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**MAINE DEP PETROLEUM VAPOR TRIAGE STUDY
PHASE IIA
CUMBERLAND FARMS – FACILITY 1834
53 MAIN STREET
LIVERMORE FALLS, MAINE**

Prepared for:

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 State House Station
Augusta, Maine 04330

Prepared by:

SUMMIT ENVIRONMENTAL CONSULTANTS, INC.
434 Cony Road
Augusta, Maine 04330

and

JBR CONSULTING HYDROGEOLOGIST
20 Dryad Woods Road
Raymond, Maine 04071

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MAIN OFFICE: LEWISTON
640 Main Street
Lewiston, ME 04240
207.795.6009 voice
207.795.6128 fax

AUGUSTA
434 Cony Road
Augusta, ME 04330
207.621.8334 voice
207.626.9094 fax

BANGOR
8 Harlow Street, Suite 4A
Bangor, ME 04401
207.262.9040 voice
207.262.9080 fax

PORTLAND
1 Industrial Way, Suite 7
Portland, ME 04103
207.221.6360 voice
207.221.6146 fax

INTRODUCTION1
1.0 OBJECTIVES.....1
2.0 SITE BACKGROUND AND CONCEPTUAL SITE MODEL1
3.0 METHODOLOGY3
4.0 RESULTS4
4.1 QUALITY ASSURANCE5
4.2 SOURCE AREA SOIL.....5
4.3 GROUNDWATER6
4.4 SOIL VAPOR.....6
5.0 CONCLUSIONS.....7
5.1 HYDROGEOLOGIC INFLUENCES ON VAPOR MIGRATION.....7
5.2 PETROLEUM DISTRIBUTION AND RELATIONSHIPS BETWEEN MEDIA.....7
5.3 PREFERENTIAL PATHWAYS, OFFSITE MIGRATION AND RECEPTORS7
5.4 CONCEPTUAL SITE MODEL CONFIRMATION AND UPDATE8
5.5 DATA GAPS AND RECOMMENDATIONS.....8

TABLES:

- Table 1: Soil and Groundwater Vapor Intrusion Report
- Table 2: Summary of Soil Vapor Detections
- Table 3: Soil Gas Vapor Intrusion Report
- Table 4: Summary of Petroleum in Soil, Groundwater and Soil Vapor

Figures:

- Figure 1: Site Location Map
- Figure 2: Sample Location Map

Appendices:

- Appendix A: Boring Logs and Monitoring Well Installation Log
- Appendix B: Field Data Sheets
- Appendix C: Laboratory Reports (sent electronically)

INTRODUCTION

In June 2010, Summit Environmental Consultants, Inc. and JBR Consulting Hydrogeologist (Summit) along with four other consulting firms were selected by the Maine Department of Environmental Protection (MEDEP) to provide vapor intrusion investigation and data analysis services for petroleum sites throughout Maine. Summit was assigned two sites including the Cumberland Farms Incorporated (CFI) property located at 53 Main Street in Livermore Falls (the Site) to identify the potential for petroleum vapor intrusion (PVI) into site and area buildings. In July Summit completed a Site Assessment of the property to develop information about possible sources of vapor contamination at and adjacent to the Site. In August Summit developed a Work Plan for the project following MEDEP guidance and incorporating their input including a conceptual model and description of the scope of investigations. This report provides the results of this PVI Triage Study - PHASE IIA and follows the reporting format and content provided by MEDEP.

1.0 OBJECTIVES

The objectives of the study were to:

- Sample residual soil contamination (if indicated by field observations) at potential source areas that were reasonably accessible (i.e. near USTs and pump islands)
- Sample groundwater beneath and downgradient of source areas if contamination was indicated by field observations
- Characterize the horizontal and vertical attenuation of Chemicals of Potential Concern (CPOCs) in soil vapor from both soil and groundwater contamination areas
- Assess on-site soil vapor pathways to identify potential risks to on-site and off-site receptors
-

2.0 SITE BACKGROUND AND CONCEPTUAL SITE MODEL

Facility Use/Petroleum Storage

The Site consists of approximately 0.54 acres of commercial land along the east side of Main Street. One concrete and mortar building (approximately 3,600 square feet) and a steel canopy with four gasoline pump islands are located on the property. The pump islands are connected to three on-site underground gasoline storage tanks (USTs). The building is occupied by a Cumberland Farms convenience store and gasoline station and also contains a vacant space formerly occupied by a Chinese restaurant.

Release

The primary soil vapor sources for the site are the former USTs at the same location as the current USTs and the pump islands. Summit obtained a copy of a Maine Underground Storage Tank Site Assessment, dated August 22, 1997, completed by EnviroInvestigations & Remediation, Inc. (ERI) for the Site. During the removal of three 8,000-gallon underground gasoline-storage tanks (USTs), petroleum contamination was observed to be present. The MEDEP established a cleanup goal of 1,500 parts per million (ppm) by headspace screening with a photoionization detector (PID). Soils exhibiting headspace readings greater than 1,500 ppm were removed from the excavation areas for the installation of the new USTs and the new

piping trench and shipped to Commercial Recycling Systems (CRS) in South Portland, Maine for asphalt batching. Only soils within the excavation for the new USTs were required to be removed. A total of 15.51 tons of contaminated soil was shipped to CRS.

The spill history for the site included four small incidental releases (less than 10 gallons) which appeared to occur mostly on pavement limiting impacts to soils. A small amount of gasoline flowed into a catch basin in 1990, but free product was collected with sorbent pads.

Releases from the former Puffin Stop which abuts the north side of the site are included based on the possibility of impact to the CFI site. Five USTs were removed from the Puffin Stop in April 1989 (three 8,000-gallon gasoline, one 5,000-gallon gasoline and one 5,000-gallon diesel tank). This removal was performed by Les Wilson and Sons of Westbrook, Maine. No further information regarding the condition of the tanks or the condition of the soils was discovered. There are currently four USTs on the property (one 12,000-gallon gasoline, two 10,000-gallon gasoline and one 10,000-gallon diesel tank); the Puffin Stop is currently out of service. Spill files for the Puffin Stop included four surface spills ranging from 8 to 50 gallons which were largely cleaned up with sand, Speedi-dry or sorbent pads with no further action anticipated.

Finally a spill report for a site approximately 0.03 miles southwest of the Site across Route 4 (Keene's Discount Gas) indicated only low field screening responses (up to 20 ppmv) during a UST removal and no further action was anticipated.

Chemicals of Potential Concern (COPCs)

The primary chemical of potential concern is gasoline and its associated volatile petroleum constituents primarily benzene, naphthalene, 1,3-butadiene and selected petroleum fractions. Chlorinated VOCs from offsite sources represent secondary COPCs.

Subsurface Exposure Pathway

The paved areas of the site (elevation ~370 feet above mean sea level) slope southwest towards the Androscoggin River about 600 feet from the site (the river elevation is estimated at 320 feet msl). Maine Geologic Survey has mapped glacial till beneath the Site (compact mixture of silt, sand and gravel). Prior to this investigation, the depth to groundwater and bedrock was unknown; based on the mapped site soils, topography and the location and elevation of the river, groundwater was anticipated to be less than 10 to 20 feet below ground if sufficient soil thickness is present above bedrock.

The former (and current) UST location(s) and pump islands are located topographically downgradient from the slab on grade convenience store. With the significant topographic relief at the site and the river serving as a groundwater discharge area, any contaminated groundwater beneath the dispensers or USTs would be anticipated to flow southwest away from the CFI store.

Subsurface public utilities include sewer and water and are believed to enter the north and west sides of the store respectively. Smaller on-site electrical conduit that runs from the store to the USTs, dispensers and any signage represent additional potential pathways.

Based on the relatively high PID cleanup guideline used at the CFI site in 1997, it is likely that soil vapors at the site have been impacted by petroleum constituents (benzene, toluene, ethylbenzene, xylenes, fractions and other VOCs). Soil vapor migration is anticipated to be limited in the native glacial till at this site with migration in granular fill materials including utility runs and beneath concrete slabs and parking areas representing more likely pathways.

3.0 METHODOLOGY

A one-day Geoprobe investigation was completed which included field screening and sampling of soils and soil vapor and groundwater sampling and analyses. A stepped approach was developed by MEDEP to guide the number and location of samples based on whether contamination was present at the suspected source area. Because drilling activities are restricted near tanks, piping and dispensers at operating UST facilities and based on site history and hydrogeology it was decided not to shut the facility down, but to include explorations directly downgradient of the UST/pump island areas. A subslab vapor sample was included from within the building. As required by DEP regulations, Summit retained a licensed Tank Installer, Bill Carver, to be present during subsurface explorations near USTs and ancillary equipment.

Sample locations are shown on Figure 2 and are summarized as follows:

Source Areas

Based on the 1997 UST removal report, it was considered likely that there was some residual petroleum in soils below the former USTs at a depth of 12 feet or greater. No information was reported relative to the pump islands, though they were considered potential sources for at least shallow soil contamination.

Migration and Preferential Pathways - 15 feet Downgradient

To assess petroleum migration from the source areas in soil vapor and groundwater, the following explorations were completed:

- six Geoprobe borings (SB-102, GW-103, SV-103, GW-104, GW-105, SV-105) at locations 15 to 20 feet downgradient of the USTs, pump islands and on the property line downgradient of USTs on the abutting former Puffin Stop property.
- Two hand auger borings (SV-01, SV-03)
- one subslab soil vapor sampling location (SV-02).

Soil

Geoprobe borings were advanced using a four-foot sampler with dedicated disposable acetate sampling sleeves and were completed to depths ranging from 4 feet bgs at SB-102 to 12 feet bgs at GW-105. Refusal was encountered at depths ranging from 4 feet at B-102 to 11.5 feet at SV-103. Refusal was not encountered at GW-105.

Soil samples were collected continuously, logged for geologic classification and screened with a *MiniRae 3000*[®] field-portable PID equipped with a 10.6 eV probe, calibrated with 100 ppm isobutylene and recording uncorrected results. One soil sample was collected at boring SV-103 from 7.5 feet bgs and submitted to Maine Environmental Laboratory/Analytics Environmental Laboratory (MEL/AEL) for Massachusetts Department of Environmental Protection (MADEP) Volatile Petroleum Hydrocarbon (VPH) and Extractable Petroleum Hydrocarbons (EPH) based on PID and odor indications of petroleum. Boring logs are provided in Appendix A.

Groundwater

Monitoring wells were installed at GW-103 located directly downgradient of the current pump islands (and adjacent to SV-103); at GW-104 downgradient from USTs on the adjacent property; and at GW-105 directly downgradient of the USTs on the Site. Wells were constructed

of 1 inch PVC installed two to four feet into the water table to allow ground water sampling and to provide depth to groundwater data. Groundwater samples were collected using a Geoflow peristaltic pump at a low flow rate and submitted to MEL/AEL for VPH analyses. Well construction logs are included in Appendix A.

Soil Vapor

Soil vapor sampling probes were installed consistent with methods described in the current MEDEP SOPs for Collecting Soil Gas Samples.

Soil vapor probes were supplied by Geoprobe and consisted of ½ inch x 6 inch double woven stainless steel wire screens with 0.0057 inch slots connected to ¼ inch teflon tubing. They were installed as follows:

- SV-01 – set in a hand auger boring at three feet below ground surface (bgs) adjacent to the water line entrance on the northwest side of the building to assess this preferential pathway in granular backfill
- SV-02 – a subslab sample collected at 0.5 feet below slab surface by drilling a hole in the concrete floor slab of the cooler room and installing a probe and teflon tubing and sealing the tubing around the hole.
- SV-03 set at 1.6 feet adjacent to the electrical conduit entrance on the south side of the building to assess vapor migration in granular fill along this utility.
- SV-103 – two probes (shallow and deep) set in a Geoprobe boring at 7 feet and 5.5 feet bgs to assess vapor migration at a location directly downgradient of the pump islands. The deep probe became saturated with water so only the shallow probe was sampled.
- SV-105 – set in Geoprobe boring at 4.5 feet bgs above a silt zone that was present across the site from about 6.5 to 12 feet bgs.

Field screening of soil gas extracted with a peristaltic pump was performed with a CO₂/O₂/Methane meter to ensure that atmospheric concentrations of CO₂ were not present and that the soil gas samples were representative of soil vapor. Soil vapor samples were collected in 30 minute Summa canisters and submitted to Alpha Analytical for analyses by the MADEP Air Petroleum Hydrocarbon (APH) method for petroleum parameters and by TO-15 for Volatile Organic Compounds (VOCs). Canisters typically started at 27 to 30 inches (of mercury) vacuum and finished at 3 to 5 inches of vacuum. Soil vapor probe construction and sampling information is provided on Field Data Sheets in Appendix B.

Receptors

Potential receptors of petroleum vapors at the site include customers and workers at the store and building occupants on adjacent commercial and residential properties to the southeast, south and southwest across Route 4.

4.0 RESULTS

Results of field and laboratory analyses are provided in Table 1 (Soil and Groundwater Vapor Intrusion Report), Table 2 (Summary of Soil Vapor Detections) and Table 3 (Soil Gas Vapor Intrusion Report) prepared from MEDEPs EGAD data base providing a comprehensive tabulation of analytes, results, detection limits and data qualifiers.

4.1 QUALITY ASSURANCE

A comparison of post sample field and laboratory measurements of carbon dioxide, oxygen and methane at soil vapor probes indicate the following (see Table 3):

- Field measurements of carbon dioxide (with the exception of SV-02) were greater than 5% (the upper range of the instrument), while lab results ranged from 1.8 to 7.0 % indicating field measurements ranged from 2.8 times higher to 0.7 of lab results.
- Field measurements of oxygen ranged from 11.3 to 18.8 %, while lab results ranged from 9.0 to 16.5 % (at SV-105 and SV-02 respectively) indicating field measurements were up to 1.3 times higher than lab results.
- Methane was detected at SV-103 at 8.5 % in the field, but was not detected at 0.147% in the lab.

