7	17	2.7	0.29	0.27	0.50	0.27	7.0	0.53	13	0.80	5.4	0.53	13	1.1	240	1.1	BRL	0.027
B-5	10-15	5/2/2013	6010C/7417B	3.4	2.9	50	2.9	BRL	0.29	BRL	0.29	6.7	0.58	200	0.87	4.8	0.58	12	1.2	220	1.2	0.11	0.030
B-6	0-5	5/2/2013	6010C/7417B	3.2	2.8	39	2.8	BRL	0.28	BRL	0.28	8.1	0.56	23	0.83	4.1	0.56	16	1.1	44	1.1	BRL	0.027
B-6	10-15	5/2/2013	6010C/7417B	3.1	2.8	12	2.8	BRL	0.28	BRL	0.28	5.4	0.56	4.8	0.84	5.2	0.56	8.3	1.1	55	1.1	BRL	0.029
B-7	0-5	5/2/2013	6010C/7417B	BRL	2.4	8.8	2.4	BRL	0.24	BRL	0.24	4.2	0.48	7.1	0.72	2.6	0.48	7.1	0.96	35	0.96	BRL	0.025
B-7	5-10	5/2/2013	6010C/7417B	BRL	2.7	18	2.7	BRL	0.27	BRL	0.27	2.2	0.54	7.6	0.81	1.3	0.54	3.5	1.1	18	1.1	0.036	0.027
<i>Selected Soil Standards</i>																							
<i>MA RCS-1</i>				20		1000		100		2		30		300		20		600		2500		20	

Notes:
 RDL = Reported Detection Limit
 BRL = Below Reporting Limit

Table 3:
Summary of Soil Analytical Data for EPH and target PAHs
106 Hale Street, Bridgewater, MA
(unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	ALIPHATIC	RDL	ALIPHATIC	RDL	AROMATIC	RDL	ANTHRACENE	RDL	BENZO(A)PYRENE	RDL	FLUORANTHENE	RDL	BENZO(G,H,I)PERYLENE	RDL	FLUORANTHENE	RDL	CHRYSENE	RDL	FLUORANTHENE	RDL	INDENO(1,2,3-CD)PYRENE	RDL	PHENANTHRENE	RDL	PYRENE	RDL
B-1	0-5	5-2-2013	MADDP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-1	5-10	5-2-2013	MADDP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-2	0-5	5-2-2013	MADDP EPH	BRL	10	46	10	66	10	0.20	0.10	0.25	0.10	0.35	0.10	0.18	0.10	0.11	0.10	0.23	0.10	0.44	0.10	0.18	0.10	0.22	0.10	0.44	0.10
B-3	0-5	5-2-2013	MADDP EPH	BRL	10	BRL	10	21	10	0.19	0.10	0.19	0.10	0.33	0.10	0.21	0.10	0.11	0.10	0.25	0.10	0.37	0.10	0.16	0.10	0.14	0.10	0.34	0.10
B-3	10-15	5-2-2013	MADDP EPH	BRL	12	BRL	12	BRL	12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12
B-4	0-5	5-2-2013	MADDP EPH	BRL	11	14	11	24	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-4	10-15	5-2-2013	MADDP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-5	0-5	5-2-2013	MADDP EPH	BRL	11	36	11	21	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-5	10-15	5-2-2013	MADDP EPH	190	11	800	11	370	11	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12	BRL	0.12
B-6	0-5	5-2-2013	MADDP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-6	10-15	5-2-2013	MADDP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-7	0-5	5-2-2013	MADDP EPH	BRL	11	BRL	11	BRL	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11
B-7	5-10	5-2-2013	MADDP EPH	BRL	11	BRL	11	12	11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	BRL	0.11	0.12		0.25	0.11	BRL	0.11	BRL	0.11	BRL	0.11
Selected Soil Standards																													
MA RCS-1				1000		3000		1000		7		2		7		1000		70		70		1000		7		10		1000	

Notes:
RDL = Reported Detection Limit
BRL = Below Reporting Limit

Table 4:
Summary of Soil Analytical Data for VPH and target VOCs
 106 Hale Street, Bridgewater, MA
 (unit, mg/kg, ppm)

Boring	Sample Depth (ft)	Sample Date	Analytical Method	m/p-Xylenes	RDL	o-Xylenes	RDL
B-1	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.057
B-1	5-10	5-2-2013	MADEP VPH	BRL	0.096	BRL	0.048
B-2	0-5	5-2-2013	MADEP VPH	0.18	0.069	0.86	0.034
B-3	0-5	5-2-2013	MADEP VPH	BRL	0.27	BRL	0.055
B-3	10-15	5-2-2013	8260B	BRL	0.0034	BRL	0.0017
B-4	0-5	5-2-2013	MADEP VPH	BRL	0.12	BRL	0.06
B-4	10-15	5-2-2013	MADEP VPH	BRL	0.10	BRL	0.051
B-5	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.053
B-5	10-15	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.053
B-6	0-5	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.054
B-6	10-15	5-2-2013	MADEP VPH	BRL	0.10	BRL	0.052
B-7	0-5	5-2-2013	MADEP VPH	BRL	0.088	BRL	0.044
B-7	5-10	5-2-2013	MADEP VPH	BRL	0.11	BRL	0.055
<i>Selected Soil Standards</i>							
<i>MA RCS-1</i>				1000		3000	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 5:
Summary of Groundwater Analytical Data for EPH
 106 Hale Street, Bridgewater, MA
(unit: ug/L, ppb)

Well ID	Sample Date	Analytical Method	C9-C18 ALIPHATICS	RDL	C19-C36 ALIPHATICS	RDL	C11-C22 AROMATICS	RDL
GEC-1	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
GEC-4	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
GEC-5	5-7-2013	MADEP EPH	150	100	240	100	200	100
GEC-6	5-7-2013	MADEP EPH	BRL	100	BRL	100	BRL	100
<i>Selected Groundwater Standards</i>								
<i>MA RCGW-2</i>			5000		50000		5000	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Table 6:
Summary of Groundwater Analytical Data for Metals
 106 Hale Street, Bridgewater, MA
 (unit: ug/L, ppb)

Well ID	Sample Date	Analytical Method	Arsenic	RDL	Barium	RDL	Cadmium	RDL	Chromium	RDL	Lead	RDL	Nickel	RDL	Zinc	RDL
GEC-1	5-7-2013	6020A	3.2	0.40	72	10	BRL	0.50	BRL	1.0	BRL	1.0	BRL	5.0	22	10
GEC-4	5-7-2013	6020A	BRL	0.40	83	10	BRL	0.50	1.1	1.0	BRL	1.0	BRL	5.0	26	10
GEC-5	5-7-2013	6020A	BRL	0.40	19	10	BRL	0.50	BRL	1.0	BRL	1.0	BRL	5.0	27	10
GEC-6	5-7-2013	6020A	BRL	0.40	72	10	1.0	0.50	3.2	1.0	1.7	1.0	11	5.0	880	10
<i>Selected Groundwater Standards</i>																
<i>MA RCGW-2</i>			900		50000		4		300		10		200		900	

Notes:

RDL = Reported Detection Limit

BRL = Below Reporting Limit

Boring Logs



Goldman
Environmental
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60 Brooks Drive
Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-1/GEC-1

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 10' South of NE building corner & 20' from building

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/37	0-5'	SILT	0-5' = 0.4 ppmv	S-1: 0"-2" ASPHALT / GRAVEL 2"-10" Brown, SILT with little fine sand & small gravel (brick) 10"-18" Brown, SILT with little fine sand & small gravel (brick), coal ash between 14"-15" 18"-25" Brown, SILT 25"-37" Light Brown, SILT with some fine sand, little medium sand & small gravel	Samples collected for laboratory analysis: B-1 / 0'-5' VPH/ VOC, EPH/PAH and MA 14 metals	
10'	2	60/52	5-10'	SAND	5-10' = 0.0 ppmv	S-2: Wet @ 45" 0-32" Tan, fine to medium SAND, little small gravel, trace silt 32"-47" Tan, fine SAND 45"-52" Tan, fine SAND, some silt	B-1 / 5'-10' VPH/ VOC, EPH/PAH and MA 14 metals	
15'	3	60/28	10-15'	SAND	10-15' = 0.0 ppmv	S-3: Wet 0-28" Tan / Brown, fine to course SAND (no odor)		

B-1 completed as a 2" monitoring well to an approximate depth of 15' BSG with 10' of screen and 5' of riser. Completed with a flush mount roadbox. Designated GEC-1.

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60 Brooks Drive
Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID:B-2

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 94' East of building, 40' South of North-east building corner

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/19	0-5'	TOP SOIL	0-5' = 0.7 ppmv	S-1: 0"-11" TOP SOIL, some small to medium gravel, small root at 12" 12"-19" BRICK	Samples collected for laboratory analysis: B-2 / 0'-5' VPH/ VOC, EPH/PAH and MA 14 metals	
				BRICK				
7'	2	24/19	5-7'	BRICK, WOOD, CONCRETE	5-7' = 0.2 ppmv	S-2: 0"-3" BRICK 3"-6" WOOD 6"-12" BRICK 12"-19" CONCRETE (Refusal)	Refusal encountered in four separate attempts from 2.5'-7' BSG	
10'								
							B-2 Not completed as a Monitoring Well	

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Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID:B-3

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location:

40' South of NE building corner and 120' east of building

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal: Bentonite Seal: Sand Pack: Slotted Screen:

[illegible]



Goldman
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60 Brooks Drive
Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-3

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location:

40' South of NE building corner and 120' east of building

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY:  = Interval sampled for analysis

Cement Seal: 

Bentonite Seal: 

Sand Pack: 

Slotted Screen: 

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION	
	No.	Pen./Rec.	Depth						
5'	1	60/29	0-5'	SAND	0-5' = 2.5 ppmv	S-1: 0"-6" CONCRETE 6"-10" Brown, fine SAND, trace silt 10"-15" Dark Brown, SILT, some fine to medium sand (coal, brick, coal ash) 15"-21" Brown, SILT 21"-29" Tan, medium SAND, trace coarse sand & silt S-2: Dry / No Odor 0"-4" Tan, medium SAND, trace coarse sand & silt 4"-20" Tan-brown, fine SAND 20"-46" Tan, fine to medium SAND, some small to medium gravel 46"-51" Tan, fine to medium SAND, some silt S-3: Wet @ 9' / No Odor 0"-14" Tan fine to medium SAND, some silt 14"-28" Brown, fine SAND, some medium to coarse sand 28"-30" Brown, fine SAND, some silt 30"-35" Brown, fine SAND, some medium to coarse sand 35"-41" Brown, fine SAND, some silt 41"-51" Brown, fine SAND, some medium to coarse sand	Samples collected for laboratory analysis: B-3 / 10'-15' VPH, 8260, EPH and MA 14 metals		
				SILT					
				SAND					
10'	2	60/51	5-10'	SAND	5-10' = 0.0 ppmv				
	15'	3	60/51	10-15'	SAND	10-15' = 13.0 ppmv			
15'									
							B-3 Not completed as a Monitoring Well		

[illegible]



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Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-5/GEC-5

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 215' East of building, 10' South of North-east corner

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

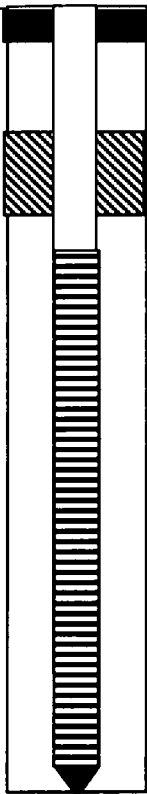
KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack:

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/47	0-5'	GRAVEL	0-5' = 0.6 ppmv	S-1: 0"-6" GRAVEL 6"-32" Tan, fine SAND, some small to medium gravel and silt 32"-47" Tan, SILT, trace fine sand	Samples collected for laboratory analysis: B-5 0'-5' VPH, EPH and MA 14 metals B-5 10'-15' VPH, EPH and MA 14 metals	
				SAND				
				SILT				
	2	60/52	5-10'	SILT	5-10' = 0.0 ppmv	S-2: No Odor / Wet at 47" 0"-52" Tan, SILT, trace fine sand		
	10'							
		3	60/23	10-15'	SILT	10-15' = 0.5 ppmv		
				SAND				
15'							B-5 completed as a 2" monitoring well to an approximate depth of 17' BSG with 12' of screen and 5' of riser. Completed with a flush mount roadbox . Designated GEC-5.	