A comparison of pre- and post sample carbon dioxide measurements at soil vapor probes (except the sub slab sample SV-02) indicate field evidence of a good seal, with all pre- and post sample values greater than 5 %. A good seal was also indicated by the large difference between ambient carbon dioxide (0.36 to 0.8%) and post sample results (all greater than 5%). Based on a low post sample carbon dioxide (field and lab result) and somewhat elevated oxygen results it appears there may have been some leakage at SV-02.

One of the lab duplicates detected 1,3-butadiene at 26 ug/m³, but none was detected in any of the samples.

Samples were delivered to MEL on September 15, 2010. All samples were delivered within the applicable holding times and within the specified temperature range. Summit obtained sample results from MEL on September 23, 2010. Included in the sample results package was a copy of QA data. The lab did not indicate interferences or problems had occurred in the analytical stages or handling of the samples.

Summit shipped the soil gas samples to Alpha Analytical on September 13, 2010 and received confirmation of their delivery on September 14, 2010 at 10:00 am (within holding time). Summit obtained analytical results from Alpha on September 21, 2010.

4.2 SOURCE AREA SOIL

Site specific surficial geology consisted of medium sand fill beneath the asphalt to about 4 feet bgs which was underlain by a fine to medium sand to about 8 feet bgs. At SV-103 and GW-105 a silt was present to about 11 feet bgs which was underlain by dense fine sand till at SV-103. The silt extended to the bottom of the boring at GW-105 at 12 feet bgs. The depth to the water table ranged from 5.3 feet bgs at GW-104 on the north side of the site to 8 feet bgs at GW-105 in the south central portion of the Site.

PID and odor indications of petroleum in soil samples were observed only at SV-103 and GW-103 (maximum uncorrected PID results for SV-103 were 1430 ppm at 7.5 feet bgs and 945 ppm at 7 feet bgs at GW-103). PID results are included on Soil Boring Logs in Appendix A.

Laboratory results for the one soil sample submitted for lab analyses (SV-103 at 7.5 feet bgs) indicated significant detections of petroleum target compounds as well as VPH and EPH fractions (see Table 1). There was no 1,3-butadiene detected in soil at SV-103. Significant EPH detections suggest the possibility of diesel fuel or weathered gasoline either at the site or from other sources.

4.3 GROUNDWATER

Results of groundwater samples are also presented in Table 1 and indicate petroleum was only detected at GW-103 located immediately downgradient of the pump islands and adjacent to SV-103. No detections were reported at GW-104 on the north property line or at GW-105 located immediately downgradient of the USTs.

Benzene and 1,3-butadiene were not detected in groundwater at GW-103, but other target analytes were detected at concentrations ranging from 0.1 to 9.5 mg/liter. VPH fractions were detected at 8.9 to 14 mg/liter.

4.4 SOIL VAPOR

Soil vapor detections are summarized in Table 2 with the complete Soil Gas Vapor Intrusion Report provided in Table 3. Low to high levels of MADEP-APH were detected in all soil vapor probes. Based on a comparison of detected concentrations to the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1), exceedences occurred at all probes except SV-02 (sub slab sample) and included the following:

- benzene (SV-01 and SV-105)
- C5-C8 aliphatic hydrocarbons (SV-103)
- C9-C12 aliphatic hydrocarbons (SV-01 and SV-103)
- ethylbenzene (SV-105)
- naphthalene (SV-01, SV-03 and SV-105)
- Tetrachloroethylene was detected above target levels at SV-105 but not at other probes.

Exceedence factors (soil vapor concentration divided by target concentration) ranged from 1.8 for ethylbenzene at SV-105 to more than 1100 for C5-C8 aliphatic hydrocarbons at SV-103. Benzene, toluene and aliphatic hydrocarbons were detected well below target levels in the sub slab sample (SV-02). There was no 1,3-butadiene detected at any of the probes.

Based on a review of Table 2 and 3, two possible preferential pathways have been identified in granular utility backfill:

- Between SV-103 and SV-01, based on the proximity of these probes to the waterline servicing the building and comparable soil vapor chemistry. Attenuation factors between these two locations (about 95 feet) ranged from 10 to 2000.
- Between SV-105 and SV-03 along the electric conduit coming from the USTs to the south end of the building. Attenuation factors between these two locations (about 65 feet) ranged from 2 to 28.

Based on a recent literature summary published in *Soil and Sediment Contamination* (Evaluation of Vapor Attenuation at Petroleum Hydrocarbon sites: Consideration for Site Screening and Investigations; 19:724-745, 2010) and provided by MEDEP, the potential for vapor intrusion impacts at this site appears to be moderate, based on a relatively thin unsaturated overburden (about 6 feet), granular fill soils and moderate to high concentration soil vapors at source areas.

5.0 CONCLUSIONS

5.1 HYDROGEOLOGIC INFLUENCES ON VAPOR MIGRATION

Soils

The permeable granular sand fill soils and limited unsaturated thickness (6 feet) likely allow for some vapor migration from two source areas:

1. The area immediately downgradient of the pump islands (and likely the islands themselves), and
2. The area at and immediately downgradient of the USTs.

While the soils are well oxygenated as confirmed by both field and laboratory data, the relatively thin unsaturated zone limits the amount of biodegradation. The moderate to high petroleum concentrations in soil vapor indicate a source of petroleum remains at the site; site history and ongoing operations indicate soils beneath the pump islands and to a lesser extent the USTs are the most likely source areas.

Groundwater

Petroleum was only detected at GW-103 located immediately downgradient of the pump islands. No detections were reported at GW-104 on the north property line or at GW-105 located immediately downgradient of the USTs. Benzene and 1,3-butadiene were not detected in groundwater at GW-103, but other target analytes were detected at concentrations ranging from 0.1 to 9.5 mg/liter. VPH fractions were detected at 8.9 to 14 mg/liter.

5.2 PETROLEUM DISTRIBUTION AND RELATIONSHIPS BETWEEN MEDIA

Table 4 presents a summary of petroleum in soil and soil vapor at SV-103 and in groundwater at the immediately adjacent GW-103. Several simple ratios of concentration are included as follows:

- Soil vapor concentration divided by soil concentration (ug/m^3)/(ug/kg)
- Soil vapor concentration divided by groundwater concentration (ug/m^3)/(ug/liter)
- Soil concentration divided by groundwater concentration (distribution coefficient or $K_d = (\text{ug}/\text{kg})/(\text{ug}/\text{liter})$)

Based on a review of Table 4, the following observations are made:

- For the two analytes that exceeded soil gas targets (C5-C8 and C9-C12 aliphatic hydrocarbons), petroleum was detected at high concentrations in both soil and groundwater
- Concentrations of petroleum in soil were 90 to more than 200 times higher than concentrations in groundwater
- For some parameters, petroleum was detected at high concentrations in both soil and groundwater, but was not detected in soil vapor suggesting variable biodegradation rates or conditions for specific analytes or fractions.

5.3 PREFERENTIAL PATHWAYS, OFFSITE MIGRATION AND RECEPTORS

Based on a review of Table 2 and 3, two possible preferential pathways have been identified in granular utility excavation backfill:

- Between SV-103 and SV-01, based on the proximity of these probes to the waterline servicing the building and comparable soil vapor chemistry. Attenuation factors between these two locations (about 95 feet) ranged from 10 to 2000.
- Between SV-105 and SV-03 along the electric conduit coming from the USTs to the south end of the building. Attenuation factors between these two locations (about 65 feet) ranged from 2 to 28.

Offsite transport of impacted groundwater (and associated soil vapor) appears likely given the high concentrations of targets and fractions at the downgradient property line and the significant topographic and hydraulic gradient to the southwest.

Receptors at the site are limited to customers and workers at the store. Abutting potential receptors include residences and/or commercial buildings to the southwest, south and southeast of the site which are located between 70 and 160 feet from impacted sample locations on the site.

5.4 CONCEPTUAL SITE MODEL CONFIRMATION AND UPDATE

Data collected for this VI investigation has allowed updating the Conceptual Model to include two likely preferential pathways in utility backfill as described above. Soil and groundwater contamination at SV-103/GW-103 appears to be the primary source of the observed soil vapor distribution, with some likely contribution from soils at the USTs. The areal extent of the source at SV-103/GW-103 is not known, nor has impacted soil or groundwater been detected at SV-105/GW-105.

5.5 DATA GAPS AND RECOMMENDATIONS

Based on substantial soil vapor exceedences of Maine's G-1 soil gas targets (more than 1100x for C5-C8 aliphatic hydrocarbons), confirming the presence and strength of the suspected sources would provide a better understanding of the risk posed to potential onsite and offsite receptor and the extent of contamination on the site. The following recommendations are offered for consideration:

1. Install hand auger or shallow Geoprobe borings on either side and downgradient of the area at SV-103/GW-103 to define and bound soil and groundwater contamination at this source area.
2. Collect a subslab sample from the store during the heating season ensuring a tight seal to measure influences of the building stack effect on soil vapor pressure, migration and possible intrusion.

Tables

Table 2
Summary of Soil Vapor Detections
Livermore Falls Cumberland Farms 1834
14-Apr-11

Sample Point	Sample Date	Depth	FIELD		PID	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	MADEP-APH	
			CARBON DIOXIDE %	FIELD OXYGEN %	SOIL GAS SCREEN PPM	1,3-BUTADIENE UG/M3	BENZENE UG/M3	C5-C8 ALIPHATIC HYDROCARBONS UG/M3	C9-C10 AROMATIC HYDROCARBONS UG/M3	C9-C12 ALIPHATIC HYDROCARBONS UG/M3	ETHYLBENZENE UG/M3	M,P-XYLENE UG/M3	NAPHTHALENE UG/M3	O-XYLENE UG/M3	MADEP-APH UG/M3	MADEP-APH UG/M3
SV-01	9/10/2010	ambient	0.8		20.8											
SV-01	9/10/2010 9:25 AM	3	5	15	2.3											
SV-01	9/10/2010 9:35 AM	3	5	14.2												
SV-01	9/23/2010															
SV-02	9/10/2010	ambient	0.8		20.8											
SV-02	10:02:00 AM	0.5	5	18.5	0.3											
SV-02	10:35:00 AM	0.5	0.0005	18.8												
SV-02	9/23/2010															
SV-03	9/10/2010	ambient	0.62		20.8											
SV-03	9/10/2010 2:31 PM	5.5	5	19.6	0.7											
SV-03	9/10/2010 3:03 PM	5.5	5	18.2												
SV-03	9/23/2010															
SV-103	9/10/2010	ambient	0.8		20.8											
SV-103	9/10/10 11:19 AM	5.5	5	17.5	667											
SV-103	9/10/10 11:52 AM	5.5	5	17.7												
SV-103	9/23/2010	7														
SV-103	9/23/2010	5.5														
SV-105	9/10/2010	ambient	0.36		20.8											
SV-105	9/10/2010 1:25 PM	4.5	5	11.6	1.8											
SV-105	9/10/2010 2:00 PM	4.5	5	11.3												
SV-105	9/23/2010															
ME RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)=						4.05	15.5	2100	500	2100	48.5		3.6		50000	
EXCEEDANCE FACTOR (MAX CONC/TARGET CONC) =							0.0	2.2	1142.9	0.7	14.3	1.8		5.6		0.0
Notes:																
1. See Table 3 for complete Soil Gas Vapor Intrusion Report, including analytes that were not detected, detection limits and data qualifiers.																
2. No entry = parameter not detected.																
3. Bold entrees exceed target concentration.																

Table 3
Soil Gas Vapor Intrusion Report
Livermore Falls Cumberland Farms 1834
14-Apr-11

Method Parameter Sample Point	Sample Date	Depth	EPA METHOD 3C CARBON DIOXIDE		EPA METHOD 3C METHANE		EPA METHOD 3C OXYGEN GAS		FIELD CARBON DIOXIDE		FIELD METHANE		FIELD OXYGEN GAS		FIELD PID SOIL GAS SCREEN		FIELD SUBSURFACE PRESSURE		MADEP-APH 1,3-BUTADIENE		MADEP-APH BENZENE		MADEP-APH C5-C8 ALIPHATIC HYDROCARBONS							
			Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units				
LAB DUPLICATE	9/10/2010		1.77	0.154 D	%			16.2	1.61 D	%										26	4.4 D	UG/M3	8.2	4.4 D	UG/M3	1000	26 D	UG/M3		
SV-01	9/10/2010										0.8	%			20.8	%														
SV-01	9/10/2010 9:25 AM	3									5	%			15	%	0.00001	U	%			0.00023	%							
SV-01	9/10/2010 9:35 AM	3	4.4	0.226 D	%			11.6	2.26 D	%	5	%			14.2	%					4.6 U	UG/M3	16	4.6 D	UG/M3	1200	28 D	UG/M3		
SV-01	9/23/2010																		-0.005											
SV-02	9/10/2010										0.8	%			20.8	%														
SV-02	10:02:00 AM	0.5									5	%			18.5	%	0.00001	U	%			0.00003	%							
SV-02	10:35:00 AM	0.5	0.418	0.164 D	%			16.5	1.64 D	%	0.0005	%			18.8	%														
SV-02	9/23/2010																		0.005	LT			2 U	UG/M3	2.2	2 D	UG/M3	270	12 D	UG/M3
SV-03	9/10/2010										0.62	%			20.8	%														
SV-03	9/10/2010 2:31 PM	5.5									5	%			19.6	%	0.00001	U	%			0.00007	%							
SV-03	9/10/2010 3:03 PM	5.5	2.42	0.161 D	%			15.8	1.61 D	%	5	%			18.2	%														
SV-03	9/23/2010																		0.005	LT			2 U	UG/M3		2 U	UG/M3	440	12 D	UG/M3
SV-103	9/10/2010										0.8	%			20.8	%														
SV-103	9/10/10 11:19 AM	5.5									5	%			17.5	%	8.5	%												
SV-103	9/10/10 11:52 AM	5.5	1.82	D	%			15.8	1.47 D	%	5	%			17.7	%														
SV-103	9/23/2010	7																												
SV-103	9/23/2010	5.5																												
SV-105	9/10/2010										0.36	%			20.8	%														
SV-105	9/10/2010 1:25 PM	4.5									5	%			11.6	%	0.00001	U	%			0.00018	%							
SV-105	9/10/2010 2:00 PM	4.5	7.01	0.174 D	%			8.98	1.74 D	%	5	%			11.3	%														
SV-105	9/23/2010																													
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)																					4.05	UG/M3	15.5	UG/M3	2100			UG/M3		