Goldman
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60 Brooks Drive
Braintree, MA

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID: B-6/GEC-6

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

Boring Location: 130' East of building, 10' South of North-east corner.

Boring Contractor: New England Geotech

Drilling Method: Geoprobe Track mounted Rig

Foreman: Steve Perry

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

GEC Engineer: Mike Bradley

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack:

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/42	0-5'	SAND	0-5' = 0.0 ppmv	S-1: 0"-17" Tan, fine SAND, little silt and small to medium gravel 17"-33" Brown, SILT, little fine sand, moderately stiff 33"-42" Light brown, SILT, little fine sand, moderately stiff	Samples collected for laboratory analysis: B-6 / 10'-15' VPH, EPH and MA 14 metals	
				SILT				
10'	2	60/52	5-10'	SILT	5-10' = 0.2 ppmv	S-2: 0"-33" Brown, SILT, some fine sand 33"-52" Brown, SILT, some fine to medium sand, some mottling		
15'	3	60/52	10-15'	SAND	10-15' = 0.4 ppmv	S-3: Wet 0"-7" Red-orange, medium to course SAND 7"-27" Brown, SILT, some fine sand 27"-35" Brown, fine SAND, some silt 35"-40" Brown, medium to course SAND 40"-52" Tan, SILT, some fine sand		
				SILT				
				SAND				
				SILT				
							B-6 completed as a 2" monitoring well to an approximate depth of 17' BSG with 12' of screen and 5' of riser. Completed with a flush mount roadbox . Designated GEC-6.	

**Goldman
Environmental
Consultants, Inc.
60 Brooks Drive
Braintree, MA**

Project:
106 Hale Street
GEC project 1424-3020

Boring Log ID:B-7

Dates of Work: 5/2/2013

Sheet: 1 of 1

Weather: 60°F and sunny

**Boring Location: 9' in and 4' to left of overhead door
(inside building)**

Boring Contractor: New England Geotech

Foreman: Steve Perry

GEC Engineer: Mike Bradley

Drilling Method: Geoprobe Track mounted Rig

Sampling: Continuous in five foot intervals with dedicated acetate Sleeves

Screening Equipment: Mini-Rae 2000 10.6 eV PID

KEY: = Interval sampled for analysis

Cement Seal:

Bentonite Seal:

Sand Pack: 

Slotted Screen:

Depth	SAMPLE			Strata Change	Sample Screening	SAMPLE DESCRIPTION	ADDITIONAL NOTES	WELL CONSTRUCTION
	No.	Pen./Rec.	Depth					
5'	1	60/32	0-5'	SAND	0-5' = N/A ppmv	S-1: 0"-17" Gray, fine to course SAND, some small gravel 17"-32" Reddish-brown, SILT, some fine sand and small to medium gravel	Samples collected for laboratory analysis: B-7 / 5'-10' VPH, EPH and MA 14 metals	
				SILT				
10'	2	60/43	5-10'	SILT	5-7' = 0.4 ppmv	S-2: Wet at 36" 0"-17" Reddish-brown, SILT, some fine sand and small to medium gravel 17"-23" Black, SILT, some fine sand 23"-43" Reddish-gray, fine SAND, some silt		
				SAND				
15'	3	60/30	10-15'	SILT	10-15' = 0.2 ppmv	S-3: Wet 0"-30" Brownish-red, SILT, some fine to course sand		
B-7 Not completed as a Monitoring Well								

Laboratory Certificates of Analysis



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 10, 2013

Mike Bradley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: Hale St., Bridgewater
Client Job Number:
Project Number: 1424-2350
Laboratory Work Order Number: 13E0137

Enclosed are results of analyses for samples received by the laboratory on May 3, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/10/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-2350

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0137

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Hale St., Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-1 (0-5ft)	13E0137-01	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-1 (5-10ft)	13E0137-02	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-2 (0-5ft)	13E0137-03	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-3 (0-5ft)	13E0137-04	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-3 (10-15ft)	13E0137-05	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B SW-846 8260C	
B-4 (0-5ft)	13E0137-06	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-4 (10-15ft)	13E0137-07	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-5 (0-5ft)	13E0137-08	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	



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Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/10/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-2350

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0137

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Hale St., Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-5 (10-15ft)	13E0137-09	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-6 (0-5ft)	13E0137-10	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-6 (10-15ft)	13E0137-11	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-7 (0-5ft)	13E0137-12	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	
B-7 (5-10ft)	13E0137-13	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 6010C SW-846 7471B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method MA VPH, only hydrocarbon ranges were requested and reported for sample B-3(10-15ft)



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MADEP-EPH-04-1.1

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

C9-C18 Aliphatics, n-Nonane

B072491-BLK I, B072491-BSI, B072491-BSD I

MADEP-VPH-04-1.1

Qualifications:

Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.

Analyte & Samples(s) Qualified:

13E0137-02[B-1 (5-10ft)], 13E0137-03[B-2 (0-5ft)], 13E0137-05[B-3 (10-15ft)], 13E0137-11[B-6 (10-15ft)]

SW-846 6010C

Qualifications:

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Antimony, Barium, Lead, Zinc

13E0137-04[B-3 (0-5ft)], B072376-MSI

SW-846 7471B

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Mercury

B072378-BSD I, B072383-BSI

SW-846 8260C

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Bromoform

13E0137-05[B-3 (10-15ft)], B072417-BLK I, B072417-BSI, B072417-BSD I

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Naphthalene

B072417-BSI



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Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

B072417-BS1

Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane, Dichlorodifluoromethane (Freon 12)

B072417-BS1, B072417-BSD1

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

13E0137-05[B-3 (10-15fi)], B072417-BLK1, B072417-BS1, B072417-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,1,1,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane (DBCP), Bromoform, Naphthalene

13E0137-05[B-3 (10-15fi)], B072417-BLK1, B072417-BS1, B072417-BSD1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane

13E0137-05[B-3 (10-15fi)], B072417-BLK1, B072417-BS1, B072417-BSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane

B072417-BS1, B072417-BSD1



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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly in methanol with a soil/methanol ratio of 1:1 +/- 25% completely covered by methanol in the proper containers specified on the chain-of-custody form unless specified in this narrative.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and 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.

Daren J. Damboragian
Laboratory Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:13	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	65.8	40-140	5/8/13 14:13
o-Terphenyl (OTP)	65.1	40-140	5/8/13 14:13
2-Bromonaphthalene	71.6	40-140	5/8/13 14:13
2-Fluorobiphenyl	74.1	40-140	5/8/13 14:13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.05

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Benzene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Ethylbenzene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Naphthalene	ND	0.29	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Toluene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
o-Xylene	ND	0.057	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 17:36	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	104	70-130							
2,5-Dibromotoluene (PID)	104	70-130							



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Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Arsenic	3.1	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Barium	30	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Chromium	6.7	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Lead	28	0.79	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Mercury	0.061	0.027	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:20	SAJ
Nickel	4.4	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Vanadium	13	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP
Zinc	31	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:18	OP



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Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (0-5ft)

Sampled: 5/2/2013 08:35

Sample ID: 13E0137-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:34	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	73.9		40-140				5/8/13 14:34		
o-Terphenyl (OTP)	66.2		40-140				5/8/13 14:34		
2-Bromonaphthalene	73.1		40-140				5/8/13 14:34		
2-Fluorobiphenyl	73.8		40-140				5/8/13 14:34		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.28

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C5-C8 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Unadjusted C9-C12 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C9-C12 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
C9-C10 Aromatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Benzene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Ethylbenzene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Naphthalene	ND	0.24	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Toluene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
m+p Xylene	ND	0.096	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
o-Xylene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	97.5	70-130						5/7/13 18:12	
2,5-Dibromotoluene (PID)	100	70-130						5/7/13 18:12	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Arsenic	4.2	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Barium	9.4	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Chromium	5.0	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Lead	6.2	0.81	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:22	SAJ
Nickel	4.3	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Vanadium	7.5	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP
Zinc	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:23	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-1 (5-10ft)

Sampled: 5/2/2013 08:50

Sample ID: 13E0137-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.0		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
C19-C36 Aliphatics	46	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Unadjusted C11-C22 Aromatics	68	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
C11-C22 Aromatics	66	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(a)anthracene	0.20	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(a)pyrene	0.25	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(b)fluoranthene	0.35	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(g,h,i)perylene	0.18	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Benzo(k)fluoranthene	0.11	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Chrysene	0.23	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Fluoranthene	0.44	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Indeno(1,2,3-cd)pyrene	0.18	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Phenanthrene	0.22	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS
Pyrene	0.44	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 14:55	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	63.9	40-140	
o-Terphenyl (OTP)	60.6	40-140	
2-Bromonaphthalene	66.1	40-140	
2-Fluorobiphenyl	70.6	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.55

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C5-C8 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Unadjusted C9-C12 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C9-C12 Aliphatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
C9-C10 Aromatics	ND	6.9	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Benzene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Ethylbenzene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Naphthalene	ND	0.17	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Toluene	ND	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
m+p Xylene	0.18	0.069	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
o-Xylene	0.086	0.034	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 18:48	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	109		70-130				5/7/13 18:48		
2,5-Dibromotoluene (PID)	106		70-130				5/7/13 18:48		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Arsenic	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Barium	37	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Beryllium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Cadmium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Chromium	12	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Lead	31	0.72	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Mercury	0.066	0.025	mg/Kg dry	1		SW-846 7471B	5/6/13	5/6/13 13:24	SAJ
Nickel	10	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Vanadium	19	0.95	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP
Zinc	87	0.95	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:28	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-2 (0-5ft)

Sampled: 5/2/2013 09:10

Sample ID: 13E0137-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Unadjusted C11-C22 Aromatics	23	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
C11-C22 Aromatics	21	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(a)anthracene	0.19	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(a)pyrene	0.19	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(b)fluoranthene	0.33	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(g,h,i)perylene	0.21	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Benzo(k)fluoranthene	0.11	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Chrysene	0.25	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Fluoranthene	0.37	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Indeno(1,2,3-cd)pyrene	0.16	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Phenanthrene	0.14	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS
Pyrene	0.34	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:15	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	69.5	40-140	
o-Terphenyl (OTP)	68.5	40-140	
2-Bromonaphthalene	76.8	40-140	
2-Fluorobiphenyl	79.1	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.04

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Benzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Ethylbenzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Toluene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
o-Xylene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 19:24	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	98.9		70-130				5/7/13 19:24		
2,5-Dibromotoluene (PID)	99.0		70-130				5/7/13 19:24		

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/6/13 19:29	OP
Arsenic	4.1	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Barium	25	2.6	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/7/13 15:35	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Chromium	10	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Lead	31	0.79	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/6/13 19:29	OP
Mercury	0.043	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:22	SAJ
Nickel	5.1	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/7/13 15:35	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Vanadium	12	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 19:29	OP
Zinc	33	1.1	mg/Kg dry	1	MS-07	SW-846 6010C	5/4/13	5/7/13 15:35	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (0-5ft)

Sampled: 5/2/2013 09:30

Sample ID: 13E0137-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromoforn	ND	0.0017	mg/Kg dry	1	L-04, V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
tert-Butyl Ethyl Etier (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chlorofonn	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,4-Dioxane	ND	0.085	mg/Kg dry	1	V-16	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Naphthalene	ND	0.0085	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,3-Trichlorobenzene	ND	0.0085	mg/Kg dry	1	V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,4-Trichlorobenzene	ND	0.0034	mg/Kg dry	1	R-05, V-05	SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	5/6/13	5/6/13 14:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	116	70-130	5/6/13 14:20
Toluene-d8	101	70-130	5/6/13 14:20
4-Bromofluorobenzene	89.2	70-130	5/6/13 14:20



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 15:36	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	75.4	40-140	
o-Terphenyl (OTP)	70.5	40-140	
2-Bromonaphthalene	69.6	40-140	
2-Fluorobiphenyl	71.5	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.31

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:00	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	88.2		70-130				5/7/13 20:00		
2,5-Dibromotoluene (PID)	90.6		70-130				5/7/13 20:00		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Arsenic	3.4	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Barium	9.1	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Chromium	4.2	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Lead	4.1	0.88	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:24	SAJ
Nickel	6.1	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Vanadium	7.2	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP
Zinc	27	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:33	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-3 (10-15ft)

Sampled: 5/2/2013 10:10

Sample ID: 13E0137-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.2		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
C19-C36 Aliphatics	14	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Unadjusted C11-C22 Aromatics	24	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
C11-C22 Aromatics	24	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 17:41	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	63.4		40-140				5/8/13 17:41		
o-Terphenyl (OTP)	60.1		40-140				5/8/13 17:41		
2-Bromonaphthalene	62.1		40-140				5/8/13 17:41		
2-Fluorobiphenyl	63.6		40-140				5/8/13 17:41		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.04

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C5-C8 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Unadjusted C9-C12 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C9-C12 Aliphatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
C9-C10 Aromatics	ND	12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Benzene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Ethylbenzene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Naphthalene	ND	0.30	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Toluene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
m+p Xylene	ND	0.12	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
o-Xylene	ND	0.060	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 20:36	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	89.0		70-130				5/7/13 20:36		
2,5-Dibromotoluene (PID)	91.5		70-130				5/7/13 20:36		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Barium	48	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Beryllium	0.32	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Chromium	8.1	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Lead	27	0.82	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Mercury	0.075	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:25	SAJ
Nickel	4.7	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Vanadium	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP
Zinc	32	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:38	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (0-5ft)

Sampled: 5/2/2013 10:30

Sample ID: 13E0137-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.2		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:02	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	76.5		40-140				5/8/13 18:02		
o-Terphenyl (OTP)	71.4		40-140				5/8/13 18:02		
2-Bromonaphthalene	73.5		40-140				5/8/13 18:02		
2-Fluorobiphenyl	75.6		40-140				5/8/13 18:02		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.23

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Benzene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Ethylbenzene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Toluene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
o-Xylene	ND	0.051	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	101	70-130							
2,5-Dibromotoluene (PID)	102	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Arsenic	3.0	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Barium	7.2	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Chromium	6.3	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Lead	5.1	0.78	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:27	SAJ
Nickel	4.2	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Vanadium	8.2	1.0	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP
Zinc	16	1.0	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 20:42	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-4 (10-15ft)

Sampled: 5/2/2013 10:55

Sample ID: 13E0137-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
C19-C36 Aliphatics	36	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Unadjusted C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:23	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	72.4		40-140					5/8/13 18:23	
o-Terphenyl (OTP)	65.2		40-140					5/8/13 18:23	
2-Bromonaphthalene	74.2		40-140					5/8/13 18:23	
2-Fluorobiphenyl	76.9		40-140					5/8/13 18:23	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.11

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Benzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Ethylbenzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Toluene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
o-Xylene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 21:49	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	91.9	70-130						5/7/13 21:49	
2,5-Dibromotoluene (PID)	91.6	70-130						5/7/13 21:49	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Arsenic	4.7	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Barium	17	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Beryllium	0.29	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Cadmium	0.50	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Chromium	7.0	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Lead	13	0.80	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:29	SAJ
Nickel	5.4	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Vanadium	13	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP
Zinc	240	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:03	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (0-5ft)

Sampled: 5/2/2013 11:15

Sample ID: 13E0137-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.1		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	190	61	mg/Kg dry	5		MADEP-EPH-04-1.1	5/7/13	5/9/13 8:58	SCS
C19-C36 Aliphatics	800	61	mg/Kg dry	5		MADEP-EPH-04-1.1	5/7/13	5/9/13 8:58	SCS
Unadjusted C11-C22 Aromatics	370	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
C11-C22 Aromatics	370	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 18:43	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	71.9		40-140				5/8/13 18:43		
o-Terphenyl (OTP)	74.6		40-140				5/8/13 18:43		
2-Bromonaphthalene	65.9		40-140				5/8/13 18:43		
2-Fluorobiphenyl	74.0		40-140				5/8/13 18:43		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 0.87

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Unadjusted C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
C9-C10 Aromatics	ND	16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Benzene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Ethylbenzene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Naphthalene	ND	0.41	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Toluene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
m+p Xylene	ND	0.16	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
o-Xylene	ND	0.081	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:49	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	82.5	70-130						5/8/13 0:49	
2,5-Dibromotoluene (PID)	83.7	70-130						5/8/13 0:49	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Arsenic	3.4	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Barium	50	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Chromium	6.7	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Lead	200	0.87	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Mercury	0.11	0.030	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:30	SAJ
Nickel	4.8	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Vanadium	12	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP
Zinc	220	1.2	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:08	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-5 (10-15ft)

Sampled: 5/2/2013 11:30

Sample ID: 13E0137-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:04	SCS
Surrogates		% Recovery	Recovery Limits		Flag				
Chlorooctadecane (COD)		70.0	40-140					5/8/13 19:04	
o-Terphenyl (OTP)		66.9	40-140					5/8/13 19:04	
2-Bromonaphthalene		74.7	40-140					5/8/13 19:04	
2-Fluorobiphenyl		79.0	40-140					5/8/13 19:04	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.17

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Benzene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Ethylbenzene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Naphthalene	ND	0.27	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Toluene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
o-Xylene	ND	0.054	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 22:25	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	93.4		70-130				5/7/13 22:25		
2,5-Dibromotoluene (PID)	95.4		70-130				5/7/13 22:25		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Arsenic	3.2	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Barium	39	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Chromium	8.1	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Lead	23	0.83	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:32	SAJ
Nickel	4.1	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Vanadium	16	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP
Zinc	44	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:13	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (0-5ft)

Sampled: 5/2/2013 11:55

Sample ID: 13E0137-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.4		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(a)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(b)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(g,h,i)perylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Chrysene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Indeno(1,2,3-cd)pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Phenanthrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:25	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	77.5		40-140				5/8/13 19:25		
o-Terphenyl (OTP)	68.8		40-140				5/8/13 19:25		
2-Bromonaphthalene	74.7		40-140				5/8/13 19:25		
2-Fluorobiphenyl	76.2		40-140				5/8/13 19:25		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.35

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Benzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Ethylbenzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Toluene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
o-Xylene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:01	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	93.9		70-130				5/7/13 23:01		
2,5-Dibromotoluene (PID)	95.7		70-130				5/7/13 23:01		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Arsenic	3.1	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Barium	12	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Chromium	5.4	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Lead	4.8	0.84	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:38	SAJ
Nickel	5.2	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Vanadium	8.3	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP
Zinc	55	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:18	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-6 (10-15ft)

Sampled: 5/2/2013 12:00

Sample ID: 13E0137-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.3		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 19:46	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	75.4		40-140				5/8/13 19:46		
o-Terphenyl (OTP)	71.0		40-140				5/8/13 19:46		
2-Bromonaphthalene	76.3		40-140				5/8/13 19:46		
2-Fluorobiphenyl	77.3		40-140				5/8/13 19:46		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.19

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C5-C8 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Unadjusted C9-C12 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C9-C12 Aliphatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
C9-C10 Aromatics	ND	8.8	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Benzene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Ethylbenzene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Naphthalene	ND	0.22	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Toluene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
m+p Xylene	ND	0.088	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
o-Xylene	ND	0.044	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/7/13 23:37	EEH
Surrogates	% Recovery		Recovery Limits		Flag				
2,5-Dibromotoluene (FID)	85.0		70-130				5/7/13 23:37		
2,5-Dibromotoluene (PID)	84.4		70-130				5/7/13 23:37		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Arsenic	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Barium	8.8	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Beryllium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Cadmium	ND	0.24	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Chromium	4.2	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Lead	7.1	0.72	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:39	SAJ
Nickel	2.6	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Vanadium	7.1	0.96	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP
Zinc	35	0.96	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:22	OP



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (0-5ft)

Sampled: 5/2/2013 14:15

Sample ID: 13E0137-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Unadjusted C11-C22 Aromatics	13	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
C11-C22 Aromatics	12	11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Chrysene	0.12	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Fluoranthene	0.25	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Phenanthrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Pyrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	5/7/13	5/8/13 20:07	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	122		40-140				5/8/13 20:07		
o-Terphenyl (OTP)	110		40-140				5/8/13 20:07		
2-Bromonaphthalene	68.5		40-140				5/8/13 20:07		
2-Fluorobiphenyl	71.5		40-140				5/8/13 20:07		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.10

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Benzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Ethylbenzene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Naphthalene	ND	0.28	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Toluene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
o-Xylene	ND	0.055	mg/Kg dry	1		MADEP-VPH-04-1.1	5/7/13	5/8/13 0:13	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	109	70-130							
2,5-Dibromotoluene (PID)	107	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Barium	18	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Chromium	2.2	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Lead	7.6	0.81	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Mercury	0.036	0.027	mg/Kg dry	1		SW-846 7471B	5/4/13	5/6/13 12:41	SAJ
Nickel	1.3	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Vanadium	3.5	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP
Zinc	18	1.1	mg/Kg dry	1		SW-846 6010C	5/4/13	5/6/13 21:27	OP



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Project Location: Hale St., Bridgewater

Sample Description:

Work Order: 13E0137

Date Received: 5/3/2013

Field Sample #: B-7 (5-10ft)

Sampled: 5/2/2013 14:30

Sample ID: 13E0137-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	5/9/13	5/10/13 9:47	RH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072491	20.4	2.00	05/07/13
13E0137-02 [B-1 (5-10ft)]	B072491	20.3	2.00	05/07/13
13E0137-03 [B-2 (0-5ft)]	B072491	20.1	2.00	05/07/13
13E0137-04 [B-3 (0-5ft)]	B072491	20.6	2.00	05/07/13
13E0137-05 [B-3 (10-15ft)]	B072491	20.0	2.00	05/07/13
13E0137-06 [B-4 (0-5ft)]	B072491	20.1	2.00	05/07/13
13E0137-07 [B-4 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-08 [B-5 (0-5ft)]	B072491	20.0	2.00	05/07/13
13E0137-09 [B-5 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-10 [B-6 (0-5ft)]	B072491	20.5	2.00	05/07/13
13E0137-11 [B-6 (10-15ft)]	B072491	20.2	2.00	05/07/13
13E0137-12 [B-7 (0-5ft)]	B072491	20.4	2.00	05/07/13
13E0137-13 [B-7 (5-10ft)]	B072491	20.1	2.00	05/07/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5ft)]	B072480	15.7	16.4	05/07/13
13E0137-02 [B-1 (5-10ft)]	B072480	19.2	16.7	05/07/13
13E0137-03 [B-2 (0-5ft)]	B072480	23.2	15.6	05/07/13
13E0137-04 [B-3 (0-5ft)]	B072480	15.6	16.0	05/07/13
13E0137-06 [B-4 (0-5ft)]	B072480	15.6	16.7	05/07/13
13E0137-07 [B-4 (10-15ft)]	B072480	18.4	16.9	05/07/13
13E0137-08 [B-5 (0-5ft)]	B072480	16.6	16.3	05/07/13
13E0137-09 [B-5 (10-15ft)]	B072480	13.1	17.4	05/07/13
13E0137-10 [B-6 (0-5ft)]	B072480	17.6	16.9	05/07/13
13E0137-11 [B-6 (10-15ft)]	B072480	20.2	18.0	05/07/13
13E0137-12 [B-7 (0-5ft)]	B072480	17.9	15.4	05/07/13
13E0137-13 [B-7 (5-10ft)]	B072480	16.5	16.5	05/07/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-05 [B-3 (10-15ft)]	B072481	19.7	18.1	05/07/13