Sample Point	Sample Date	Depth	MADEP-APH C9-C10 AROMATIC HYDROCARBONS			MADEP-APH C9-C12 ALIPHATIC HYDROCARBONS			MADEP-APH ETHYLBENZENE			MADEP-APH M,P-XYLENE			MADEP-APH METHYL-TERT-BUTYL ETHER (MTBE)			MADEP-APH NAPHTHALENE			MADEP-APH O-XYLENE			MADEP-APH TOLUENE			TO15 1,1,1-TRICHLOROETHANE			TO15 1,1-DICHLOROETHANE		
			Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units
LAB DUPLICATE	9/10/2010		98	22 D	UG/M3	260	31 D	UG/M3	13	4.4 D	UG/M3	19	8.8 D	UG/M3	4.4 U	UG/M3	4.4 U	UG/M3	7.3	4.4 D	UG/M3	19	4.4 D	UG/M3	0.433 U	PPBV		0.433 U	PPBV			
SV-01	9/10/2010																															
SV-01	9/10/2010 9:25 AM	3																														
SV-01	9/10/2010 9:35 AM	3	360	23 D	UG/M3	3300	32 D	UG/M3	47	4.6 D	UG/M3	81	9.2 D	UG/M3	4.6 U	UG/M3	17	4.6 D	UG/M3	28	4.6 D	UG/M3	110	4.6 D	UG/M3	2.47 U	UG/M3		1.83 U	UG/M3		
SV-01	9/23/2010																															
SV-02	9/10/2010																															
SV-02	10:02:00 AM	0.5																														
SV-02	10:35:00 AM	0.5	10	U	UG/M3	58	14 D	UG/M3			2 U	UG/M3	4 U	UG/M3	2 U	UG/M3	2 U	UG/M3	2 U	UG/M3	2.6	2 D	UG/M3	1.09 U	UG/M3		0.809 U	UG/M3				
SV-02	9/23/2010																															
SV-03	9/10/2010																															
SV-03	9/10/2010 2:31 PM	5.5																														
SV-03	9/10/2010 3:03 PM	5.5	130	10 D	UG/M3	640	14 D	UG/M3	9.8	2 D	UG/M3	15	4 D	UG/M3	2 U	UG/M3	20	2 D	UG/M3	5.1	2 D	UG/M3	11	2 D	UG/M3	1.09 U	UG/M3		0.809 U	UG/M3		
SV-03	9/23/2010																															
SV-103	9/10/2010																															
SV-103	9/10/10 11:19 AM	5.5																														
SV-103	9/10/10 11:52 AM	5.5	20000	U	UG/M3	30000	28000 D	UG/M3	4000	U	UG/M3	8000	U	UG/M3	4000	U	UG/M3	4000	U	UG/M3	4000	U	UG/M3	4000	U	UG/M3	2130	U	UG/M3	1580	U	UG/M3
SV-103	9/23/2010	7																														
SV-103	9/23/2010	5.5																														
SV-105	9/10/2010																															
SV-105	9/10/2010 1:25 PM	4.5																														
SV-105	9/10/2010 2:00 PM	4.5	320	10 D	UG/M3	1300	14 D	UG/M3	87	2 D	UG/M3	150	4 D	UG/M3	2 U	UG/M3	6.8	2 D	UG/M3	49	2 D	UG/M3	310	2 D	UG/M3	1.09 U	UG/M3		0.809 U	UG/M3		
SV-105	9/23/2010																															
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)			500		UG/M3	2100		UG/M3	48.5		UG/M3			470		UG/M3	3.8		UG/M3			50000		UG/M3	50000		UG/M3	75		UG/M3		

Sample Point	Sample Date	Depth	TO15 1,1-DICHLOROETHYLENE		TO15 1,2-DIBROMOETHANE		TO15 1,2-DICHLOROETHANE		TO15 CIS-1,2-DICHLOROETHENE		TO15 TETRACHLOROETHYLENE		TO15 TRANS-1,2-DICHLOROETHENE		TO15 TRICHLOROETHYLENE		TO15 VINYL CHLORIDE		WL MEASURING POINT ELEVATION		WL WATER LEVEL DEPTH									
			Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units	Concentrat	Reporting L Qualifier	Units							
LAB DUPLICATE	9/10/2010		0.433	U	PPBV	0.433	U	PPBV	0.433	U	PPBV	3.84	0.433 D	PPBV	0.433	U	PPBV	0.433	U	PPBV										
LAB DUPLICATE	9/16/2010																													
SV-01	9/10/2010																													
SV-01	9/10/2010 9:25 AM	3																												
SV-01	9/10/2010 9:35 AM	3	1.79	U	UG/M3	3.48	U	UG/M3	1.83	U	UG/M3	1.79	U	UG/M3	3.07	U	UG/M3	1.79	U	UG/M3	2.43	U	UG/M3	1.16	U	UG/M3		6	LT	FMP
SV-01	9/23/2010																													
SV-02	9/10/2010																													
SV-02	10:02:00 AM	0.5																												

Table 4
Summary of Petroleum in Soil, Groundwater and Soil Vapor
Livermore Falls Cumberland Farms 1834
14-Apr-11

Sample Point	Sample Date	Depth	MADEP-VPH BENZENE				MADEP-VPH C5-C8 ALIPHATIC HYDROCARBONS				MADEP-VPH C9-C10 AROMATIC HYDROCARBONS				MADEP-VPH C9-C12 ALIPHATIC HYDROCARBONS				MADEP-VPH ETHYLBENZENE				MADEP-VPH M,P-XYLENE				MADEP-VPH NAPHTHALENE				MADEP-VPH O-XYLENE				MADEP-VPH TOLUENE							
			Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units	Concentration	Reporting	Qualifier	Units				
SOIL																																										
SV-103	9/10/2010	7.5	7970	7080		UG/KG	2190000	177000		UG/KG	1050000	35400		UG/KG	1260000	177000		UG/KG	7080	U	UG/KG	16500	14200		UG/KG	7080	U	UG/KG	5190	7080	J	UG/KG	8210	7080		UG/KG						
GROUNDWATER																																										
GW-103	9/10/2010 12:45 PM			200	U	UG/L	8930	5000		UG/L	11300	1000		UG/L	14300	5000		UG/L	1870	200	UG/L	9500	400		UG/L	664	200		UG/L	3320	200		UG/L	132	200	J	UG/L					
SOIL VAPOR																																										
SV-103		5.5		4000	U	UG/M3	2400000	24000	D	UG/M3		20000	U	UG/M3	30000	28000	D	UG/M3		4000	U	UG/M3		8000	U	UG/M3		4000	U	UG/M3		4000	U	UG/M3		4000	U	UG/M3				
SV/SOIL (ug/m3)/(ug/kg) =			<0.5				1.1				<0.02				0.024							<0.48							<0.77			<0.49										
SV/GW (ug/m3)/(ug/liter) =							269				<1.8				2.1							<0.84						<1.2			<30											
SOIL/GW = Kd = (ug/kg)/(ug/liter) =							245				93				88							35						2			2											
ME MEG			4			UG/L	300			UG/L	200			UG/L	700			UG/L	30			UG/L	10			UG/L	10			UG/L	600					UG/L						
ME COMMERCIAL GW SL			6.9			UG/L	3.2			UG/L	130			UG/L	2.7			UG/L	15			UG/L	41 (SUM OF ALL)			UG/L	20			UG/L	16000					UG/L						
MA GW STANDARD (GW-2)			2000			UG/L	3000			UG/L	7000			UG/L	5000			UG/L	20000			UG/L	1000			UG/L				50000						UG/L						
ME COMMERCIAL SOIL GAS TARGET			15.5			UG/M3	2100			UG/M3	500			UG/M3	2100			UG/M3	2100			UG/M3	2100			UG/M3	2100			UG/M3	2100						UG/M3					

Figures

Figure 1

Site Location Map

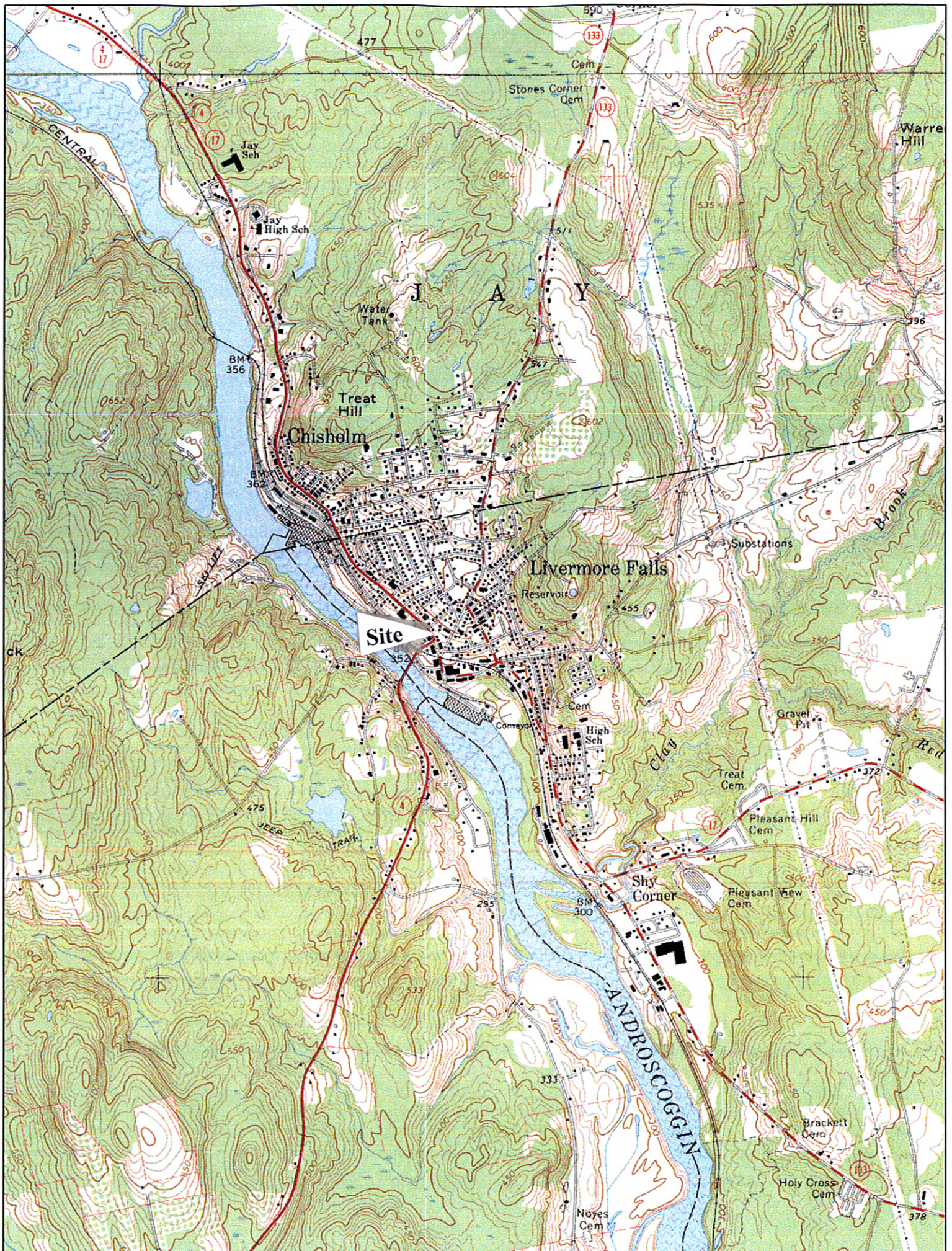


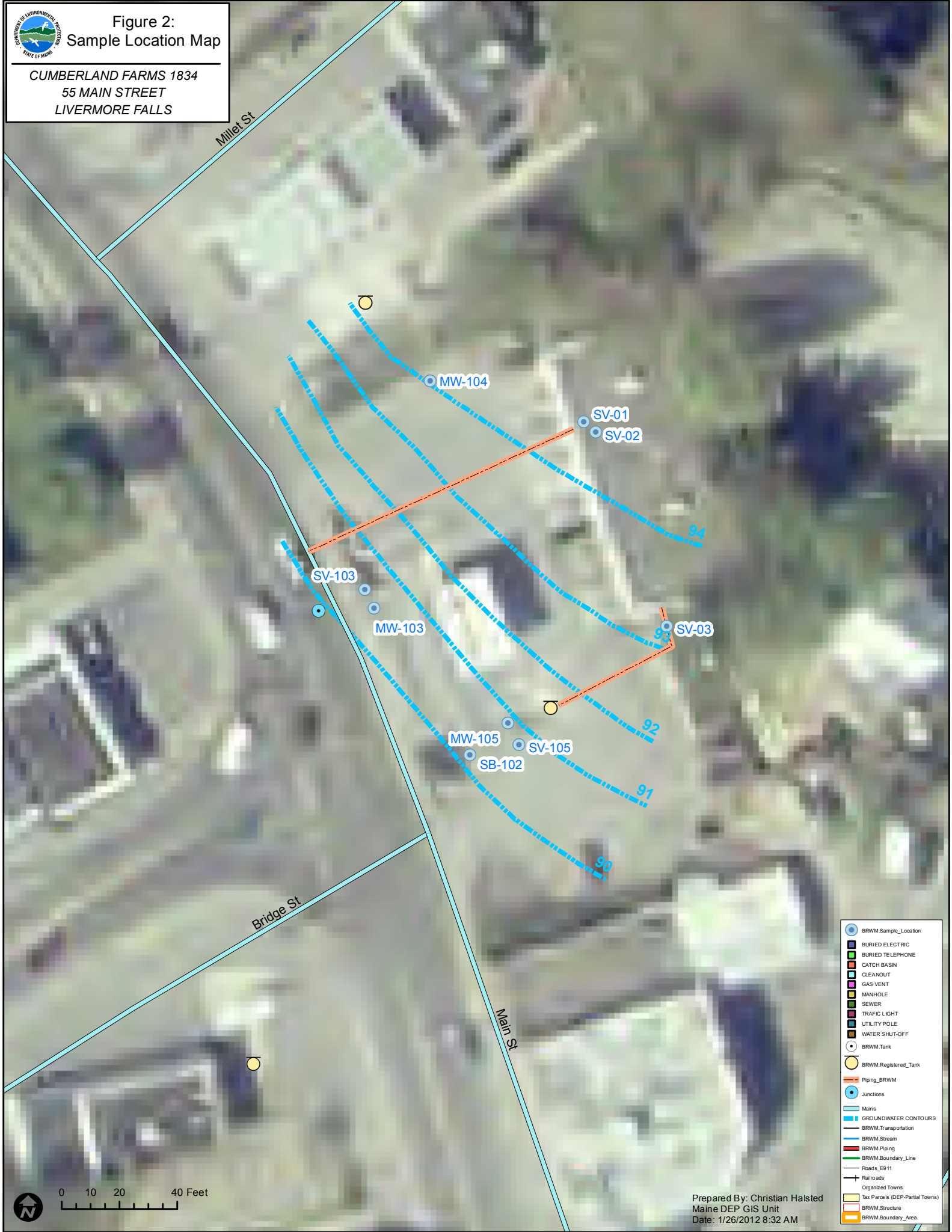
Figure 2

Sample Location Map



Figure 2:
Sample Location Map

CUMBERLAND FARMS 1834
55 MAIN STREET
LIVERMORE FALLS



Prepared By: Christian Halsted
Maine DEP GIS Unit
Date: 1/26/2012 8:32 AM

Appendices

Appendix A

Boring Logs and Monitoring Well Installation Log

SUMMIT ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240				SOIL BORING LOG				Boring #: B-102	
Project: Site Investigation				Project #: 10-3241				Sheet:	
Location: Livermore Falls CFI				Date started: 9/10/2010				Date Completed: 9/10/2010	
Chkd by:				Boring Location:					
Drilling Co: EPI				Elevation:					
Personnel: Dave, Brian				Date started: 9/10/2010					
Summit Staff: JBR				Date Completed: 9/10/2010					
DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH					
Vehicle:	Geoprobe	Type:	24" SPT	Date	Depth	Reference	Groundwater Elevation		
Model:	Track	Hammer:	140 lb.			Ex. Grade			
Method:	Dual Tube	Fall:	30"			Top of PVC			
Depth (ft.)	SAMPLE DESCRIPTION				Stratum	Field Screening (ppmv)			
	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.					
1	S1	48/30			Grass, loam, light brown, medium sand, dry	0.4 ppm			
2									
3									
4					Silt, fine sand with gravel and rock fragments, dry				
5					Refusal @ 4'				
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
Granular Soils				Cohesive Soils		% Composition			
Blows/ft.		Density		Blows/ft.		Consistency			
0-4	V. Loose	<2	V. soft	<5%	trace	NOTES: 1. Field screening results in parts per million by volume (ppmv).			
4-10	Loose	2-4	Soft	5-15	little				
10-30	Compact	4-8	Firm	15-25	some				
30-50	Dense	8-15	Stiff	>25	and				
>50	V. Dense	15-30	V. Stiff	>30	Hard				

SUMMIT ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240				SOIL BORING LOG				Boring #: GW-103	
Project: Site Investigation Location: Livermore Falls CFI				Project #: 10-3241 Sheet: Chkd by:					
Drilling Co: EPI Personnel: Dave, Brian Summit Staff: JBR				Boring Location: Elevation: Date started: 9/10/2010 Date Completed: 9/10/2010					
DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH					
Vehicle:	Geoprobe	Type:	24" SPT	Date	Depth	Reference	Groundwater Elev.		
Model:	Track	Hammer:	140 lb.	9/10/2010	6	Ex. Grade			
Method:	Dual Tube	Fall:	30"			Top of PVC			
Depth (ft.)	SAMPLE DESCRIPTION				Stratum	Field Screening (ppmv)			
	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.					
2	S1	48/27			Asphalt Light brown, medium sand, dry (Fill)				
4	S2	48/4			Grey, fine to medium sand with gravel and rock fragments, dry, gas odor				
8					Rock End of boring @ 8'				
10					Filter sand to 3' Bentonite to 2' Road Box to grade				
12									
14									
16									
18									
20									
Granular Soils		Cohesive Soils		% Composition		Notes: 1. Field screening results in parts per million by volume (ppmv).			
Blows/ft.	Density	Blows/ft.	Consistency						
0-4	V. Loose	<2	V. soft	<5%	trace				
4-10	Loose	2-4	Soft	5-15	little				
10-30	Compact	4-8	Firm	15-25	some				
30-50	Dense	8-15	Stiff	>25	and				
>50	V. Dense	15-30	V. Stiff						
		>30	Hard						

SUMMIT ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240				SOIL BORING LOG				Boring #: GW-104	
Project: Site Investigation Location: Livermore Falls CFI				Project #: 10-3241 Sheet: Chkd by:					
Drilling Co: EPI Personnel: Dave, Brian Summit Staff: JBR				Boring Location: Elevation: Date started: 9/10/2010 Date Completed: 9/10/2010					
DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH					
Vehicle:	Geoprobe	Type:	24" SPT	Date	Depth	Reference	Groundwater Elevation		
Model:	Track	Hammer:	140 lb.	9/10/2010	5.3	Ex. Grade			
Method:	Dual Tube	Fall:	30"			Top of PVC			
Depth (ft.)					SAMPLE DESCRIPTION		Stratum	Field Screening (ppmv)	
	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.					
2	S1	48/15			Grass Loam Light brown sand, trace of gravel moist black layer (Fill) dry				
4	S2	48/12			Light brown silt, fine sand with gravel, saturated				
6									
8	S3	12"/6"			Same as above (till)				
10					Refusal @ 9.1'				
12					Filter sand to 4' Bentonite to 0.6' Sand to grade				
14									
16									
18									
20									
Granular Soils		Cohesive Soils		% Composition		NOTES: 1. Field screening results in parts per million by volume (ppmv).			
Blows/ft.	Density	Blows/ft.	Consistency						
0-4	V. Loose	<2	V. soft	<5%	trace				
4-10	Loose	2-4	Soft	5-15	little				
10-30	Compact	4-8	Firm	15-25	some				
30-50	Dense	8-15	Stiff	>25	and				
>50	V. Dense	15-30	V. Stiff						
		>30	Hard						

SUMMIT ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240				SOIL BORING LOG				Boring #: GW-105		
Drilling Co: EPI Personnel: Dave, Brian Summit Staff: JBR				Project: Site Investigation Location: Livermore Falls CFI				Project #: 10-3241 Sheet: Chkd by:		
Drilling Co: EPI Personnel: Dave, Brian Summit Staff: JBR				Boring Location: Elevation:				Date started: 9/10/2010 Date Completed: 9/10/2010		
DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH						
Vehicle:	Geoprobe	Type:	24" SPT	Date	Depth	Reference	Groundwater Elev.			
Model:	Track	Hammer:	140 lb.	9/10/2010	8	Ex. Grade				
Method:	Dual Tube	Fall:	30"			Top of PVC				
Depth (ft.)	SAMPLE DESCRIPTION				Stratum	Field Screening (ppmv)				
	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.						
2	S1	48/27			Asphalt Light brown, medium sand, dry (Fill)					
4	S2	48/36			Same as above					
6					Light brown silt, very fine sand, saturated					
8	S3	48/48			Olive silt, saturated with fine sand layers, saturated					
10										
12					Bottom of boring @ 12'					
14					Filter Sand to 0.9' Bentonite to surface Road box installed					
16										
18										
20										
Granular Soils		Cohesive Soils		% Composition		Notes:				
Blows/ft.	Density	Blows/ft.	Consistency			1. Field screening results in parts per million by volume (ppmv).				
0-4	V. Loose	<2	V. soft	<5%	trace					
4-10	Loose	2-4	Soft	5-15	little					
10-30	Compact	4-8	Firm	15-25	some					
30-50	Dense	8-15	Stiff	>25	and					
>50	V. Dense	15-30	V. Stiff							
		>30	Hard							

SUMMIT ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240				SOIL BORING LOG				Boring #: SV-103	
Project: Site Investigation				Project #: 10-3241				Sheet:	
Location: Livermore Falls CFI				Date started: 9/10/2010				Date Completed: 9/10/2010	
Chkd by:				Boring Location:				Elevation:	
Drilling Co: EPI				Personnel: Dave, Brian				Summit Staff: JBR	
DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH					
Vehicle: Geoprobe	Type: 24" SPT	Date	Depth	Reference	Groundwater Elevation				
Model: Track	Hammer: 140 lb.			Ex. Grade					
Method: Dual Tube	Fall: 30"			Top of PVC					
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Stratum	Field Screening (ppmv)		
2	S1	48/20			Asphalt Brown, medium sand, dry/moist (Fill)		0.5 ppm		
4	S2	48/36			Same as above Grey, fine to medium sand Olive grey, fine to medium sand, gas odor, dry		0.9 ppm		
8	S3	48/27			Olive silt, moist, trace of gas odor		1430 ppm		
12					Green, grey fine sand with gravel, dense, dry/moist, no significant odor (till)		24 ppm		
12					Refusal @ 11.5'				
14					Bentonite chips to 7.2' Deep soil vapor probe @ 7-6.5' Point @ 6.4'				
16					Shallow soil vapor probe @ 5.5-5.5' Sand to 4.5' Bentonite to 3.5'				
18					Sand to grade				
20									
Granular Soils		Cohesive Soils		% Composition		NOTES: 1. Field screening results in parts per million by volume (ppmv).			
Blows/ft.	Density	Blows/ft.	Consistency						
0-4	V. Loose	<2	V. soft	<5%	trace				
4-10	Loose	2-4	Soft	5-15	little				
10-30	Compact	4-8	Firm	15-25	some				
30-50	Dense	8-15	Stiff	>25	and				
>50	V. Dense	15-30	V. Stiff	>30	Hard				

SUMMIT ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240		WELL COMPLETION LOG		Well #:	MW-103	
Drilling Co: <u>EPI</u>		Project:	<u>VI Investigation</u>		Project #:	10-3341
Foreman: <u>Dionne</u>		Location:	<u>Cumberland Farms</u>		Sheet:	1 of 1
Summit Staff: <u>JBR</u>		<u>Livermore Falls, Maine</u>		Chkd by:	JKC	
Well Location: <u>Near roadway</u>		Date started: <u>9/10/2010</u> Date Completed: <u>9/10/2010</u>				
Depth (ft.)	Flush-mounted Roadbox		REFERENCE ELEVATIONS		GW ELEVATIONS	
	Stratum from soil boring log		Surveyor: <u>Summit</u>	Date	Elevation	
			Reference (MSL or TBM): _____	9/10/2010	94.01	
			Top of Protective Casing: _____			
			Top of inner casing: <u>96.17</u>			
			Ground Surface: _____			
1	Filter Sand	SAND (Fill)	WELL CONSTRUCTION DETAILS			
2	Bentonite		PROTECTIVE CASING			
3	Filter Sand		Type (Standpipe or roadbox): <u>roadbox</u>			
4			Diameter (in.): <u>4.0</u>			
5		SAND with Gravel and Rock	Length (in.): <u>8.0</u>			
6			Concrete Seal (gal): <u>1</u>			
7			WELL CASING AND SCREEN			
8				Riser	Screen	
9	Bottom of boring @ 8'		Material:	PVC	PVC	
10			Schedule:	40	40	
11			Diameter (in.):	1.0	1.0	
12			Length (ft):	2.0	5.0	
13			Interval below ground surface (ft):	0-2	2-7	
14			Slot size (in.):		0.1	
15			FILTER AND SEAL MATERIALS			
16				Filter	Seal	
17			Type:	sand	bentonite	
18			Size:			
19			Quantity (lbs.):			
20			Interval below ground surface (ft):	0-1, 2-8	1-2	
			GROUT			
			Type (filter sand, bentonite, etc.): _____			
			Quantity (gal. or lbs.): _____			
			Interval below ground surface (ft.): _____			
			WELL DEVELOPMENT DETAILS			
			Water level from measuring point (ft): <u>6</u>			
			Depth of well from measuring point (ft): <u>7</u>			
			Total feet of water: <u>0.50</u>			
			Volume of water (gal): <u>0.064</u>			
			Volume of water evacuated: <u>1 gallon</u>			
			Method of development: <u>peristaltic pump</u>			
NOTES:						

SUMMIT		WELL COMPLETION LOG		Well #: MW-104
ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240		Project: VI Investigation	Project #: 10-3341	
		Location: Cumberland Farms Livermore Falls, Maine	Sheet: 1 of 1	
			Chkd by: JKC	
Drilling Co: <u>EPI</u>		Well Location: <u>Upgradient of building</u>		
Foreman: <u>Dionne</u>		Date started: <u>9/10/2010</u> Date Completed: <u>9/10/2010</u>		
Summit Staff: <u>JBR</u>				
	Flush-mounted Roadbox	Stratum from soil boring log	REFERENCE ELEVATIONS	
Depth (ft.)			Surveyor: <u>Summit</u>	GW ELEVATIONS
			Reference (MSL or TBM): _____	Date
			Top of Protective Casing: _____	Elevation
			Top of inner casing: <u>99.31</u>	9/10/2010
			Ground Surface: _____	94.01
			WELL CONSTRUCTION DETAILS	
1	Filter Sand	SAND, trace Gravel (Fill)	PROTECTIVE CASING	
2	Bentonite	Silty SAND with Gravel	Type (Standpipe or roadbox): <u>roadbox</u>	
3			Diameter (in.): <u>4.0</u>	
4			Length (in.): <u>8.0</u>	
5	Filter Sand		Concrete Seal (gal): <u>1</u>	
6			WELL CASING AND SCREEN	
7			Material:	Riser Screen
8	Cave-In		Schedule:	PVC PVC
9	Refusal @ 9.1'		Diameter (in.):	40 40
10			Length (ft.):	1.0 1.0
11			Interval below ground surface (ft):	2.0 5.0
12			Slot size (in.):	0-4 4-9
13				0.1
14			FILTER AND SEAL MATERIALS	
15			Type:	Filter Seal
16			Size:	sand bentonite
17			Quantity (lbs.):	
18			Interval below ground surface (ft):	0-2, 2-7.5 2-3
19			GROUT	
20			Type (filter sand, bentonite, etc.): _____	
			Quantity (gal. or lbs.): _____	
			Interval below ground surface (ft.): _____	
			WELL DEVELOPMENT DETAILS	
			Water level from measuring point (ft): <u>5.3</u>	
			Depth of well from measuring point (ft): <u>9</u>	
			Total feet of water: <u>3.70</u>	
			Volume of water (gal): <u>0.473</u>	
			Volume of water evacuated: <u>1 gallon</u>	
			Method of development: <u>peristaltic pump</u>	
NOTES:				