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13E0137-01 [B-1 (0-5ft)]	B072717	05/09/13
13E0137-02 [B-1 (5-10ft)]	B072717	05/09/13
13E0137-03 [B-2 (0-5ft)]	B072717	05/09/13
13E0137-04 [B-3 (0-5ft)]	B072717	05/09/13
13E0137-05 [B-3 (10-15ft)]	B072717	05/09/13
13E0137-06 [B-4 (0-5ft)]	B072717	05/09/13
13E0137-07 [B-4 (10-15ft)]	B072717	05/09/13
13E0137-08 [B-5 (0-5ft)]	B072717	05/09/13
13E0137-09 [B-5 (10-15ft)]	B072717	05/09/13
13E0137-10 [B-6 (0-5ft)]	B072717	05/09/13
13E0137-11 [B-6 (10-15ft)]	B072717	05/09/13
13E0137-12 [B-7 (0-5ft)]	B072717	05/09/13
13E0137-13 [B-7 (5-10ft)]	B072717	05/09/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5R)]	B072376	1.04	50.0	05/04/13
13E0137-02 [B-1 (5-10R)]	B072376	1.02	50.0	05/04/13
13E0137-03 [B-2 (0-5R)]	B072376	1.07	50.0	05/04/13
13E0137-04 [B-3 (0-5R)]	B072376	1.01	50.0	05/04/13
13E0137-05 [B-3 (10-15R)]	B072376	1.02	50.0	05/04/13
13E0137-06 [B-4 (0-5R)]	B072376	1.02	50.0	05/04/13
13E0137-07 [B-4 (10-15R)]	B072376	1.08	50.0	05/04/13
13E0137-08 [B-5 (0-5R)]	B072376	1.02	50.0	05/04/13
13E0137-09 [B-5 (10-15R)]	B072376	1.05	50.0	05/04/13
13E0137-10 [B-6 (0-5R)]	B072376	1.01	50.0	05/04/13
13E0137-11 [B-6 (10-15R)]	B072376	1.05	50.0	05/04/13
13E0137-12 [B-7 (0-5R)]	B072376	1.06	50.0	05/04/13
13E0137-13 [B-7 (5-10R)]	B072376	1.02	50.0	05/04/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-04 [B-3 (0-5R)]	B072378	0.600	50.0	05/04/13
13E0137-05 [B-3 (10-15R)]	B072378	0.610	50.0	05/04/13
13E0137-06 [B-4 (0-5R)]	B072378	0.616	50.0	05/04/13
13E0137-07 [B-4 (10-15R)]	B072378	0.605	50.0	05/04/13
13E0137-08 [B-5 (0-5R)]	B072378	0.602	50.0	05/04/13
13E0137-09 [B-5 (10-15R)]	B072378	0.615	50.0	05/04/13
13E0137-10 [B-6 (0-5R)]	B072378	0.616	50.0	05/04/13
13E0137-11 [B-6 (10-15R)]	B072378	0.609	50.0	05/04/13
13E0137-12 [B-7 (0-5R)]	B072378	0.605	50.0	05/04/13
13E0137-13 [B-7 (5-10R)]	B072378	0.610	50.0	05/04/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-01 [B-1 (0-5R)]	B072383	0.616	50.0	05/06/13
13E0137-02 [B-1 (5-10R)]	B072383	0.610	50.0	05/06/13
13E0137-03 [B-2 (0-5R)]	B072383	0.607	50.0	05/06/13

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13E0137-05 [B-3 (10-15R)]	B072417	6.95	10.0	05/06/13



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
Blank (B072417-BLK1)				Prepared & Analyzed: 05/06/13						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							L-04, V-05
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.010	mg/Kg wet							V-05



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
Blank (B072417-BLK1)				Prepared & Analyzed: 05/06/13						
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							V-05
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.010	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.0040	mg/Kg wet							R-05, V-05
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0586		mg/Kg wet	0.0500		117	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0458		mg/Kg wet	0.0500		91.5	70-130			
LCS (B072417-BS1)				Prepared & Analyzed: 05/06/13						
Acetone	0.278	0.10	mg/Kg wet	0.200		139	40-160			L-14, V-20 †
tert-Amyl Methyl Ether (TAME)	0.0190	0.0010	mg/Kg wet	0.0200		95.2	70-130			
Benzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130			
Bromochloromethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
Bromoform	0.0114	0.0020	mg/Kg wet	0.0200		57.1	70-130			L-04, V-05
Bromomethane	0.0113	0.010	mg/Kg wet	0.0200		56.5	40-160			L-14, V-20 †
2-Butanone (MEK)	0.196	0.040	mg/Kg wet	0.200		98.2	40-160			†
n-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
sec-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
tert-Butylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0198	0.0010	mg/Kg wet	0.0200		98.8	70-130			
Carbon Disulfide	0.0220	0.0060	mg/Kg wet	0.0200		110	70-130			
Carbon Tetrachloride	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130			
Chlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
Chlorodibromomethane	0.0153	0.0010	mg/Kg wet	0.0200		76.5	70-130			
Chloroethane	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
Chloroform	0.0207	0.0040	mg/Kg wet	0.0200		104	70-130			
Chloromethane	0.0166	0.010	mg/Kg wet	0.0200		82.8	40-160			†
2-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
4-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0145	0.0020	mg/Kg wet	0.0200		72.6	70-130			V-05
1,2-Dibromoethane (EDB)	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130			
Dibromomethane	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
1,3-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,4-Dichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS (B072417-BS1)				Prepared & Analyzed: 05/06/13						
Dichlorodifluoromethane (Freon 12)	0.0107	0.010	mg/Kg wet	0.0200		53.4	40-160			L-14 †
1,1-Dichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1-Dichloroethylene	0.0218	0.0040	mg/Kg wet	0.0200		109	70-130			
cis-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
trans-1,2-Dichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
1,3-Dichloropropane	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130			
2,2-Dichloropropane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130			
1,1-Dichloropropene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
cis-1,3-Dichloropropene	0.0167	0.0010	mg/Kg wet	0.0200		83.3	70-130			
trans-1,3-Dichloropropene	0.0169	0.0010	mg/Kg wet	0.0200		84.4	70-130			
Diethyl Ether	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
Diisopropyl Ether (DIPE)	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130			
1,4-Dioxane	0.168	0.10	mg/Kg wet	0.200		83.8	40-160			V-16 †
Ethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
Hexachlorobutadiene	0.0159	0.0020	mg/Kg wet	0.0200		79.7	70-130			
2-Hexanone (MBK)	0.175	0.020	mg/Kg wet	0.200		87.7	40-160			†
Isopropylbenzene (Cumene)	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
4-Methyl-2-pentanone (MIBK)	0.177	0.020	mg/Kg wet	0.200		88.5	40-160			†
Naphthalene	0.0128	0.010	mg/Kg wet	0.0200		64.1	70-130			L-07, V-05
n-Propylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Styrene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
1,1,1,2-Tetrachloroethane	0.0157	0.0020	mg/Kg wet	0.0200		78.6	70-130			V-05
1,1,2,2-Tetrachloroethane	0.0167	0.0010	mg/Kg wet	0.0200		83.7	70-130			
Tetrachloroethylene	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
Tetrahydrofuran	0.0199	0.010	mg/Kg wet	0.0200		99.3	70-130			
Toluene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
1,2,3-Trichlorobenzene	0.0140	0.010	mg/Kg wet	0.0200		70.1	70-130			V-05
1,2,4-Trichlorobenzene	0.0129	0.0040	mg/Kg wet	0.0200		64.7	70-130			L-07A, R-05, V-05
1,1,1-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,1,2-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130			
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Trichlorofluoromethane (Freon 11)	0.0217	0.010	mg/Kg wet	0.0200		108	70-130			
1,2,3-Trichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
1,2,4-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,3,5-Trimethylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
Vinyl Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.6	70-130			
m+p Xylene	0.0385	0.0040	mg/Kg wet	0.0400		96.2	70-130			
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0554		mg/Kg wet	0.0500		111	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0470		mg/Kg wet	0.0500		94.0	70-130			



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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS Dup (B072417-BSD1)				Prepared & Analyzed: 05/06/13						
Acetone	0.273	0.10	mg/Kg wet	0.200		137	40-160	1.95	20	L-14, V-20 †
tert-Amyl Methyl Ether (TAME)	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130	9.41	20	
Benzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	7.37	20	
Bromobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	8.11	20	
Bromochloromethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	8.67	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130	9.70	20	
Bromoform	0.0124	0.0020	mg/Kg wet	0.0200		61.8	70-130	7.91	20	L-04, V-05
Bromomethane	0.0138	0.010	mg/Kg wet	0.0200		68.8	40-160	19.6	20	L-14, V-20 †
2-Butanone (MEK)	0.214	0.040	mg/Kg wet	0.200		107	40-160	8.78	20	†
n-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	11.7	20	
sec-Butylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	7.94	20	
tert-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	7.93	20	
tert-Butyl Ethyl Ether (TBEE)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	7.88	20	
Carbon Disulfide	0.0231	0.0060	mg/Kg wet	0.0200		116	70-130	4.78	20	
Carbon Tetrachloride	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	6.89	20	
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	7.94	20	
Chlorodibromomethane	0.0166	0.0010	mg/Kg wet	0.0200		83.1	70-130	8.27	20	
Chloroethane	0.0208	0.010	mg/Kg wet	0.0200		104	70-130	0.289	20	
Chloroform	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130	7.71	20	
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	40-160	5.75	20	†
2-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	11.1	20	
4-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	9.95	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0163	0.0020	mg/Kg wet	0.0200		81.4	70-130	11.4	20	V-05
1,2-Dibromoethane (EDB)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	9.92	20	
Dibromomethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	8.92	20	
1,2-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	10.6	20	
1,3-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	9.62	20	
1,4-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	7.17	20	
Dichlorodifluoromethane (Freon 12)	0.0114	0.010	mg/Kg wet	0.0200		57.2	40-160	6.87	20	L-14 †
1,1-Dichloroethane	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	5.39	20	
1,2-Dichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	5.92	20	
1,1-Dichloroethylene	0.0229	0.0040	mg/Kg wet	0.0200		114	70-130	4.83	20	
cis-1,2-Dichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.12	20	
trans-1,2-Dichloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	8.53	20	
1,2-Dichloropropane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	9.18	20	
1,3-Dichloropropane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	13.0	20	
2,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130	6.47	20	
1,1-Dichloropropene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	6.24	20	
cis-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130	9.49	20	
trans-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130	11.4	20	
Diethyl Ether	0.0209	0.010	mg/Kg wet	0.0200		104	70-130	3.61	20	
Diisopropyl Ether (DIPE)	0.0241	0.0010	mg/Kg wet	0.0200		120	70-130	9.13	20	
1,4-Dioxane	0.174	0.10	mg/Kg wet	0.200		87.2	40-160	3.99	20	V-16 †
Ethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	8.38	20	
Hexachlorobutadiene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	13.3	20	
2-Hexanone (MBK)	0.196	0.020	mg/Kg wet	0.200		97.9	40-160	10.9	20	†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.63	20	
p-Isopropyltoluene (p-Cymene)	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	8.52	20	
Methyl tert-Butyl Ether (MTBE)	0.0229	0.0040	mg/Kg wet	0.0200		115	70-130	11.6	20	
Methylene Chloride	0.0214	0.010	mg/Kg wet	0.0200		107	70-130	6.25	20	
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101	40-160	13.6	20	†
Naphthalene	0.0148	0.010	mg/Kg wet	0.0200		74.2	70-130	14.6	20	V-05