SUMMIT		WELL COMPLETION LOG		Well #: MW-105																																				
ENVIRONMENTAL CONSULTANTS, INC. 640 Main Street Lewiston, Maine 04240		Project: VI Investigation	Project #: 10-3341																																					
		Location: Cumberland Farms Livermore Falls, Maine	Sheet: 1 of 1	Chkd by: JKC																																				
Drilling Co: <u>EPI</u>		Well Location: <u>Near USTs</u>																																						
Foreman: <u>Dionne</u>		Date started: <u>9/10/2010</u> Date Completed: <u>9/10/2010</u>																																						
Summit Staff: <u>JBR</u>																																								
Depth (ft.)	Flush-mounted Roadbox	Stratum from soil boring log	REFERENCE ELEVATIONS Surveyor: <u>Summit</u>	GW ELEVATIONS Date: <u>9/10/2010</u> Elevation: <u>90.97</u>																																				
1	Filter Sand	SAND (Fill)	WELL CONSTRUCTION DETAILS PROTECTIVE CASING Type (Standpipe or roadbox): <u>roadbox</u> Diameter (in.): <u>4.0</u> Length (in.): <u>8.0</u> Concrete Seal (gal): <u>1</u> WELL CASING AND SCREEN <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">Riser</td> <td style="text-align: center;">Screen</td> </tr> <tr> <td>Material:</td> <td style="text-align: center;"><u>PVC</u></td> <td style="text-align: center;"><u>PVC</u></td> </tr> <tr> <td>Schedule:</td> <td style="text-align: center;"><u>40</u></td> <td style="text-align: center;"><u>40</u></td> </tr> <tr> <td>Diameter (in.):</td> <td style="text-align: center;"><u>1.0</u></td> <td style="text-align: center;"><u>1.0</u></td> </tr> <tr> <td>Length (ft.):</td> <td style="text-align: center;"><u>2.0</u></td> <td style="text-align: center;"><u>10.0</u></td> </tr> <tr> <td>Interval below ground surface (ft):</td> <td style="text-align: center;"><u>0-2</u></td> <td style="text-align: center;"><u>2-12</u></td> </tr> <tr> <td>Slot size (in.):</td> <td colspan="2" style="text-align: center;"><u>0.1</u></td> </tr> </table> FILTER AND SEAL MATERIALS <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">Filter</td> <td style="text-align: center;">Seal</td> </tr> <tr> <td>Type:</td> <td style="text-align: center;"><u>sand</u></td> <td style="text-align: center;"><u>bentonite</u></td> </tr> <tr> <td>Size:</td> <td></td> <td></td> </tr> <tr> <td>Quantity (lbs.):</td> <td></td> <td></td> </tr> <tr> <td>Interval below ground surface (ft):</td> <td style="text-align: center;"><u>0-1, 2-12</u></td> <td style="text-align: center;"><u>1-2</u></td> </tr> </table> GROUT Type (filter sand, bentonite, etc.): _____ Quantity (gal. or lbs.): _____ Interval below ground surface (ft.): _____			Riser	Screen	Material:	<u>PVC</u>	<u>PVC</u>	Schedule:	<u>40</u>	<u>40</u>	Diameter (in.):	<u>1.0</u>	<u>1.0</u>	Length (ft.):	<u>2.0</u>	<u>10.0</u>	Interval below ground surface (ft):	<u>0-2</u>	<u>2-12</u>	Slot size (in.):	<u>0.1</u>			Filter	Seal	Type:	<u>sand</u>	<u>bentonite</u>	Size:			Quantity (lbs.):			Interval below ground surface (ft):	<u>0-1, 2-12</u>	<u>1-2</u>
	Riser	Screen																																						
Material:	<u>PVC</u>	<u>PVC</u>																																						
Schedule:	<u>40</u>	<u>40</u>																																						
Diameter (in.):	<u>1.0</u>	<u>1.0</u>																																						
Length (ft.):	<u>2.0</u>	<u>10.0</u>																																						
Interval below ground surface (ft):	<u>0-2</u>	<u>2-12</u>																																						
Slot size (in.):	<u>0.1</u>																																							
	Filter	Seal																																						
Type:	<u>sand</u>	<u>bentonite</u>																																						
Size:																																								
Quantity (lbs.):																																								
Interval below ground surface (ft):	<u>0-1, 2-12</u>	<u>1-2</u>																																						
2	Bentonite																																							
3																																								
4																																								
5	Filter Sand																																							
6		Silty SAND																																						
7																																								
8		SILT with SAND layers																																						
9																																								
10																																								
11																																								
12	Bottom of Boring @ 12'																																							
13																																								
14																																								
15																																								
16																																								
17																																								
18																																								
19																																								
20																																								
NOTES:																																								

Appendix B

Field Data Sheets

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	CUMB Farms
Town:	Live Falls
Date:	9/10
Sample I.D.:	SV-105
Sampling Purpose:	(Source) (Utility) (Mitigation) (Receptor) (Other)
Sampling Personnel:	Troy Smith - DEP Mike Deyling - Summit
Project Manager:	
Collection Device:	(Summa Can) (Tedlar Bag)
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	4.5 - 3.5
Depth to Water:	26.0 bgs
Suspected COCs:	(Petroleum) (Solvents)
Cannister I.D.:	506
Flow Control I.D.:	0100
Flow control rate:	69 mL/min
O ₂ Ambient:	20.89%
CO ₂ Ambient:	0.36%
subsurface pressure/vacuum	(+/- inches of water column)
Pre-Sample O ₂ :	11.6%
Pre-Sample CO ₂ :	5%
Pre-Sample PID:	1.8 PPMV
Pre-Sample CH ₄ :	0 (% Volume, %LEL, PPM)
Sample Initiation Time:	1:25 PM
Initial Vacuum:	-30"
Sample End Time:	2:00 PM
Final Vacuum:	-3.0"
Post Sample O ₂ :	11.3%
Post Sample CO ₂ :	5%

Sample Location Sketch

Stone

disp Island

SU-105

wood barrier pole

Road

~~note~~

5 ppm CO - pre sample

SV-105
Notes: Sd to 3.5
chips to 2.5
sand to surface

Finished w/ road box

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	CUMB Farms	
Town:	Liv. Falls	
Date:	9/10/10	
Sample I.D.:	SV-103	
Sampling Purpose:	(Source) (Utility) (Mitigation) (Receptor) (Other) <u>Down road, of source</u>	
Sampling Personnel:	Smith-DEP Deyling-Summit	
Project Manager:		
Collection Device:	(Summa Can) (Tedlar Bag)	
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)	
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)	
Sample Depth:	5.5'	
Depth to Water:	6.4'	
Suspected COCs:	(Petroleum) (Solvents) SV-103 SV-103 (DUP)	
Cannister I.D.:	110	194
Flow Control I.D.:	0002	0227
Flow control rate:	71 ML/min	70 ML/min
O ₂ Ambient:	20.8%	—
CO ₂ Ambient:	0.8%	—
subsurface pressure/vacuum:	+/- inches of water column	
Pre-Sample O ₂ :	17.5%	—
Pre-Sample CO ₂ :	5.00%	—
Pre-Sample PID:	667 ppm	—
Pre-Sample CH ₄ :	17%	(% Volume, %LEL, PPM)
Sample Initiation Time:	10:19	"
Initial Vacuum:	29.0" 29.0"	-29.0"
Sample End Time:	11:50	11:50
Final Vacuum:	-4	-2
Post Sample O ₂ :	17.7%	—
Post Sample CO ₂ :	5%	—

Sample Location Sketch

Storage

DISP island

Landscape Island SV-103

side walk

initial CO = 500 ppm

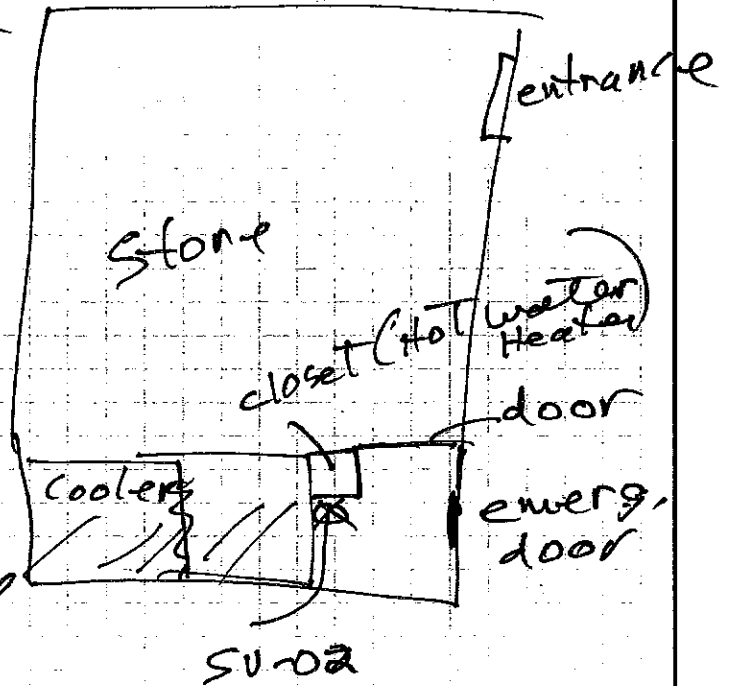
Post CH₄ 4%
Post CO 375 ppm

Notes: purge w/ peristaltic
- deeper vapor probe may be below water
- Dup samples collected from shallow probe.

Indoor Air/Subslab Sampling Field Sheet
Maine DEP

Site Name:	cumb Farms
Town:	Liv Falls
Date:	9/10/10
Sample I.D.:	SU-02
Project Manager:	Troy Smith - DEP Cressey - Summit
Sampling Personnel:	Smith DEP DeYling Summit
Collection Device:	(Summa Can) (Tedlar Bag)
Sample Type:	(Subslab) (Indoor Air)
Sampling Location:	utility room
Foundation Floor Type:	(Dirt) (Concrete)
Foundation Wall Type:	(Concrete) (Block) (Stone) (Brick) (Slab on Grade)
Sump Hole:	(Yes) (No)
Penetrations in Floor:	(Sewer) (Water) (Gas) (Cracks) (Drains) plugged
Penetrations in Wall:	(Sewer) (Water) (Gas) (Electric) (Cracks)
Suspected COCs:	(Petroleum) (Solvents)
Cannister I.D.:	467
Flow Control I.D.:	265
Flow control rate:	600 mL/min.
O ₂ Ambient	20.8
CO ₂ Ambient	1.2%
Pre-Sample O ₂	18.5%
Pre-Sample CO ₂	5%
Pre-Sample PID:	0.3 PPMV
Pre-Sample CH ₄ :	0%
Sample Initiation Time:	10:02 AM
Initial Vacuum:	-30" Hg.
Sample End Time:	10:35
Final Vacuum:	-4" Hg
Post Sample O ₂	18.8%
Post Sample CO ₂ :	5%

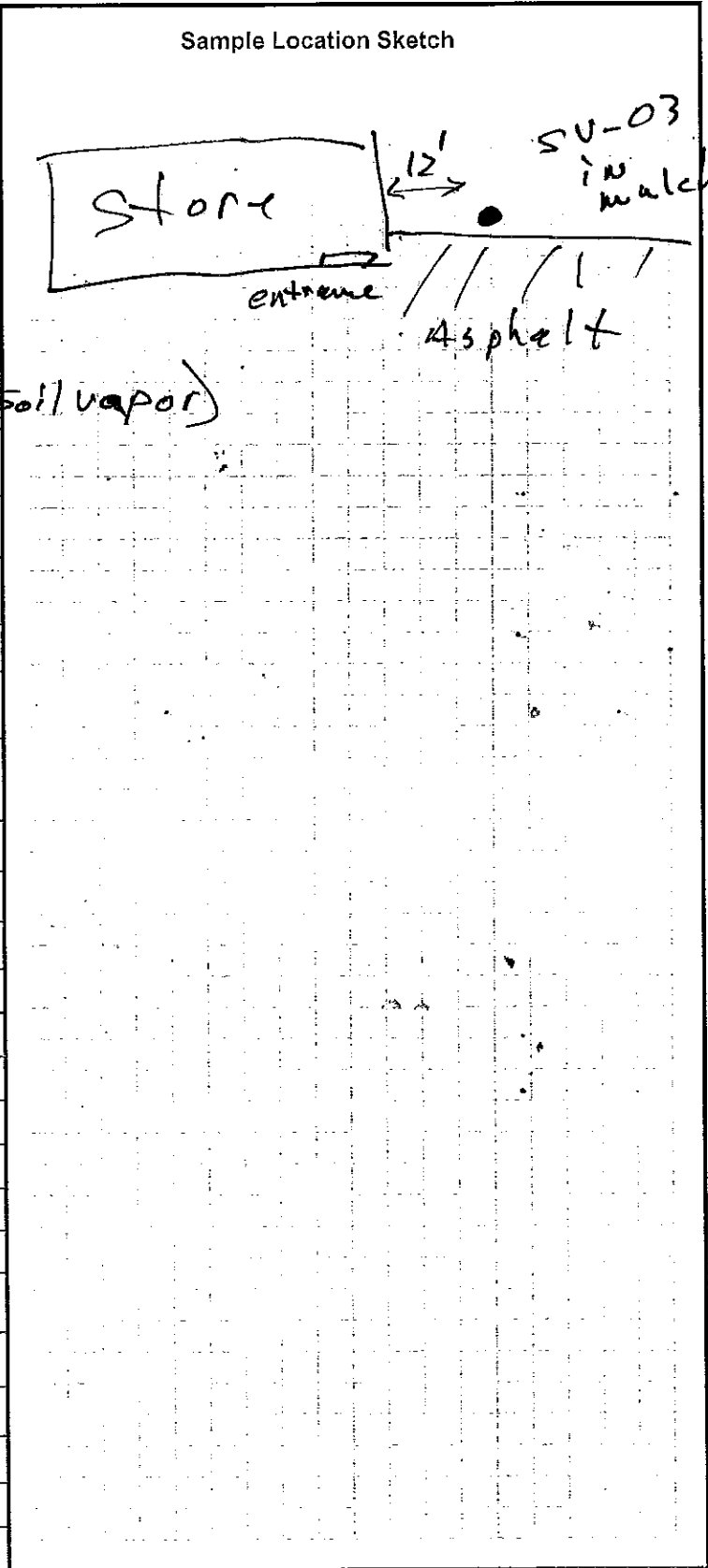
Sample Location Sketch



Notes/Observations:

Indoor Air/Subslab Sampling Field Sheet
Maine DEP

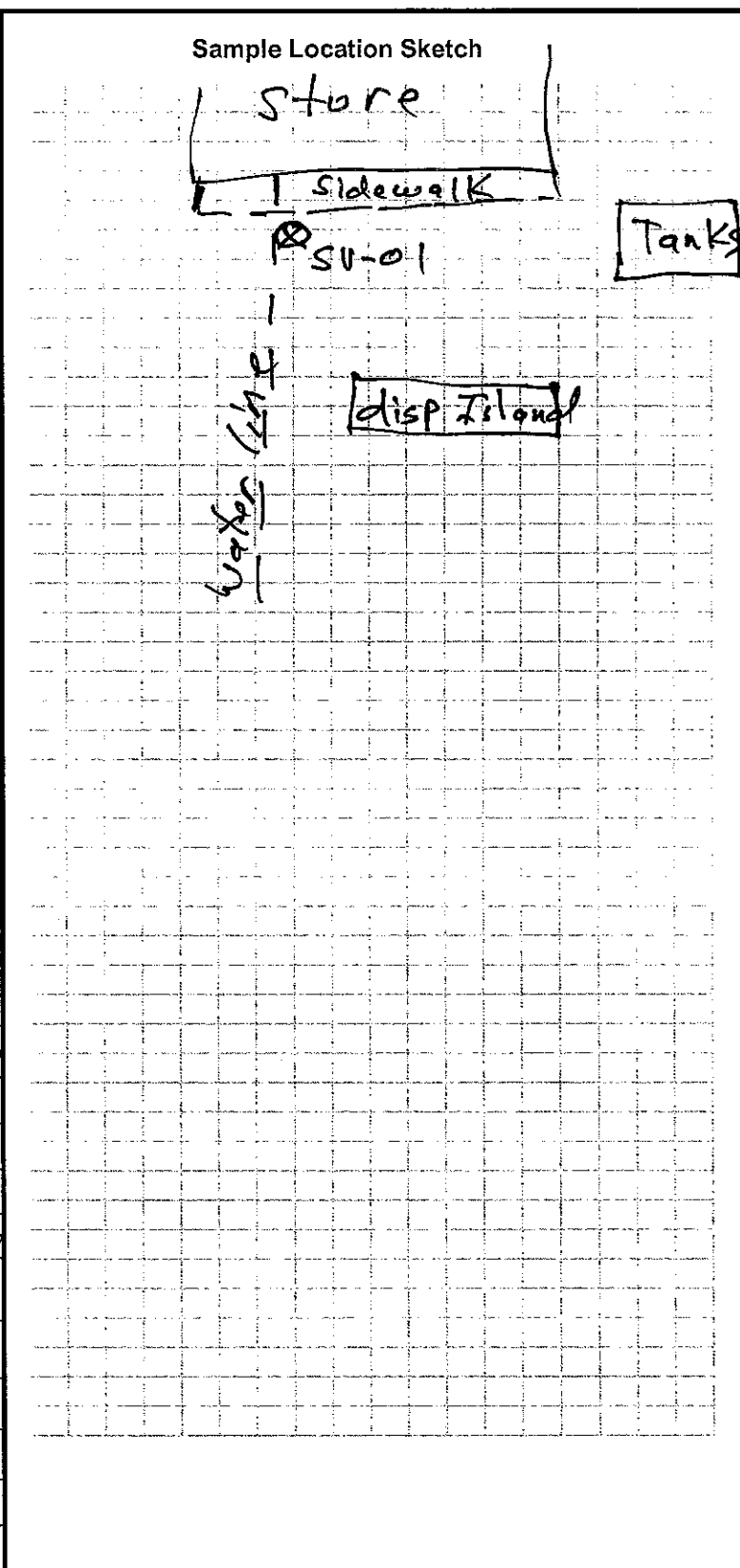
Site Name:	100 101 Cumby Farms
Town:	Liv. Falls
Date:	9/10
Sample I.D.:	SV-03
Project Manager:	
Sampling Personnel:	Troy Smith Mike Peyling
Collection Device:	(Summa Can) (Tedlar Bag)
Sample Type:	(Subslab) (Indoor Air) (Soil Vapor)
Sampling Location:	Elect conduit
Foundation Floor Type:	(Dirt) (Concrete)
Foundation Wall Type:	(Concrete) (Block) (Stone) (Brick) (Slab on Grade)
Sump Hole:	(Yes) (No)
Penetrations in Floor:	(Sewer) (Water) (Gas) (Cracks) (Drains)
Penetrations in Wall:	(Sewer) (Water) (Gas) (Electric) (Cracks)
Suspected COCs:	(Petroleum) (Solvents)
Cannister I.D.:	116
Flow Control I.D.:	0305
Flow control rate:	72 ml/min
O ₂ Ambient	20.8%
CO ₂ Ambient	0.62%
Pre-Sample O ₂	19.6%
Pre-Sample CO ₂	5.00%
Pre-Sample PID:	0.7 ppm
Pre-Sample CH ₄ :	0%
Sample Initiation Time:	2:31
Initial Vacuum:	-30+ "Hg
Sample End Time:	3:03 PM
Final Vacuum:	-3.0
Post Sample O ₂ :	18.2%
Post Sample CO ₂ :	5.00%



Notes/Observations:

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumb Farms
Town:	Liv. Falls
Date:	9/10/10
Sample I.D.:	SV-01
Sampling Purpose:	(Source) <u>(Utility)</u> (Mitigation) (Receptor) (Other)
Sampling Personnel:	Troy Smith / Mike Deyling
Project Manager:	Troy - DEP J. Cressey - Summit
Collection Device:	<u>(Summa Can)</u> (Tedlar Bag)
Sample Penetration Location:	<u>(Ashphalt)</u> (Concrete) (Soil) 9-12"
Soil Type:	(Fill) (Till) <u>(Sand & Gravel)</u> (Glacial Marine)
Sample Depth:	3'
Depth to Water:	NA
Suspected COCs:	<u>(Petroleum)</u> (Solvents)
Cannister I.D.:	662
Flow Control I.D.:	268
Flow control rate:	100 mL/min
O ₂ Ambient:	20.8 %
CO ₂ Ambient:	0.8 %
subsurface pressure/vacuum	NA (+/- inches of water column)
Pre-Sample O ₂ :	15 %
Pre-Sample CO ₂ :	5 %
Pre-Sample PID:	2.3 PPMV
Pre-Sample CH ₄ :	0 % (% Volume, %LEL, PPM)
Sample Initiation Time:	9:25
Initial Vacuum:	-30" Hg
Sample End Time:	9:35 AM
Final Vacuum:	-4.935
Post Sample O ₂ :	14.2 %
Post Sample CO ₂ :	5 %



Notes: Purge w/ peristaltic

Appendix C

Laboratory Reports



ANALYTICAL REPORT

Lab Number:	L1014295
Client:	Summit Environmental 434 Cony Road Augusta, ME 04330
ATTN:	John Cressey
Phone:	(207) 621-8334
Project Name:	LIVERMORE FALLS CFI
Project Number:	Not Specified
Report Date:	09/21/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1014295-01	SV-03	LIVERMORE FALLS, ME	09/10/10 15:03
L1014295-02	SV-103	LIVERMORE FALLS, ME	09/10/10 11:52
L1014295-03	SV-105	LIVERMORE FALLS, ME	09/10/10 14:00
L1014295-04	SV-103 DUP	LIVERMORE FALLS, ME	09/10/10 11:50
L1014295-05	SV-01	LIVERMORE FALLS, ME	09/10/10 09:35
L1014295-06	SV-02	LIVERMORE FALLS, ME	09/10/10 10:35

Project Name: LIVERMORE FALLS CFI

Lab Number: L1014295

Project Number: Not Specified

Report Date: 09/21/10

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An 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
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
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
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
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
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	YES
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
A response to questions G, H and I 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
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

MCP Related Narratives

Canisters were released from the laboratory on August 27 and September 7, 2010.

The canister certification data is provided as an addendum.

The internal standards were within method criteria.

Volatile Organics in Air (Low Level)

L1014295-02 and -04 have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

L1014295-05: Prior to sample analysis, the canister was pressurized with UHP Nitrogen due to canister size. The pressurization resulted in a dilution of the sample. The reporting limits have been elevated accordingly.

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

Case Narrative (continued)

Petroleum Hydrocarbons in Air

L1014295-02 and -04 have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.


L1014295-05: Prior to sample analysis, the canister was pressurized with UHP Nitrogen due to canister size. The pressurization resulted in a dilution of the sample. The reporting limits have been elevated accordingly.

Fixed Gas

L1014295-01 through -06: Prior to sample analysis, the canisters were pressurized with UHP Nitrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Nitrogen resulted in a dilution of the sample. The reporting limits have been elevated accordingly.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Kathleen O'Brien

Title: Technical Director/Representative

Date: 09/21/10

AIR

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-01
 Client ID: SV-03
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/17/10 01:18
 Analyst: RY

Date Collected: 09/10/10 15:03
 Date Received: 09/14/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	96		60-140



Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-02 D
 Client ID: SV-103
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/17/10 09:47
 Analyst: RY

Date Collected: 09/10/10 11:52
 Date Received: 09/14/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Vinyl chloride	ND	391.	--	ND	999.	--		1956
1,1-Dichloroethene	ND	391.	--	ND	1550	--		1956
trans-1,2-Dichloroethene	ND	391.	--	ND	1550	--		1956
1,1-Dichloroethane	ND	391.	--	ND	1580	--		1956
cis-1,2-Dichloroethene	ND	391.	--	ND	1550	--		1956
1,2-Dichloroethane	ND	391.	--	ND	1580	--		1956
1,1,1-Trichloroethane	ND	391.	--	ND	2130	--		1956
Trichloroethene	ND	391.	--	ND	2100	--		1956
1,2-Dibromoethane	ND	391.	--	ND	3000	--		1956
Tetrachloroethene	ND	391.	--	ND	2650	--		1956

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	109		60-140
Bromochloromethane	109		60-140
chlorobenzene-d5	102		60-140



Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-03
 Client ID: SV-105
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/17/10 01:54
 Analyst: RY

Date Collected: 09/10/10 14:00
 Date Received: 09/14/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	7.00	0.200	--	47.4	1.36	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	120		60-140
Bromochloromethane	123		60-140
chlorobenzene-d5	116		60-140



Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-04 D
 Client ID: SV-103 DUP
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/17/10 04:12
 Analyst: RY

Date Collected: 09/10/10 11:50
 Date Received: 09/14/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Vinyl chloride	ND	412.	--	ND	1050	--		2061
1,1-Dichloroethene	ND	412.	--	ND	1630	--		2061
trans-1,2-Dichloroethene	ND	412.	--	ND	1630	--		2061
1,1-Dichloroethane	ND	412.	--	ND	1670	--		2061
cis-1,2-Dichloroethene	ND	412.	--	ND	1630	--		2061
1,2-Dichloroethane	ND	412.	--	ND	1670	--		2061
1,1,1-Trichloroethane	ND	412.	--	ND	2250	--		2061
Trichloroethene	ND	412.	--	ND	2210	--		2061
1,2-Dibromoethane	ND	412.	--	ND	3160	--		2061
Tetrachloroethene	ND	412.	--	ND	2790	--		2061

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	134		60-140
Bromochloromethane	126		60-140
chlorobenzene-d5	119		60-140



Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-05 D
 Client ID: SV-01
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/17/10 02:30
 Analyst: RY

Date Collected: 09/10/10 09:35
 Date Received: 09/14/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Vinyl chloride	ND	0.453	--	ND	1.16	--		2.264
1,1-Dichloroethene	ND	0.453	--	ND	1.79	--		2.264
trans-1,2-Dichloroethene	ND	0.453	--	ND	1.79	--		2.264
1,1-Dichloroethane	ND	0.453	--	ND	1.83	--		2.264
cis-1,2-Dichloroethene	ND	0.453	--	ND	1.79	--		2.264
1,2-Dichloroethane	ND	0.453	--	ND	1.83	--		2.264
1,1,1-Trichloroethane	ND	0.453	--	ND	2.47	--		2.264
Trichloroethene	ND	0.453	--	ND	2.43	--		2.264
1,2-Dibromoethane	ND	0.453	--	ND	3.48	--		2.264
Tetrachloroethene	ND	0.453	--	ND	3.07	--		2.264

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	127		60-140
Bromochloromethane	123		60-140
chlorobenzene-d5	117		60-140



Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-06
 Client ID: SV-02
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/17/10 03:04
 Analyst: RY

Date Collected: 09/10/10 10:35
 Date Received: 09/14/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	112		60-140
Bromochloromethane	112		60-140
chlorobenzene-d5	105		60-140