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072417 - SW-846 5035										
LCS Dup (B072417-BSD1)				Prepared & Analyzed: 05/06/13						
n-Propylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	10.2	20	
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	9.12	20	
1,1,1,2-Tetrachloroethane	0.0166	0.0020	mg/Kg wet	0.0200		83.1	70-130	5.57	20	V-05
1,1,2,2-Tetrachloroethane	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130	11.8	20	
Tetrachloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	10.6	20	
Tetrahydrofuran	0.0232	0.010	mg/Kg wet	0.0200		116	70-130	15.4	20	
Toluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.01	20	
1,2,3-Trichlorobenzene	0.0166	0.010	mg/Kg wet	0.0200		82.8	70-130	16.6	20	V-05
1,2,4-Trichlorobenzene	0.0162	0.0040	mg/Kg wet	0.0200		80.8	70-130	22.1	20	V-05, R-05
1,1,1-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	6.65	20	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	12.8	20	
Trichloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	8.24	20	
Trichlorofluoromethane (Freon 11)	0.0234	0.010	mg/Kg wet	0.0200		117	70-130	7.71	20	
1,2,3-Trichloropropane	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	8.12	20	
1,2,4-Trimethylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	6.87	20	
1,3,5-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	11.8	20	
Vinyl Chloride	0.0182	0.010	mg/Kg wet	0.0200		91.2	70-130	5.17	20	
m+p Xylene	0.0415	0.0040	mg/Kg wet	0.0400		104	70-130	7.60	20	
o-Xylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	6.73	20	
Surrogate: 1,2-Dichloroethane-d4	0.0577		mg/Kg wet	0.0500		115	70-130			
Surrogate: Toluene-d8	0.0516		mg/Kg wet	0.0500		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.0483		mg/Kg wet	0.0500		96.7	70-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072491 - SW-846 3546										
Blank (B072491-BLK1)				Prepared: 05/07/13 Analyzed: 05/08/13						
C9-C18 Aliphatics	ND	10	mg/Kg wet							L-04
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							L-04
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	4.26		mg/Kg wet	4.99		85.4	40-140			
Surrogate: o-Terphenyl (OTP)	3.83		mg/Kg wet	5.00		76.6	40-140			
Surrogate: 2-Bromonaphthalene	3.58		mg/Kg wet	5.00		71.6	40-140			
Surrogate: 2-Fluorobiphenyl	3.59		mg/Kg wet	5.00		71.9	40-140			
LCS (B072491-BS1)				Prepared: 05/07/13 Analyzed: 05/08/13						
Acenaphthene	3.89	0.10	mg/Kg wet	5.00		77.8	40-140			
Acenaphthylene	3.75	0.10	mg/Kg wet	5.00		75.0	40-140			
Anthracene	4.02	0.10	mg/Kg wet	5.00		80.5	40-140			
Benzo(a)anthracene	4.18	0.10	mg/Kg wet	5.00		83.5	40-140			
Benzo(a)pyrene	4.05	0.10	mg/Kg wet	5.00		81.1	40-140			
Benzo(b)fluoranthene	4.19	0.10	mg/Kg wet	5.00		83.9	40-140			
Benzo(g,h,i)perylene	4.43	0.10	mg/Kg wet	5.00		88.7	40-140			
Benzo(k)fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.3	40-140			
Chrysene	3.94	0.10	mg/Kg wet	5.00		78.8	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072491 - SW-846 3546										
LCS (B072491-BS1)					Prepared: 05/07/13 Analyzed: 05/08/13					
Dibenz(a,h)anthracene	4.40	0.10	mg/Kg wet	5.00		88.1	40-140			
Fluoranthene	4.10	0.10	mg/Kg wet	5.00		82.0	40-140			
Fluorene	4.00	0.10	mg/Kg wet	5.00		80.0	40-140			
Indeno(1,2,3-cd)pyrene	4.46	0.10	mg/Kg wet	5.00		89.1	40-140			
2-Methylnaphthalene	3.72	0.10	mg/Kg wet	5.00		74.5	40-140			
Naphthalene	3.32	0.10	mg/Kg wet	5.00		66.5	40-140			
Phenanthrene	4.07	0.10	mg/Kg wet	5.00		81.5	40-140			
Pyrene	4.00	0.10	mg/Kg wet	5.00		80.1	40-140			
n-Decane	2.22	0.10	mg/Kg wet	5.00		44.5	40-140			
n-Docosane	4.15	0.10	mg/Kg wet	5.00		83.0	40-140			
n-Dodecane	3.33	0.10	mg/Kg wet	5.00		66.6	40-140			
n-Eicosane	4.12	0.10	mg/Kg wet	5.00		82.3	40-140			
n-Hexacosane	3.90	0.10	mg/Kg wet	5.00		78.0	40-140			
n-Hexadecane	4.22	0.10	mg/Kg wet	5.00		84.3	40-140			
n-Hexatriacontane	3.69	0.10	mg/Kg wet	5.00		73.9	40-140			
n-Nonadecane	4.16	0.10	mg/Kg wet	5.00		83.2	40-140			
n-Nonane	1.19	0.10	mg/Kg wet	5.00		23.7	30-140			L-04
n-Octacosane	3.79	0.10	mg/Kg wet	5.00		75.9	40-140			
n-Octadecane	4.18	0.10	mg/Kg wet	5.00		83.6	40-140			
n-Tetracosane	3.99	0.10	mg/Kg wet	5.00		79.9	40-140			
n-Tetradecane	3.94	0.10	mg/Kg wet	5.00		78.8	40-140			
n-Triacontane	3.81	0.10	mg/Kg wet	5.00		76.1	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.09		mg/Kg wet	4.99		82.0	40-140			
Surrogate: o-Terphenyl (OTP)	3.81		mg/Kg wet	5.00		76.1	40-140			
Surrogate: 2-Bromonaphthalene	3.63		mg/Kg wet	5.00		72.6	40-140			
Surrogate: 2-Fluorobiphenyl	3.75		mg/Kg wet	5.00		75.0	40-140			
LCS Dup (B072491-BS1)					Prepared: 05/07/13 Analyzed: 05/08/13					
Acenaphthene	3.85	0.10	mg/Kg wet	5.00		77.0	40-140	1.04	25	
Acenaphthylene	3.70	0.10	mg/Kg wet	5.00		74.1	40-140	1.18	25	
Anthracene	4.03	0.10	mg/Kg wet	5.00		80.6	40-140	0.216	25	
Benzo(a)anthracene	4.26	0.10	mg/Kg wet	5.00		85.3	40-140	2.12	25	
Benzo(a)pyrene	4.15	0.10	mg/Kg wet	5.00		82.9	40-140	2.24	25	
Benzo(b)fluoranthene	4.31	0.10	mg/Kg wet	5.00		86.3	40-140	2.84	25	
Benzo(g,h,i)perylene	4.55	0.10	mg/Kg wet	5.00		90.9	40-140	2.54	25	
Benzo(k)fluoranthene	4.25	0.10	mg/Kg wet	5.00		85.0	40-140	1.92	25	
Chrysene	4.03	0.10	mg/Kg wet	5.00		80.5	40-140	2.18	25	
Dibenz(a,h)anthracene	4.52	0.10	mg/Kg wet	5.00		90.5	40-140	2.68	25	
Fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.4	40-140	1.61	25	
Fluorene	3.96	0.10	mg/Kg wet	5.00		79.2	40-140	0.937	25	
Indeno(1,2,3-cd)pyrene	4.57	0.10	mg/Kg wet	5.00		91.5	40-140	2.62	25	
2-Methylnaphthalene	3.66	0.10	mg/Kg wet	5.00		73.2	40-140	1.74	25	
Naphthalene	3.27	0.10	mg/Kg wet	5.00		65.4	40-140	1.64	25	
Phenanthrene	4.09	0.10	mg/Kg wet	5.00		81.7	40-140	0.284	25	
Pyrene	4.06	0.10	mg/Kg wet	5.00		81.2	40-140	1.41	25	
n-Decane	2.16	0.10	mg/Kg wet	5.00		43.1	40-140	3.03	25	
n-Docosane	4.35	0.10	mg/Kg wet	5.00		87.0	40-140	4.68	25	
n-Dodecane	3.40	0.10	mg/Kg wet	5.00		68.0	40-140	1.99	25	
n-Eicosane	4.33	0.10	mg/Kg wet	5.00		86.6	40-140	5.03	25	
n-Hexacosane	4.08	0.10	mg/Kg wet	5.00		81.6	40-140	4.54	25	



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072491 - SW-846 3546

LCS Dup (B072491-BSD1)

Prepared: 05/07/13 Analyzed: 05/08/13

n-Hexadecane	4.39	0.10	mg/Kg wet	5.00		87.7	40-140	4.00	25	
n-Hexatriacontane	4.04	0.10	mg/Kg wet	5.00		80.9	40-140	9.03	25	
n-Nonadecane	4.36	0.10	mg/Kg wet	5.00		87.3	40-140	4.82	25	
n-Nonane	1.05	0.10	mg/Kg wet	5.00		21.0	30-140	12.0	25	L-04
n-Octacosane	3.97	0.10	mg/Kg wet	5.00		79.3	40-140	4.46	25	
n-Octadecane	4.39	0.10	mg/Kg wet	5.00		87.8	40-140	4.86	25	
n-Tetracosane	4.19	0.10	mg/Kg wet	5.00		83.8	40-140	4.83	25	
n-Tetradecane	4.08	0.10	mg/Kg wet	5.00		81.5	40-140	3.36	25	
n-Triacontane	3.98	0.10	mg/Kg wet	5.00		79.5	40-140	4.38	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.11		mg/Kg wet	4.99		82.3	40-140			
Surrogate: o-Terphenyl (OTP)	3.61		mg/Kg wet	5.00		72.2	40-140			
Surrogate: 2-Bromonaphthalene	3.49		mg/Kg wet	5.00		69.8	40-140			
Surrogate: 2-Fluorobiphenyl	3.60		mg/Kg wet	5.00		72.0	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072480 - MA VPH										
Blank (B072480-BLK1)				Prepared & Analyzed: 05/07/13						
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
Naphthalene	ND	0.25	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
o-Xylene	ND	0.050	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0348		mg/Kg wet	0.0400		87.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0377		mg/Kg wet	0.0400		94.1	70-130			
LCS (B072480-BS1)				Prepared & Analyzed: 05/07/13						
Benzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Butylcyclohexane	0.0879	0.0010	mg/Kg wet	0.100		87.9	70-130			
Decane	0.0931	0.0010	mg/Kg wet	0.100		93.1	70-130			
Ethylbenzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.0979	0.0050	mg/Kg wet	0.100		97.9	70-130			
Nonane	0.0882	0.0010	mg/Kg wet	0.100		88.2	30-130			
Pentane	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
Toluene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
2,2,4-Trimethylpentane	0.0928	0.0010	mg/Kg wet	0.100		92.8	70-130			
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		106	70-130			
o-Xylene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0376		mg/Kg wet	0.0400		94.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0384		mg/Kg wet	0.0400		95.9	70-130			
LCS Dup (B072480-BSD1)				Prepared & Analyzed: 05/07/13						
Benzene	0.106	0.0010	mg/Kg wet	0.100		106	70-130	2.96	25	
Butylcyclohexane	0.0911	0.0010	mg/Kg wet	0.100		91.1	70-130	3.60	25	
Decane	0.0981	0.0010	mg/Kg wet	0.100		98.1	70-130	5.21	25	
Ethylbenzene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.20	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.96	25	
2-Methylpentane	0.103	0.0010	mg/Kg wet	0.100		103	70-130	2.73	25	
Naphthalene	0.105	0.0050	mg/Kg wet	0.100		105	70-130	6.88	25	
Nonane	0.0918	0.0010	mg/Kg wet	0.100		91.8	30-130	3.93	25	
Pentane	0.108	0.0010	mg/Kg wet	0.100		108	70-130	2.67	25	
Toluene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.08	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.10	25	
2,2,4-Trimethylpentane	0.0950	0.0010	mg/Kg wet	0.100		95.0	70-130	2.34	25	
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130	3.06	25	
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.09	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0432		mg/Kg wet	0.0400		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0388		mg/Kg wet	0.0400		96.9	70-130			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072481 - MA VPH										
Blank (B072481-BLK1)										
Prepared & Analyzed: 05/07/13										
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0348		mg/Kg wet	0.0400		87.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0377		mg/Kg wet	0.0400		94.1	70-130			
LCS (B072481-BS1)										
Prepared & Analyzed: 05/07/13										
Benzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Butylcyclohexane	0.0879	0.0010	mg/Kg wet	0.100		87.9	70-130			
Decane	0.0931	0.0010	mg/Kg wet	0.100		93.1	70-130			
Ethylbenzene	0.103	0.0010	mg/Kg wet	0.100		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.0979	0.010	mg/Kg wet	0.100		97.9	70-130			
Nonane	0.0882	0.0010	mg/Kg wet	0.100		88.2	30-130			
Pentane	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
Toluene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.105	0.0010	mg/Kg wet	0.100		105	70-130			
2,2,4-Trimethylpentane	0.0928	0.0010	mg/Kg wet	0.100		92.8	70-130			
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		106	70-130			
o-Xylene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0376		mg/Kg wet	0.0400		94.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0384		mg/Kg wet	0.0400		95.9	70-130			
LCS Dup (B072481-BSD1)										
Prepared & Analyzed: 05/07/13										
Benzene	0.106	0.0010	mg/Kg wet	0.100		106	70-130	2.96	25	
Butylcyclohexane	0.0911	0.0010	mg/Kg wet	0.100		91.1	70-130	3.60	25	
Decane	0.0981	0.0010	mg/Kg wet	0.100		98.1	70-130	5.21	25	
Ethylbenzene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.20	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.96	25	
2-Methylpentane	0.103	0.0010	mg/Kg wet	0.100		103	70-130	2.73	25	
Naphthalene	0.105	0.010	mg/Kg wet	0.100		105	70-130	6.88	25	
Nonane	0.0918	0.0010	mg/Kg wet	0.100		91.8	30-130	3.93	25	
Pentane	0.108	0.0010	mg/Kg wet	0.100		108	70-130	2.67	25	
Toluene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.08	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.10	25	
2,2,4-Trimethylpentane	0.0950	0.0010	mg/Kg wet	0.100		95.0	70-130	2.34	25	
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130	3.06	25	
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130	3.09	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0432		mg/Kg wet	0.0400		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0388		mg/Kg wet	0.0400		96.9	70-130			