Project Name: LIVERMORE FALLS CFI

Lab Number: L1014295

Project Number: Not Specified

Report Date: 09/21/10

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 09/16/10 17:06

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01-06 Batch: WG432800-4								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-06 Batch: WG432800-3								
Vinyl chloride	97		-		70-130	-		
1,1-Dichloroethene	98		-		70-130	-		
trans-1,2-Dichloroethene	89		-		70-130	-		
1,1-Dichloroethane	90		-		70-130	-		
cis-1,2-Dichloroethene	94		-		70-130	-		
1,2-Dichloroethane	97		-		70-130	-		
1,1,1-Trichloroethane	94		-		70-130	-		
Trichloroethene	96		-		70-130	-		
1,2-Dibromoethane	94		-		70-130	-		
Tetrachloroethene	96		-		70-130	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432800-5 QC Sample: L1014293-01 Client ID: DUP Sample						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	3.87	3.84	ppbV	1		25

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-01 D
Client ID: SV-03
Sample Location: LIVERMORE FALLS, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/17/10 21:26
Analyst: RY

Date Collected: 09/10/10 15:03
Date Received: 09/14/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.8		%	1.61	--	1.606
Methane	ND		%	0.161	--	1.606
Carbon Dioxide	2.42		%	0.161	--	1.606

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-02 D
Client ID: SV-103
Sample Location: LIVERMORE FALLS, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/17/10 22:08
Analyst: RY

Date Collected: 09/10/10 11:52
Date Received: 09/14/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.8		%	1.47	--	1.467
Methane	ND		%	0.147	--	1.467
Carbon Dioxide	1.82		%	0.147	--	1.467

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-03 D
Client ID: SV-105
Sample Location: LIVERMORE FALLS, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/17/10 22:51
Analyst: RY

Date Collected: 09/10/10 14:00
Date Received: 09/14/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	8.98		%	1.74	--	1.745
Methane	ND		%	0.174	--	1.745
Carbon Dioxide	7.01		%	0.174	--	1.745

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-04 D
Client ID: SV-103 DUP
Sample Location: LIVERMORE FALLS, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/17/10 23:34
Analyst: RY

Date Collected: 09/10/10 11:50
Date Received: 09/14/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.9		%	1.54	--	1.545
Methane	ND		%	0.154	--	1.545
Carbon Dioxide	1.77		%	0.154	--	1.545

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-05 D
Client ID: SV-01
Sample Location: LIVERMORE FALLS, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/18/10 00:16
Analyst: RY

Date Collected: 09/10/10 09:35
Date Received: 09/14/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	11.6		%	2.26	--	2.264
Methane	ND		%	0.226	--	2.264
Carbon Dioxide	4.40		%	0.226	--	2.264

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**SAMPLE RESULTS**

Lab ID: L1014295-06 D
Client ID: SV-02
Sample Location: LIVERMORE FALLS, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/18/10 00:59
Analyst: RY

Date Collected: 09/10/10 10:35
Date Received: 09/14/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	16.5		%	1.64	--	1.646
Methane	ND		%	0.164	--	1.646
Carbon Dioxide	0.418		%	0.164	--	1.646

Project Name: LIVERMORE FALLS CFI

Lab Number: L1014295

Project Number: Not Specified

Report Date: 09/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 51,3C

Analytical Date: 09/17/10 16:19

Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
Fixed Gases by GC - Mansfield Lab for sample(s): 01-06 Batch: WG432998-2					
Oxygen	ND		%	1.00	--
Methane	ND		%	0.100	--
Carbon Dioxide	ND		%	0.100	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 Batch: WG432998-1								
Oxygen	93		-		80-120	-		
Methane	95		-		80-120	-		
Carbon Dioxide	106		-		80-120	-		

Lab Duplicate Analysis Batch Quality Control

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-10 QC Sample: L1014295-03 Client ID: SV-105						
Oxygen	8.98	8.85	%	1		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	7.01	7.01	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-11 QC Sample: L1014295-04 Client ID: SV-103 DUP						
Oxygen	15.9	15.5	%	3		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	1.77	1.77	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-12 QC Sample: L1014295-05 Client ID: SV-01						
Oxygen	11.6	12.1	%	4		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	4.40	4.40	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-13 QC Sample: L1014295-06 Client ID: SV-02						
Oxygen	16.5	16.7	%	1		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	0.418	0.416	%	0		5



Lab Duplicate Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-3 QC Sample: L1014293-01 Client ID: DUP Sample					
Oxygen	11.7	11.6	%	1	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	2.85	2.91	%	2	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-4 QC Sample: L1014293-02 Client ID: DUP Sample					
Oxygen	15.2	14.7	%	3	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	2.81	2.82	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-5 QC Sample: L1014293-03 Client ID: DUP Sample					
Oxygen	11.4	11.6	%	2	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	1.98	1.98	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-6 QC Sample: L1014293-04 Client ID: DUP Sample					
Oxygen	17.9	17.4	%	3	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	0.180	0.182	%	1	5

Lab Duplicate Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-7 QC Sample: L1014293-05 Client ID: DUP Sample					
Oxygen	16.6	16.8	%	1	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	1.59	1.59	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-8 QC Sample: L1014295-01 Client ID: SV-03					
Oxygen	15.8	16.2	%	2	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	2.42	2.41	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432998-9 QC Sample: L1014295-02 Client ID: SV-103					
Oxygen	15.8	16.0	%	1	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	1.82	1.82	%	0	5

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

SAMPLE RESULTS

Lab ID: L1014295-01
 Client ID: SV-03
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 96,APH
 Analytical Date: 09/17/10 01:18
 Analyst: RY

Date Collected: 09/10/10 15:03
 Date Received: 09/14/10
 Field Prep: Not Specified

Quality Control Information

Sample Type:	30 minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	ND		ug/m3	2.0	--	1
Toluene	11		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	440		ug/m3	12	--	1
Ethylbenzene	9.8		ug/m3	2.0	--	1
p/m-Xylene	15		ug/m3	4.0	--	1
o-Xylene	5.1		ug/m3	2.0	--	1
Naphthalene	20		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	640		ug/m3	14	--	1
C9-C10 Aromatics Total	130		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		50-200
Bromochloromethane	93		50-200
Chlorobenzene-d5	92		50-200

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

SAMPLE RESULTS

Lab ID: L1014295-02 D
 Client ID: SV-103
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 96,APH
 Analytical Date: 09/17/10 03:37
 Analyst: RY

Date Collected: 09/10/10 11:52
 Date Received: 09/14/10
 Field Prep: Not Specified

Quality Control Information

Sample Type: 30 minute Composite
 Sample Container Type: Canister - 2.7 Liter
 Sampling Flow Controller: Mechanical
 Sampling Zone: Unknown
 Sampling Flow Meter RPD of pre & post-sampling calibration check: <=20%
 Were all QA/QC procedures REQUIRED by the method followed? Yes
 Were all performance/acceptance standards for the required procedures achieved? Yes
 Were significant modifications made to the method as specified in Sect 11.1.2? No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	4000	--	2000
Methyl tert butyl ether	ND		ug/m3	4000	--	2000
Benzene	ND		ug/m3	4000	--	2000
Toluene	ND		ug/m3	4000	--	2000
C5-C8 Aliphatics, Adjusted	2400000		ug/m3	24000	--	2000
Ethylbenzene	ND		ug/m3	4000	--	2000
p/m-Xylene	ND		ug/m3	8000	--	2000
o-Xylene	ND		ug/m3	4000	--	2000
Naphthalene	ND		ug/m3	4000	--	2000
C9-C12 Aliphatics, Adjusted	30000		ug/m3	28000	--	2000
C9-C10 Aromatics Total	ND		ug/m3	20000	--	2000

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	130		50-200
Bromochloromethane	127		50-200
Chlorobenzene-d5	118		50-200

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

SAMPLE RESULTS

Lab ID: L1014295-03
 Client ID: SV-105
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 96,APH
 Analytical Date: 09/17/10 01:54
 Analyst: RY

Date Collected: 09/10/10 14:00
 Date Received: 09/14/10
 Field Prep: Not Specified

Quality Control Information

Sample Type: 30 minute Composite
 Sample Container Type: Canister - 2.7 Liter
 Sampling Flow Controller: Mechanical
 Sampling Zone: Unknown
 Sampling Flow Meter RPD of pre & post-sampling calibration check: <=20%
 Were all QA/QC procedures REQUIRED by the method followed? Yes
 Were all performance/acceptance standards for the required procedures achieved? Yes
 Were significant modifications made to the method as specified in Sect 11.1.2? No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	34		ug/m3	2.0	--	1
Toluene	310		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	1200		ug/m3	12	--	1
Ethylbenzene	87		ug/m3	2.0	--	1
p/m-Xylene	150		ug/m3	4.0	--	1
o-Xylene	49		ug/m3	2.0	--	1
Naphthalene	6.8		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	1300		ug/m3	14	--	1
C9-C10 Aromatics Total	320		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	111		50-200
Bromochloromethane	116		50-200
Chlorobenzene-d5	112		50-200

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

SAMPLE RESULTS

Lab ID: L1014295-04 D
 Client ID: SV-103 DUP
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 96,APH
 Analytical Date: 09/17/10 04:12
 Analyst: RY

Date Collected: 09/10/10 11:50
 Date Received: 09/14/10
 Field Prep: Not Specified

Quality Control Information

Sample Type:	30 minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	4200	--	2100
Methyl tert butyl ether	ND		ug/m3	4200	--	2100
Benzene	ND		ug/m3	4200	--	2100
Toluene	ND		ug/m3	4200	--	2100
C5-C8 Aliphatics, Adjusted	2400000		ug/m3	25000	--	2100
Ethylbenzene	ND		ug/m3	4200	--	2100
p/m-Xylene	ND		ug/m3	8400	--	2100
o-Xylene	ND		ug/m3	4200	--	2100
Naphthalene	ND		ug/m3	4200	--	2100
C9-C12 Aliphatics, Adjusted	ND		ug/m3	29000	--	2100
C9-C10 Aromatics Total	ND		ug/m3	21000	--	2100

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	124		50-200
Bromochloromethane	122		50-200
Chlorobenzene-d5	113		50-200

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

SAMPLE RESULTS

Lab ID: L1014295-05 D
 Client ID: SV-01
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 96,APH
 Analytical Date: 09/17/10 02:30
 Analyst: RY

Date Collected: 09/10/10 09:35
 Date Received: 09/14/10
 Field Prep: Not Specified

Quality Control Information

Sample Type:	100 ml/min Composite
Sample Container Type:	Canister - 1 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	4.6	--	2.3
Methyl tert butyl ether	ND		ug/m3	4.6	--	2.3
Benzene	16		ug/m3	4.6	--	2.3
Toluene	110		ug/m3	4.6	--	2.3
C5-C8 Aliphatics, Adjusted	1200		ug/m3	28	--	2.3
Ethylbenzene	47		ug/m3	4.6	--	2.3
p/m-Xylene	81		ug/m3	9.2	--	2.3
o-Xylene	28		ug/m3	4.6	--	2.3
Naphthalene	17		ug/m3	4.6	--	2.3
C9-C12 Aliphatics, Adjusted	3300		ug/m3	32	--	2.3
C9-C10 Aromatics Total	360		ug/m3	23	--	2.3

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	117		50-200
Bromochloromethane	119		50-200
Chlorobenzene-d5	112		50-200

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

SAMPLE RESULTS

Lab ID: L1014295-06
 Client ID: SV-02
 Sample Location: LIVERMORE FALLS, ME
 Matrix: Soil_Vapor
 Analytical Method: 96,APH
 Analytical Date: 09/17/10 03:04
 Analyst: RY

Date Collected: 09/10/10 10:35
 Date Received: 09/14/10
 Field Prep: Not Specified

Quality Control Information

Sample Type: 30 minute Composite
 Sample Container Type: Canister - 2.7 Liter
 Sampling Flow Controller: Mechanical
 Sampling Zone: Unknown
 Sampling Flow Meter RPD of pre & post-sampling calibration check: <=20%
 Were all QA/QC procedures REQUIRED by the method followed? Yes
 Were all performance/acceptance standards for the required procedures achieved? Yes
 Were significant modifications made to the method as specified in Sect 11.1.2? No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	2.2		ug/m3	2.0	--	1
Toluene	2.6		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	270		ug/m3	12	--	1
Ethylbenzene	ND		ug/m3	2.0	--	1
p/m-Xylene	ND		ug/m3	4.0	--	1
o-Xylene	ND		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	58		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	103		50-200
Bromochloromethane	106		50-200
Chlorobenzene-d5	99		50-200

Project Name: LIVERMORE FALLS CFI

Lab Number: L1014295

Project Number: Not Specified

Report Date: 09/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 96,APH
 Analytical Date: 09/16/10 17:06
 Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbons in Air - Mansfield Lab for sample(s): 01-06 Batch: WG432801-4					
1,3-Butadiene	ND		ug/m3	2.0	--
Methyl tert butyl ether	ND		ug/m3	2.0	--
Benzene	ND		ug/m3	2.0	--
Toluene	ND		ug/m3	2.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/m3	12	--
Ethylbenzene	ND		ug/m3	2.0	--
p/m-Xylene	ND		ug/m3	4.0	--
o-Xylene	ND		ug/m3	2.0	--
Naphthalene	ND		ug/m3	2.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/m3	14	--
C9-C10 Aromatics Total	ND		ug/m3	10	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG432801-3								
1,3-Butadiene	86		-		70-130	-		
Methyl tert butyl ether	93		-		70-130	-		
Benzene	90		-		70-130	-		
Toluene	99		-		70-130	-		
C5-C8 Aliphatics, Adjusted	96		-		70-130	-		
Ethylbenzene	102		-		70-130	-		
p/m-Xylene	102		-		70-130	-		
o-Xylene	104		-		70-130	-		
Naphthalene	118		-		50-150	-		
C9-C12 Aliphatics, Adjusted	123		-		70-130	-		
C9-C10 Aromatics Total	92		-		70-130	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: LIVERMORE FALLS CFI

Project Number: Not Specified

Lab Number: L1014295

Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG432801-5 QC Sample: L1014293-01 Client ID: DUP Sample						
1,3-Butadiene	26	26	ug/m3	0		30
Methyl tert butyl ether	ND	ND	ug/m3	NC		30
Benzene	8.0	8.2	ug/m3	2		30
Toluene	19	19	ug/m3	0		30
C5-C8 Aliphatics, Adjusted	1000	1000	ug/m3	0		30
Ethylbenzene	13	13	ug/m3	0		30
p/m-Xylene	19	19	ug/m3	0		30
o-Xylene	7.0	7.3	ug/m3	4		30
Naphthalene	ND	ND	ug/m3	NC		30
C9-C12 Aliphatics, Adjusted	270	260	ug/m3	4		30
C9-C10 Aromatics Total	99	98	ug/m3	1		30