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072376 - SW-846 3050B										
Blank (B072376-BLK1)										
Prepared: 05/04/13 Analyzed: 05/06/13										
Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B072376-BS1)										
Prepared: 05/04/13 Analyzed: 05/06/13										
Antimony	82.0	5.0	mg/Kg wet	106		77.4	8.2-218.9			
Arsenic	178	5.0	mg/Kg wet	182		97.9	83-117.6			
Barium	142	5.0	mg/Kg wet	143		99.2	83.2-117.5			
Beryllium	101	0.50	mg/Kg wet	98.3		103	83.9-116			
Cadmium	61.7	0.50	mg/Kg wet	60.4		102	83.1-116.9			
Chromium	125	1.0	mg/Kg wet	125		99.7	81.6-117.6			
Lead	125	1.5	mg/Kg wet	136		91.7	82.4-117.8			
Nickel	126	1.0	mg/Kg wet	128		98.3	84.4-115.6			
Selenium	73.1	10	mg/Kg wet	85.9		85.1	80-120			
Silver	56.8	1.0	mg/Kg wet	61.3		92.6	66.2-133.8			
Thallium	133	5.0	mg/Kg wet	144		92.4	81.2-118.8			
Vanadium	106	2.0	mg/Kg wet	104		102	75.5-124			
Zinc	186	2.0	mg/Kg wet	204		90.9	81.9-117.6			
LCS Dup (B072376-BSD1)										
Prepared: 05/04/13 Analyzed: 05/06/13										
Antimony	76.5	5.0	mg/Kg wet	106		72.1	8.2-218.9	7.05	30	
Arsenic	176	5.0	mg/Kg wet	182		96.8	83-117.6	1.18	30	
Barium	137	5.0	mg/Kg wet	143		95.9	83.2-117.5	3.42	30	
Beryllium	98.0	0.50	mg/Kg wet	98.3		99.7	83.9-116	3.25	30	
Cadmium	59.7	0.50	mg/Kg wet	60.4		98.9	83.1-116.9	3.33	30	
Chromium	122	1.0	mg/Kg wet	125		97.5	81.6-117.6	2.29	30	
Lead	122	1.5	mg/Kg wet	136		89.6	82.4-117.8	2.40	30	
Nickel	122	1.0	mg/Kg wet	128		95.3	84.4-115.6	3.15	30	
Selenium	71.0	10	mg/Kg wet	85.9		82.7	80-120	2.80	30	
Silver	54.9	1.0	mg/Kg wet	61.3		89.6	66.2-133.8	3.30	30	
Thallium	133	5.0	mg/Kg wet	144		92.4	81.2-118.8	0.0333	30	
Vanadium	103	2.0	mg/Kg wet	104		99.2	75.5-124	2.29	30	
Zinc	184	2.0	mg/Kg wet	204		90.4	81.9-117.6	0.579	30	



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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072376 - SW-846 3050B										
Duplicate (B072376-DUP1)		Source: 13E0137-04		Prepared: 05/04/13		Analyzed: 05/06/13				
Antimony	ND	2.5	mg/Kg dry		ND			NC	35	
Arsenic	3.95	2.5	mg/Kg dry		4.13			4.40	35	
Barium	25.3	2.5	mg/Kg dry		25.0			0.918	35	
Beryllium	0.281	0.25	mg/Kg dry		ND			NC	35	
Cadmium	ND	0.25	mg/Kg dry		ND			NC	35	
Chromium	8.88	0.49	mg/Kg dry		10.2			13.6	35	
Lead	25.4	0.74	mg/Kg dry		30.6			18.7	35	
Nickel	5.06	0.49	mg/Kg dry		5.11			0.997	35	
Selenium	ND	4.9	mg/Kg dry		ND			NC	35	
Silver	ND	0.49	mg/Kg dry		ND			NC	35	
Thallium	ND	2.5	mg/Kg dry		ND			NC	35	
Vanadium	11.3	0.98	mg/Kg dry		11.6			2.14	35	
Zinc	33.0	0.98	mg/Kg dry		32.7			0.888	35	
MRL Check (B072376-MRL1)				Prepared: 05/04/13		Analyzed: 05/06/13				
Lead	0.723	0.71	mg/Kg wet	0.711		102		80-120		
Matrix Spike (B072376-MS1)		Source: 13E0137-04		Prepared: 05/04/13		Analyzed: 05/06/13				
Antimony	8.90	2.4	mg/Kg dry	24.5	ND	36.4	*	75-125		MS-07
Arsenic	25.3	2.4	mg/Kg dry	24.5	4.13	86.5		75-125		
Barium	39.7	2.4	mg/Kg dry	24.5	25.0	59.9	*	75-125		MS-07
Beryllium	23.6	0.24	mg/Kg dry	24.5	0.245	95.6		75-125		
Cadmium	22.3	0.24	mg/Kg dry	24.5	ND	91.2		75-125		
Chromium	32.8	0.49	mg/Kg dry	24.5	10.2	92.3		75-125		
Lead	39.4	0.73	mg/Kg dry	24.5	30.6	35.9	*	75-125		MS-07
Nickel	27.0	0.49	mg/Kg dry	24.5	5.11	89.3		75-125		
Selenium	20.0	4.9	mg/Kg dry	24.5	ND	81.7		75-125		
Silver	20.9	0.49	mg/Kg dry	24.5	ND	85.6		75-125		
Thallium	21.1	2.4	mg/Kg dry	24.5	ND	86.2		75-125		
Vanadium	34.7	0.98	mg/Kg dry	24.5	11.6	94.5		75-125		
Zinc	45.1	0.98	mg/Kg dry	24.5	32.7	50.8	*	75-125		MS-07
Batch B072378 - SW-846 7471										
Blank (B072378-BLK1)				Prepared: 05/04/13		Analyzed: 05/06/13				
Mercury	ND	0.025	mg/Kg wet							
LCS (B072378-BS1)				Prepared: 05/04/13		Analyzed: 05/06/13				
Mercury	4.61	0.33	mg/Kg wet	4.05		114		71.6-128.1		
LCS Dup (B072378-BSD1)				Prepared: 05/04/13		Analyzed: 05/06/13				
Mercury	5.59	0.67	mg/Kg wet	4.05		138	*	71.6-128.1	19.3	30 L-07



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072378 - SW-846 7471										
Duplicate (B072378-DUP1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Mercury	0.0460	0.027	mg/Kg dry		0.0426			7.80	35	
Matrix Spike (B072378-MS1)		Source: 13E0137-04		Prepared: 05/04/13 Analyzed: 05/06/13						
Mercury	0.219	0.026	mg/Kg dry	0.176	0.0426	100	75-125			
Batch B072383 - SW-846 7471										
Blank (B072383-BLK1)		Prepared & Analyzed: 05/06/13								
Mercury	ND	0.025	mg/Kg wet							
LCS (B072383-BS1)		Prepared & Analyzed: 05/06/13								
Mercury	5.50	0.66	mg/Kg wet	4.05		136	* 71.6-128.1			L-07
LCS Dup (B072383-BSD1)		Prepared & Analyzed: 05/06/13								
Mercury	4.50	0.34	mg/Kg wet	4.05		111	71.6-128.1	19.9	30	



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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072717 - % Solids										
Duplicate (B072717-DUP2)		Source: 13E0137-04			Prepared: 05/09/13		Analyzed: 05/10/13			
% Solids	93.3		% Wt		93.8			0.534	20	

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
O-01	Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP-EPH-04-1.1 in Soil</i>	
C9-C18 Aliphatics	CT,NC,WA,ME,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,ME,NH-P
Acenaphthene	CT,NC,WA,ME,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,ME,NH-P
Anthracene	CT,NC,WA,ME,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,ME,NH-P
Chrysene	CT,NC,WA,ME,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,ME,NH-P
Fluoranthene	CT,NC,WA,ME,ME,NH-P
Fluorene	CT,NC,WA,ME,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME,ME
Naphthalene	CT,NC,WA,ME,ME,NH-P
Phenanthrene	CT,NC,WA,ME,ME,NH-P
Pyrene	CT,NC,WA,ME,ME,NH-P
<i>MADEP-VPH-04-1.1 in Soil</i>	
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,ME,NH-P
Benzene	CT,NC,WA,ME,ME,NH-P
Benzene	CT,NC,WA,ME,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,ME,NH-P
Naphthalene	CT,NC,WA,ME,ME,NH-P
Naphthalene	CT,NC,WA,ME,ME,NH-P
Toluene	CT,NC,WA,ME,ME,NH-P
Toluene	CT,NC,WA,ME,ME,NH-P
m+p Xylene	CT,NC,WA,ME,ME,NH-P
m+p Xylene	CT,NC,WA,ME,ME,NH-P
o-Xylene	CT,NC,WA,ME,ME,NH-P
o-Xylene	CT,NC,WA,ME,ME,NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,ME,NC,VA
Barium	CT,NH,NY,ME,NC,VA
Beryllium	CT,NH,NY,ME,NC,VA
Cadmium	CT,NH,NY,ME,NC,VA
Chromium	CT,NH,NY,ME,NC,VA
Lead	CT,NH,NY,AIHA,ME,NC,VA
Nickel	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,NC,VA
Silver	CT,NH,NY,ME,NC,VA
Thallium	CT,NH,NY,ME,NC,VA
Vanadium	CT,NH,NY,ME,NC,VA
Zinc	CT,NH,NY,ME,NC,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	I00033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	I0899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



con-test
ANALYTICAL LABORATORY

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East longmeadow, MA 01028

Page 1 of 2

Rev 04.05.12

13E 0137

781-356-9140

Company Name: GCL

Telephone:

Address: 60 Brooks Drive

Project #

BRADSHAW, MA 02184

Client PO# 1424-4350

Attention:

DATA DELIVERY (check all that apply)

☐ FAX ☐ EMAIL ☐ WEBSITE

Project Location: WALE ST DARTMOUTH

Fax #

Sampled By: M BRODUEY

Email:

Project Proposal Provided? (for billing purposes)

☐ yes ☐ proposal date

Format:

☐ PDF ☐ EXCEL ☐ GIS

☐ OTHER

☐ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection		Composite	Grab	Matrix Code	Conc Code	ANALYSIS REQUESTED											
		Beginning Date/Time	Ending Date/Time																
01	B-1 0-5'	5-2-13	0935		X	S	U	X	X	X									
02	B-1 5-10'	5-2-13	0850		X	S	U	X	X	X									
03	B-2 0-5'	5-2-13	0910		X	S	U	X	X	X									
04	B-2 5-10'	5-2-13	0930		X	S	U	X	X	X									
05	B-3 10-15'	5-2-13	1010		X	S	U		X	X	X								
06	B-4 0-5'	5-2-13	1030		X	S	U	X	X	X									
07	B-4 10-15	5-2-13	1055		X	S	U	X	X	X									
08	B-5 0-5'	5-2-13	1115		X	S	U	X	X	X									
09	B-5 10-15	5-2-13	1130		X	S	U	X	X	X									

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)

Date/Time:

Turnaround ^{††}

☐ 7-Day

☐ 10-Day

☒ Other 5

RUSH [†]

☐ 24-Hr ☐ 48-Hr

☐ 72-Hr ☐ 4-Day

[†] Require lab approval

Detection Limit Requirements

Massachusetts: PLS-1

Connecticut:

Other:

Is your project MCP or RCP?

☒ MCP Form Required

☐ RCP Form Required

☐ MA State DW Form Required PWSID #



NELAC & AIHA-LAP, LLC
Accredited

WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Page 83 of 86 13E0137_1 Contest_Final 05 10 13 1608 05/10/13 16:08:39

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: GCC RECEIVED BY: JMM DATE: 5/3/13

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples? Yes No

If not, explain:

3) Are all the samples in good condition? Yes No

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 3.0 °C

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	<u>13</u>
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>15</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol 2 13

Doc# 277 # Bisulfate 2 # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____ Unpreserved

Time and Date Frozen:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory

Project #: 13E0137

Project Location: Hale St., Bridgewater

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E0137-01 thru 13E0137-13

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B ()	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A (X)	6020 Metals CAM III D ()	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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.

Signature: _____



Position: Laboratory Manager

Printed Name: Daren J. Damboragian

Date: 05/10/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 15, 2013

Mike Bradley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: 106 Hale, Bridgewater
Client Job Number:
Project Number: 1424-3020
Laboratory Work Order Number: 13E0263

Enclosed are results of analyses for samples received by the laboratory on May 8, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James M. Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Mike Bradley

REPORT DATE: 5/15/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1424-3020

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E0263

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 106 Hale, Bridgewater

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GEC-1	13E0263-01	Ground Water		MADEP-EPH-04-1.1	
				MADEP-VPH-04-1.1	
				SW-846 6020A	
				SW-846 7470A	
GEC-4	13E0263-02	Ground Water		SW-846 8270D	
				MADEP-EPH-04-1.1	
				MADEP-VPH-04-1.1	
				SW-846 6020A	
GEC-5	13E0263-03	Ground Water		SW-846 7470A	
				SW-846 8270D	
				MADEP-EPH-04-1.1	
				MADEP-VPH-04-1.1	
GEC-6	13E0263-04	Ground Water		SW-846 6020A	
				SW-846 7470A	
				SW-846 8270D	
				MADEP-EPH-04-1.1	



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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8270, only a select list of PAH compounds were analyzed and reported in order to achieve lower detection limits than possible with the EPH analysis.

MADEP-EPH-04-1.1

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

n-Decane, n-Nonane
B072825-BSD1

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and 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.

Michael A. Erickson
Laboratory Director



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:21	CJM
Surrogates		% Recovery	Recovery Limits		Flag				
o-Terphenyl (OTP)		125	30-130					5/14/13 2:21	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:31	SCS
Surrogates		% Recovery	Recovery Limits		Flag				
Chlorooctadecane (COD)		57.2	40-140					5/13/13 13:31	
o-Terphenyl (OTP)		66.0	40-140					5/13/13 13:31	
2-Bromonaphthalene		65.2	40-140					5/13/13 13:31	
2-Fluorobiphenyl		69.0	40-140					5/13/13 13:31	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:12	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	95.7	70-130							
2,5-Dibromotoluene (PID)	101	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-1

Sampled: 5/7/2013 08:50

Sample ID: 13E0263-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Arsenic	3.2	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Barium	72	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:35	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH
Zinc	22	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:12	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 2:50	CJM
Surrogates		% Recovery	Recovery Limits		Flag				
o-Terphenyl (OTP)		125	30-130					5/14/13 2:50	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 13:50	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
Chlorooctadecane (COD)	55.9		40-140				5/13/13 13:50		
o-Terphenyl (OTP)	68.7		40-140				5/13/13 13:50		
2-Bromonaphthalene	86.6		40-140				5/13/13 13:50		
2-Fluorobiphenyl	89.0		40-140				5/13/13 13:50		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/9/13 23:49	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	87.9	70-130							
2,5-Dibromotoluene (PID)	87.4	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-4

Sampled: 5/7/2013 09:55

Sample ID: 13E0263-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Barium	83	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Chromium	1.1	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:36	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH
Zinc	26	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 13:39	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:19	CJM

Surrogates	% Recovery	Recovery Limits	Flag
o-Terphenyl (OTP)	108	30-130	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	150	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
C19-C36 Aliphatics	240	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Unadjusted C11-C22 Aromatics	200	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
C11-C22 Aromatics	200	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:10	SCS
Surrogates		% Recovery	Recovery Limits		Flag				
Chlorooctadecane (COD)		49.5	40-140					5/13/13 14:10	
o-Terphenyl (OTP)		61.0	40-140					5/13/13 14:10	
2-Bromonaphthalene		78.0	40-140					5/13/13 14:10	
2-Fluorobiphenyl		81.9	40-140					5/13/13 14:10	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 0:25	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	86.9	70-130							
2,5-Dibromotoluene (PID)	88.6	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-5

Sampled: 5/7/2013 12:00

Sample ID: 13E0263-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Barium	19	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:38	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH
Zinc	27	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:15	KSH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Chrysene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270D	5/11/13	5/14/13 3:48	CJM

Surrogates	% Recovery	Recovery Limits	Flag
o-Terphenyl (OTP)	115	30-130	

5/14/13 3:48



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	5/11/13	5/13/13 14:30	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	58.7	40-140	
o-Terphenyl (OTP)	67.8	40-140	
2-Bromonaphthalene	87.4	40-140	
2-Fluorobiphenyl	89.1	40-140	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	5/9/13	5/10/13 1:01	EEH
Surrogates	% Recovery	Recovery Limits	Flag						
2,5-Dibromotoluene (FID)	100	70-130							
2,5-Dibromotoluene (PID)	98.0	70-130							



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 106 Hale, Bridgewater

Sample Description:

Work Order: 13E0263

Date Received: 5/8/2013

Field Sample #: GEC-6

Sampled: 5/7/2013 10:50

Sample ID: 13E0263-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Arsenic	1.7	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Barium	72	10	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Cadmium	1.0	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Chromium	3.2	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Lead	1.7	1.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	5/9/13	5/9/13 13:40	SAJ
Nickel	11	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Selenium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Thallium	ND	0.20	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	5/9/13	5/10/13 14:19	KSH
Zinc	880	100	µg/L	10		SW-846 6020A	5/9/13	5/10/13 14:44	KSH



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Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072825	1000	2.00	05/11/13
13E0263-02 [GEC-4]	B072825	1000	2.00	05/11/13
13E0263-03 [GEC-5]	B072825	1000	2.00	05/11/13
13E0263-04 [GEC-6]	B072825	1000	2.00	05/11/13

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072697	5	5.00	05/09/13
13E0263-02 [GEC-4]	B072697	5	5.00	05/09/13
13E0263-03 [GEC-5]	B072697	5	5.00	05/09/13
13E0263-04 [GEC-6]	B072697	5	5.00	05/09/13

Prep Method: SW-846 3005A Dissolved-SW-846 6020A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072716	50.0	50.0	05/09/13
13E0263-02 [GEC-4]	B072716	50.0	50.0	05/09/13
13E0263-03 [GEC-5]	B072716	50.0	50.0	05/09/13
13E0263-04 [GEC-6]	B072716	50.0	50.0	05/09/13

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072651	6.00	6.00	05/09/13
13E0263-02 [GEC-4]	B072651	6.00	6.00	05/09/13
13E0263-03 [GEC-5]	B072651	6.00	6.00	05/09/13
13E0263-04 [GEC-6]	B072651	6.00	6.00	05/09/13

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E0263-01 [GEC-1]	B072882	1000	2.00	05/11/13
13E0263-02 [GEC-4]	B072882	1000	2.00	05/11/13
13E0263-03 [GEC-5]	B072882	1000	2.00	05/11/13
13E0263-04 [GEC-6]	B072882	1000	2.00	05/11/13



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072882 - SW-846 3510C										
Blank (B072882-BLK1) Prepared: 05/11/13 Analyzed: 05/14/13										
Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(g,h,i)perylene	ND	0.50	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Surrogate: o-Terphenyl (OTP)	114		µg/L	100		114	30-130			
LCS (B072882-BS1) Prepared: 05/11/13 Analyzed: 05/14/13										
Benzo(a)anthracene	88.4	1.2	µg/L	100		88.4	40-140			
Benzo(a)pyrene	88.8	2.5	µg/L	100		88.8	40-140			
Benzo(b)fluoranthene	90.3	1.2	µg/L	100		90.3	40-140			
Benzo(g,h,i)perylene	94.5	12	µg/L	100		94.5	40-140			
Benzo(k)fluoranthene	92.0	5.0	µg/L	100		92.0	40-140			
Chrysene	90.3	5.0	µg/L	100		90.3	40-140			
Dibenz(a,h)anthracene	97.8	5.0	µg/L	100		97.8	40-140			
Indeno(1,2,3-cd)pyrene	97.2	5.0	µg/L	100		97.2	40-140			
Surrogate: o-Terphenyl (OTP)	73.3		µg/L	100		73.3	30-130			
LCS Dup (B072882-BSD1) Prepared: 05/11/13 Analyzed: 05/14/13										
Benzo(a)anthracene	87.2	1.2	µg/L	100		87.2	40-140	1.42	20	
Benzo(a)pyrene	87.7	2.5	µg/L	100		87.7	40-140	1.19	20	
Benzo(b)fluoranthene	89.7	1.2	µg/L	100		89.7	40-140	0.667	20	
Benzo(g,h,i)perylene	92.3	12	µg/L	100		92.3	40-140	2.36	20	
Benzo(k)fluoranthene	92.0	5.0	µg/L	100		92.0	40-140	0.0543	20	
Chrysene	89.3	5.0	µg/L	100		89.3	40-140	1.11	20	
Dibenz(a,h)anthracene	95.5	5.0	µg/L	100		95.5	40-140	2.43	20	
Indeno(1,2,3-cd)pyrene	94.4	5.0	µg/L	100		94.4	40-140	2.92	20	
Surrogate: o-Terphenyl (OTP)	69.2		µg/L	100		69.2	30-130			



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072825 - SW-846 3510C										
Blank (B072825-BLK1)				Prepared: 05/11/13 Analyzed: 05/13/13						
C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	69.6		µg/L	99.8		69.7	40-140			
Surrogate: o-Terphenyl (OTP)	69.5		µg/L	100		69.5	40-140			
Surrogate: 2-Bromonaphthalene	80.5		µg/L	100		80.5	40-140			
Surrogate: 2-Fluorobiphenyl	83.0		µg/L	100		83.0	40-140			
LCS (B072825-BS1)				Prepared: 05/11/13 Analyzed: 05/13/13						
Acenaphthene	70.7	2.0	µg/L	100		70.7	40-140			
Acenaphthylene	67.3	2.0	µg/L	100		67.3	40-140			
Anthracene	74.8	2.0	µg/L	100		74.8	40-140			
Benzo(a)anthracene	76.3	2.0	µg/L	100		76.3	40-140			
Benzo(a)pyrene	74.9	2.0	µg/L	100		74.9	40-140			
Benzo(b)fluoranthene	77.6	2.0	µg/L	100		77.6	40-140			
Benzo(g,h,i)perylene	82.8	2.0	µg/L	100		82.8	40-140			
Benzo(k)fluoranthene	76.2	2.0	µg/L	100		76.2	40-140			
Chrysene	72.3	2.0	µg/L	100		72.3	40-140			
Dibenz(a,h)anthracene	81.5	2.0	µg/L	100		81.5	40-140			
Fluoranthene	74.7	2.0	µg/L	100		74.7	40-140			
Fluorene	72.2	2.0	µg/L	100		72.2	40-140			
Indeno(1,2,3-cd)pyrene	82.8	2.0	µg/L	100		82.8	40-140			
2-Methylnaphthalene	65.2	2.0	µg/L	100		65.2	40-140			
Naphthalene	57.9	2.0	µg/L	100		57.9	40-140			
Phenanthrene	73.8	2.0	µg/L	100		73.8	40-140			
Pyrene	73.0	2.0	µg/L	100		73.0	40-140			
n-Decane	43.6	2.0	µg/L	100		43.6	40-140			
n-Docosane	81.1	2.0	µg/L	100		81.1	40-140			
n-Dodecane	60.6	2.0	µg/L	100		60.6	40-140			
n-Eicosane	81.4	2.0	µg/L	100		81.4	40-140			
n-Hexacosane	78.2	2.0	µg/L	100		78.2	40-140			
n-Hexadecane	79.5	2.0	µg/L	100		79.5	40-140			
n-Hexatriacontane	83.9	2.0	µg/L	100		83.9	40-140			
n-Nonadecane	81.7	2.0	µg/L	100		81.7	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072825 - SW-846 3510C										
LCS (B072825-BS1) Prepared: 05/11/13 Analyzed: 05/13/13										
n-Nonane	33.3	2.0	µg/L	100		33.3	30-140			
n-Octacosane	77.0	2.0	µg/L	100		77.0	40-140			
n-Octadecane	81.1	2.0	µg/L	100		81.1	40-140			
n-Tetracosane	79.4	2.0	µg/L	100		79.4	40-140			
n-Tetradecane	74.2	2.0	µg/L	100		74.2	40-140			
n-Triacontane	78.9	2.0	µg/L	100		78.9	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	73.4		µg/L	99.8		73.5	40-140			
Surrogate: o-Terphenyl (OTP)	70.1		µg/L	100		70.1	40-140			
Surrogate: 2-Bromonaphthalene	79.5		µg/L	100		79.5	40-140			
Surrogate: 2-Fluorobiphenyl	83.6		µg/L	100		83.6	40-140			
LCS Dup (B072825-BS1) Prepared: 05/11/13 Analyzed: 05/13/13										
Acenaphthene	66.5	2.0	µg/L	100		66.5	40-140	6.11	25	
Acenaphthylene	63.3	2.0	µg/L	100		63.3	40-140	6.15	25	
Anthracene	72.1	2.0	µg/L	100		72.1	40-140	3.64	25	
Benzo(a)anthracene	74.5	2.0	µg/L	100		74.5	40-140	2.45	25	
Benzo(a)pyrene	73.0	2.0	µg/L	100		73.0	40-140	2.61	25	
Benzo(b)fluoranthene	75.4	2.0	µg/L	100		75.4	40-140	2.86	25	
Benzo(g,h,i)perylene	80.4	2.0	µg/L	100		80.4	40-140	2.89	25	
Benzo(k)fluoranthene	74.6	2.0	µg/L	100		74.6	40-140	2.15	25	
Chrysene	70.5	2.0	µg/L	100		70.5	40-140	2.56	25	
Dibenz(a,h)anthracene	79.9	2.0	µg/L	100		79.9	40-140	1.95	25	
Fluoranthene	72.3	2.0	µg/L	100		72.3	40-140	3.26	25	
Fluorene	68.3	2.0	µg/L	100		68.3	40-140	5.51	25	
Indeno(1,2,3-cd)pyrene	80.8	2.0	µg/L	100		80.8	40-140	2.39	25	
2-Methylnaphthalene	60.9	2.0	µg/L	100		60.9	40-140	6.79	25	
Naphthalene	54.1	2.0	µg/L	100		54.1	40-140	6.66	25	
Phenanthrene	70.7	2.0	µg/L	100		70.7	40-140	4.32	25	
Pyrene	70.5	2.0	µg/L	100		70.5	40-140	3.53	25	
n-Decane	34.9	2.0	µg/L	100		34.9	40-140	22.2	25	L-07
n-Docosane	73.0	2.0	µg/L	100		73.0	40-140	10.5	25	
n-Dodecane	52.1	2.0	µg/L	100		52.1	40-140	15.2	25	
n-Eicosane	72.9	2.0	µg/L	100		72.9	40-140	11.0	25	
n-Hexacosane	70.2	2.0	µg/L	100		70.2	40-140	10.8	25	
n-Hexadecane	70.9	2.0	µg/L	100		70.9	40-140	11.4	25	
n-Hexatriacontane	74.5	2.0	µg/L	100		74.5	40-140	11.8	25	
n-Nonadecane	73.7	2.0	µg/L	100		73.7	40-140	10.3	25	
n-Nonane	25.9	2.0	µg/L	100		25.9	30-140	24.8	25	L-07
n-Octacosane	68.9	2.0	µg/L	100		68.9	40-140	11.1	25	
n-Octadecane	73.0	2.0	µg/L	100		73.0	40-140	10.6	25	
n-Tetracosane	71.1	2.0	µg/L	100		71.1	40-140	11.0	25	
n-Tetradecane	64.9	2.0	µg/L	100		64.9	40-140	13.4	25	
n-Triacontane	70.6	2.0	µg/L	100		70.6	40-140	11.2	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	63.0		µg/L	99.8		63.1	40-140			
Surrogate: o-Terphenyl (OTP)	65.6		µg/L	100		65.6	40-140			
Surrogate: 2-Bromonaphthalene	82.2		µg/L	100		82.2	40-140			
Surrogate: 2-Fluorobiphenyl	86.4		µg/L	100		86.4	40-140			



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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072697 - MA VPH										
Blank (B072697-BLK1)				Prepared & Analyzed: 05/09/13						
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	39.1		µg/L	40.0		97.7	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	35.8		µg/L	40.0		89.5	70-130			
LCS (B072697-BS1)				Prepared & Analyzed: 05/09/13						
Benzene	104	1.0	µg/L	100		104	70-130			
Butylcyclohexane	89.3	1.0	µg/L	100		89.3	70-130			
Decane	96.7	1.0	µg/L	100		96.7	70-130			
Ethylbenzene	105	1.0	µg/L	100		105	70-130			
Methyl tert-Butyl Ether (MTBE)	100	1.0	µg/L	100		100	70-130			
2-Methylpentane	105	1.0	µg/L	100		105	70-130			
Naphthalene	101	5.0	µg/L	100		101	70-130			
Nonane	90.5	1.0	µg/L	100		90.5	30-130			
Pentane	109	1.0	µg/L	100		109	70-130			
Toluene	105	1.0	µg/L	100		105	70-130			
1,2,4-Trimethylbenzene	105	1.0	µg/L	100		105	70-130			
2,2,4-Trimethylpentane	96.9	1.0	µg/L	100		96.9	70-130			
m+p Xylene	214	2.0	µg/L	200		107	70-130			
o-Xylene	104	1.0	µg/L	100		104	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	41.0		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.0		µg/L	40.0		95.0	70-130			
LCS Dup (B072697-BSD1)				Prepared & Analyzed: 05/09/13						
Benzene	103	1.0	µg/L	100		103	70-130	0.544	25	
Butylcyclohexane	91.5	1.0	µg/L	100		91.5	70-130	2.44	25	
Decane	99.7	1.0	µg/L	100		99.7	70-130	3.09	25	
Ethylbenzene	105	1.0	µg/L	100		105	70-130	0.0611	25	
Methyl tert-Butyl Ether (MTBE)	99.7	1.0	µg/L	100		99.7	70-130	0.377	25	
2-Methylpentane	102	1.0	µg/L	100		102	70-130	3.10	25	
Naphthalene	102	5.0	µg/L	100		102	70-130	0.860	25	
Nonane	92.3	1.0	µg/L	100		92.3	30-130	1.95	25	
Pentane	106	1.0	µg/L	100		106	70-130	2.74	25	
Toluene	105	1.0	µg/L	100		105	70-130	0.0959	25	
1,2,4-Trimethylbenzene	105	1.0	µg/L	100		105	70-130	0.0961	25	
2,2,4-Trimethylpentane	95.0	1.0	µg/L	100		95.0	70-130	1.98	25	
m+p Xylene	214	2.0	µg/L	200		107	70-130	0.200	25	
o-Xylene	105	1.0	µg/L	100		105	70-130	0.114	25	
Surrogate: 2,5-Dibromotoluene (FID)	43.3		µg/L	40.0		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	39.7		µg/L	40.0		99.4	70-130			



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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B072651 - SW-846 7470A Prep										
Blank (B072651-BLK1)				Prepared & Analyzed: 05/09/13						
Mercury	ND	0.00010	mg/L							
LCS (B072651-BS1)				Prepared & Analyzed: 05/09/13						
Mercury	0.00204	0.00010	mg/L	0.00200		102	80-120			
LCS Dup (B072651-BSD1)				Prepared & Analyzed: 05/09/13						
Mercury	0.00204	0.00010	mg/L	0.00200		102	80-120	0.0873	20	
Batch B072716 - SW-846 3005A Dissolved										
Blank (B072716-BLK1)				Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							
LCS (B072716-BS1)				Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	259	5.0	µg/L	250		104	80-120			
Arsenic	253	2.0	µg/L	250		101	80-120			
Barium	247	50	µg/L	250		98.9	80-120			
Beryllium	255	2.0	µg/L	250		102	80-120			
Cadmium	260	2.5	µg/L	250		104	80-120			
Chromium	246	5.0	µg/L	250		98.2	80-120			
Lead	251	5.0	µg/L	250		100	80-120			
Nickel	250	25	µg/L	250		99.9	80-120			
Selenium	259	25	µg/L	250		104	80-120			
Silver	265	2.5	µg/L	250		106	80-120			
Thallium	244	1.0	µg/L	250		97.5	80-120			
Vanadium	250	25	µg/L	250		100	80-120			
Zinc	277	50	µg/L	250		111	80-120			
LCS Dup (B072716-BSD1)				Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	260	5.0	µg/L	250		104	80-120	0.236	20	
Arsenic	255	2.0	µg/L	250		102	80-120	0.807	20	
Barium	247	50	µg/L	250		98.9	80-120	0.0153	20	
Beryllium	258	2.0	µg/L	250		103	80-120	1.05	20	
Cadmium	260	2.5	µg/L	250		104	80-120	0.0575	20	
Chromium	251	5.0	µg/L	250		100	80-120	2.20	20	
Lead	254	5.0	µg/L	250		102	80-120	1.17	20	
Nickel	250	25	µg/L	250		100	80-120	0.279	20	
Selenium	263	25	µg/L	250		105	80-120	1.48	20	
Silver	265	2.5	µg/L	250		106	80-120	0.0747	20	
Thallium	247	1.0	µg/L	250		99.0	80-120	1.52	20	
Vanadium	255	25	µg/L	250		102	80-120	1.69	20	
Zinc	272	50	µg/L	250		109	80-120	1.53	20	



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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B072716 - SW-846 3005A Dissolved

Duplicate (B072716-DUP1)		Source: 13E0263-02		Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	0.550	0.40	µg/L		ND			NC	20	
Barium	86.0	10	µg/L		83.5			2.93	20	
Beryllium	ND	0.40	µg/L		ND			NC	20	
Cadmium	ND	0.50	µg/L		ND			NC	20	
Chromium	1.10	1.0	µg/L		1.10			0.423	20	
Lead	ND	1.0	µg/L		ND			NC	20	
Nickel	ND	5.0	µg/L		ND			NC	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.50	µg/L		ND			NC	20	
Thallium	ND	0.20	µg/L		ND			NC	20	
Vanadium	ND	5.0	µg/L		ND			NC	20	
Zinc	27.4	10	µg/L		26.3			4.33	20	

Matrix Spike (B072716-MS1)		Source: 13E0263-02		Prepared: 05/09/13 Analyzed: 05/10/13						
Antimony	268	10	µg/L	250	ND	107		75-125		
Arsenic	261	4.0	µg/L	250	0.373	104		75-125		
Barium	333	100	µg/L	250	83.5	99.7		75-125		
Beryllium	260	4.0	µg/L	250	ND	104		75-125		
Cadmium	262	5.0	µg/L	250	0.0354	105		75-125		
Chromium	245	10	µg/L	250	1.10	97.6		75-125		
Lead	260	10	µg/L	250	0.214	104		75-125		
Nickel	250	50	µg/L	250	4.69	98.2		75-125		
Selenium	267	50	µg/L	250	0.860	106		75-125		
Silver	260	5.0	µg/L	250	ND	104		75-125		
Thallium	251	2.0	µg/L	250	ND	100		75-125		
Vanadium	258	50	µg/L	250	ND	103		75-125		
Zinc	298	100	µg/L	250	26.3	109		75-125		



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FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Water	
C9-C18 Aliphatics	CT,NC,WA,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,NH-P
Acenaphthene	CT,NC,WA,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,NH-P
Anthracene	CT,NC,WA,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,NH-P
Chrysene	CT,NC,WA,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,NH-P
Fluoranthene	CT,NC,WA,ME,NH-P
Fluorene	CT,NC,WA,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME
Naphthalene	CT,NC,WA,ME,NH-P
Phenanthrene	CT,NC,WA,ME,NH-P
Pyrene	CT,NC,WA,ME,NH-P

MADEP-VPH-04-1.1 in Water

Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P

SW-846 6020A in Water

Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Beryllium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
Thallium	CT,NH,NY,NC,ME,VA



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6020A in Water</i>	
Vanadium	CT,NH,NY,NC,ME,VA
Zinc	CT,NH,NY,NC,ME,VA

SW-846 7470A in Water

Mercury	CT,NH,NY,NC,ME,VA
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SW-846 8270D in Water

Acenaphthene	ME,NC,NY,CT,NH,VA
Acenaphthylene	ME,NC,NY,CT,NH,VA
Anthracene	ME,NC,NY,CT,NH,VA
Benzo(a)anthracene	ME,NC,NY,CT,NH,VA
Benzo(a)pyrene	ME,NC,NY,CT,NH,VA
Benzo(b)fluoranthene	ME,NC,NY,CT,NH,VA
Benzo(g,h,i)perylene	ME,NC,NY,CT,NH,VA
Benzo(k)fluoranthene	ME,NC,NY,CT,NH,VA
Chrysene	ME,NC,NY,CT,NH,VA
Dibenz(a,h)anthracene	ME,NC,NY,CT,NH,VA
Fluoranthene	ME,NC,NY,CT,NH,VA
Fluorene	ME,NC,NY,CT,NH,VA
Indeno(1,2,3-cd)pyrene	ME,NC,NY,CT,NH,VA
2-Methylnaphthalene	ME,NC
Naphthalene	ME,NC,NY,CT,NH,VA
Phenanthrene	ME,NC,NY,CT,NH,VA
Pyrene	ME,NC,NY,CT,NH,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
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Sample Receipt Checklist

CLIENT NAME: GEC RECEIVED BY: RLF DATE: 5/8/13

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples? Yes No

If not, explain:

3) Are all the samples in good condition? Yes No

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 5.9°C

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

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Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	<u>8</u>	8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic	<u>4</u>	Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>12</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl 12 # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____

Time and Date Frozen:

Doc# 277

Rev. 3 May 2012

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13E0263
Project Location: 106 Hale, Bridgewater	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E0263-01 thru 13E0263-04

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A ()	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A ()	6020 Metals CAM III D (X)	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
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Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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.

Signature: Michael A. Erickson Position: Laboratory Director

Printed Name: Michael A. Erickson Date: 05/15/13