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Cleaning Batch ID	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Out mL/min	Flow In mL/min	% RSD
L1014295-01	SV-03	0365	#90 SV		-	-	72	69	4
L1014295-01	SV-03	116	2.7L Can	I1013618	-29.5	-0.7	-	-	-
L1014295-02	SV-103	0062	#90 SV		-	-	71	74	4
L1014295-02	SV-103	110	2.7L Can	I1013194	-29.5	-1.1	-	-	-
L1014295-03	SV-105	0100	#30 SV		-	-	69	66	4
L1014295-03	SV-105	506	2.7L Can	I1013618	-29.5	-2.0	-	-	-
L1014295-04	SV-103 DUP	0227	#90 SV		-	-	70	71	1
L1014295-04	SV-103 DUP	194	2.7L Can	I1013618	-29.5	-2.6	-	-	-
L1014295-05	SV-01	0268	#90 SV		-	-	100	100	0
L1014295-05	SV-01	662	1.0L Can	L1013135	-29.1	-1.6	-	-	-
L1014295-06	SV-02	0265	#90 SV		-	-	66	64	3
L1014295-06	SV-02	467	2.7L Can	I1013618	-29.5	-0.7	-	-	-



Air Volatiles Can Certification

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01
 Client ID: CAN 713 SHELF 13
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 08/26/10 12:06
 Analyst: AJ

Date Collected: 08/25/10 00:00
 Date Received: 08/25/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.200	--	ND	0.344	--		1
Propane	ND	0.200	--	ND	0.606	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.988	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.776	--		1
Chloroethane	ND	0.200	--	ND	0.527	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.841	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.14	--		1
Acetone	ND	1.00	--	ND	2.37	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01

Date Collected: 08/25/10 00:00

Client ID: CAN 713 SHELF 13

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.622	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.720	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.589	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.976	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.589	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.923	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.704	--		1
Diisopropyl ether	ND	0.200	--	ND	0.835	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.835	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.907	--		1
Benzene	ND	0.200	--	ND	0.638	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.835	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.720	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01

Date Collected: 08/25/10 00:00

Client ID: CAN 713 SHELF 13

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.819	--		1
2,4,4-trimethyl-1-pentene	ND	0.500	--	ND	2.29	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.819	--		1
2,4,4-trimethyl-2-pentene	ND	0.500	--	ND	2.29	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.753	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.923	--		1
2-Hexanone	ND	0.200	--	ND	0.819	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.37	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.920	--		1
Ethylbenzene	ND	0.200	--	ND	0.868	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.06	--		1
Styrene	ND	0.200	--	ND	0.851	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.868	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.20	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.982	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01

Date Collected: 08/25/10 00:00

Client ID: CAN 713 SHELF 13

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Bromobenzene	ND	0.200	--	ND	1.28	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.03	--		1
n-Propylbenzene	ND	0.200	--	ND	0.982	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.03	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.982	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.03	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01
 Client ID: CAN 713 SHELF 13
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 08/26/10 12:06
 Analyst: AJ

Date Collected: 08/25/10 00:00
 Date Received: 08/25/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.08	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.403	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01

Date Collected: 08/25/10 00:00

Client ID: CAN 713 SHELF 13

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.020	--	ND	0.075	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.206	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013135-01

Date Collected: 08/25/10 00:00

Client ID: CAN 713 SHELF 13

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01
 Client ID: CAN 514 SHELF 8
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 08/26/10 12:43
 Analyst: AJ

Date Collected: 08/25/10 00:00
 Date Received: 08/25/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.200	--	ND	0.344	--		1
Propane	ND	0.200	--	ND	0.606	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.988	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.776	--		1
Chloroethane	ND	0.200	--	ND	0.527	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.841	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.14	--		1
Acetone	ND	1.00	--	ND	2.37	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01

Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.622	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.720	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.589	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.976	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.589	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.923	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.704	--		1
Diisopropyl ether	ND	0.200	--	ND	0.835	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.835	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.907	--		1
Benzene	ND	0.200	--	ND	0.638	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.835	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.720	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01

Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.819	--		1
2,4,4-trimethyl-1-pentene	ND	0.500	--	ND	2.29	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.819	--		1
2,4,4-trimethyl-2-pentene	ND	0.500	--	ND	2.29	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.753	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.923	--		1
2-Hexanone	ND	0.200	--	ND	0.819	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.37	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.920	--		1
Ethylbenzene	ND	0.200	--	ND	0.868	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.06	--		1
Styrene	ND	0.200	--	ND	0.851	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.868	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.20	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.982	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01

Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Bromobenzene	ND	0.200	--	ND	1.28	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.03	--		1
n-Propylbenzene	ND	0.200	--	ND	0.982	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.03	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.982	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.03	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01
 Client ID: CAN 514 SHELF 8
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 08/26/10 12:43
 Analyst: AJ

Date Collected: 08/25/10 00:00
 Date Received: 08/25/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.08	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.403	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01

Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.020	--	ND	0.075	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.206	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013194-01

Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8

Date Received: 08/25/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01
 Client ID: CAN 116 SHELF 2
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 09/02/10 19:20
 Analyst: RY

Date Collected: 09/02/10 00:00
 Date Received: 09/02/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.200	--	ND	0.344	--		1
Propane	ND	0.200	--	ND	0.606	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.988	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.776	--		1
Chloroethane	ND	0.200	--	ND	0.527	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.841	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.14	--		1
Acetone	ND	1.00	--	ND	2.37	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.622	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.720	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.589	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.976	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.589	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.923	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.704	--		1
Diisopropyl ether	ND	0.200	--	ND	0.835	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.835	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.907	--		1
Benzene	ND	0.200	--	ND	0.638	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.835	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.720	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.819	--		1
2,4,4-trimethyl-1-pentene	ND	0.500	--	ND	2.29	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.819	--		1
2,4,4-trimethyl-2-pentene	ND	0.500	--	ND	2.29	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.753	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.923	--		1
2-Hexanone	ND	0.200	--	ND	0.819	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.37	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.920	--		1
Ethylbenzene	ND	0.200	--	ND	0.868	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.06	--		1
Styrene	ND	0.200	--	ND	0.851	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.868	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.20	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.982	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Bromobenzene	ND	0.200	--	ND	1.28	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.03	--		1
n-Propylbenzene	ND	0.200	--	ND	0.982	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.03	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.982	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.03	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L1013618

Project Number: CANISTER QC BAT

Report Date: 09/21/10

Air Canister Certification Results

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	103		60-140
Bromochloromethane	115		60-140
chlorobenzene-d5	97		60-140



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01
 Client ID: CAN 116 SHELF 2
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 09/02/10 19:20
 Analyst: RY

Date Collected: 09/02/10 00:00
 Date Received: 09/02/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.08	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.403	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.020	--	ND	0.075	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.206	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**Air Canister Certification Results**

Lab ID: L1013618-01

Date Collected: 09/02/10 00:00

Client ID: CAN 116 SHELF 2

Date Received: 09/02/10

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	97		60-140

AIR Petro Can Certification

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013135**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**AIR CAN CERTIFICATION RESULTS**

Lab ID: L1013135-01
Client ID: CAN 713 SHELF 13
Sample Location: Not Specified
Matrix: Air
Analytical Method: 96,APH
Analytical Date: 08/27/10 17:22
Analyst: AR

Date Collected: 08/25/10 00:00
Date Received: 08/25/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	ND		ug/m3	2.0	--	1
Toluene	ND		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/m3	12	--	1
Ethylbenzene	ND		ug/m3	2.0	--	1
p/m-Xylene	ND		ug/m3	4.0	--	1
o-Xylene	ND		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013194**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**AIR CAN CERTIFICATION RESULTS**

Lab ID: L1013194-01
Client ID: CAN 514 SHELF 8
Sample Location: Not Specified
Matrix: Air
Analytical Method: 96,APH
Analytical Date: 08/27/10 18:36
Analyst: AR

Date Collected: 08/25/10 00:00
Date Received: 08/25/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	ND		ug/m3	2.0	--	1
Toluene	ND		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/m3	12	--	1
Ethylbenzene	ND		ug/m3	2.0	--	1
p/m-Xylene	ND		ug/m3	4.0	--	1
o-Xylene	ND		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1013618**Project Number:** CANISTER QC BAT**Report Date:** 09/21/10**AIR CAN CERTIFICATION RESULTS**

Lab ID: L1013618-01
Client ID: CAN 116 SHELF 2
Sample Location: Not Specified
Matrix: Air
Analytical Method: 96,APH
Analytical Date: 09/03/10 17:40
Analyst: RY

Date Collected: 09/02/10 00:00
Date Received: 09/02/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	ND		ug/m3	2.0	--	1
Toluene	ND		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/m3	12	--	1
Ethylbenzene	ND		ug/m3	2.0	--	1
p/m-Xylene	ND		ug/m3	4.0	--	1
o-Xylene	ND		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Project Name: LIVERMORE FALLS CFI**Lab Number:** L1014295**Project Number:** Not Specified**Report Date:** 09/21/10**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal**Cooler**

N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1014295-01A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1014295-02A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1014295-03A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1014295-04A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1014295-05A	Canister - 1 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1014295-06A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

GLOSSARY

Acronyms

- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD** - Laboratory Control Sample Duplicate: Refer to LCS.
- MDL** - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MSD** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NI** - Not Ignitable.
- RL** - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.

Report Format: Data Usability Report



Project Name: LIVERMORE FALLS CFI

Lab Number: L1014295

Project Number: Not Specified

Report Date: 09/21/10

Data Qualifiers

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Project Name: LIVERMORE FALLS CFI
Project Number: Not Specified

Lab Number: L1014295
Report Date: 09/21/10

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.
- 51 Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources. Method 3C. Appendix A, Part 60, 40 CFR (Code of Federal Regulations). June 20, 1996.
- 96 Method for the Determination of Air-Phase Petroleum Hydrocarbons (APH), MassDEP, December 2009, Revision 1 with QC Requirements & Performance Standards for the Analysis of APH by GC/MS under the Massachusetts Contingency Plan, WSC-CAM-IXA, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised July 19, 2010 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3051, 6020, 747A, 7474, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl.



CHAIN OF CUSTODY

AIR ANALYSIS

PAGE 1 OF 1

320 Forbes Blvd, Mansfield, MA 02048
 TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: MAINE DEP

Address: 312 CAUSE ROAD

Phone: (207) 822-6000

Fax:

Email: Hoy.t.smith@maine.gov

Other Project Specific Requirements/Comments:

Project Information

Project Name: Livestone Falls Superfund Site

Project Location: Livestone Falls, ME

Project #:

Project Manager: PETER EDEMMER

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

Report to: (if different than Project Manager)
 dian.w.mckenzie@maine.gov
 jeressey@summitenv.com

Criteria Checker: (Default based on Regulatory Criteria Indicated)

Other Formats:

EMail (standard pdf report)

Additional Deliverables:

Billing Information

Same as Client Info PO #:

ATTN: Peter Edemmer

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MAINE EDD

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTOR				Sample Matrix*	Sampler's Initials	Can Size	I.D. Can	I.D. - Flow Controller	ANALYSIS				Sample Comments (i.e. PID)
		Date	Start Time	End Time	Initial Vacuum						Final Vacuum	TO-14A by TO-15	TO-15 EDB ONLY	TO-15 SIM	
14295	SV-03	9/10/10	2:31	3:03	-30	-3	SV	1L	116	0365	X	X	X	X	CO2 + O2 + CH4
2	SV-103	9/10/10	11:19	11:52	-30	-4	SV	1L	110	0062	X	X	X	X	
3	SV-105	9/10/10	1:25	2:00	-30	-3	SV	1L	506	0100	X	X	X	X	
4	SV-103 DUP	9/10/10	11:19	11:50	-29	-2	SV	1L	194	0227	X	X	X	X	
5	SV-01	9/10/10	9:25	9:35	-30	-5	SV	1L	602	0268	X	X	X	X	
6	SV-02	9/10/10	10:02	10:35	-30	-4	SV	1L	467	0265	X	X	X	X	

*SAMPLE MATRIX CODES
 AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/VLE
 Other = Please Specify

Relinquished By: <i>AWG</i>	Date/Time: 9/13/10	Received By: <i>FEDEX</i>	Date/Time: 9/13/10 1130
Container Type:			

Please print clearly, legibly, and completely. Samples can only be analyzed if the container is properly sealed, will not leak, and is free from contamination. Samples should be submitted in accordance with the following conditions:
 1. Samples should be submitted in original containers.
 2. Samples should be submitted in original containers.
 3. Samples should be submitted in original containers.
 4. Samples should be submitted in original containers.
 5. Samples should be submitted in original containers.
 6. Samples should be submitted in original containers.
 7. Samples should be submitted in original containers.
 8. Samples should be submitted in original containers.
 9. Samples should be submitted in original containers.
 10. Samples should be submitted in original containers.

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

Report Number: 67789

Revision: Rev. 0

Re: DEP 2496-10

Enclosed are the results of the analyses on your sample(s). Samples were received on 15 September 2010 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
67789-1	09/10/10	SV-103 (7.5')	MADEP EPH	
	09/10/10	SV-103 (7.5')	Volatile Petroleum Hydrocarbons	
67789-2	09/10/10	GW-103	Volatile Petroleum Hydrocarbons	
67789-3	09/10/10	GW-104	Volatile Petroleum Hydrocarbons	
67789-4	09/10/10	GW-105	Volatile Petroleum Hydrocarbons	
67789-5	09/10/10	Trip Blank (aq)	Volatile Petroleum Hydrocarbons	
67789-6	09/10/10	Trip Blank (s)	Electronic Data Deliverable	
	09/10/10	Trip Blank (s)	Volatile Petroleum Hydrocarbons	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, Virginia, Maryland, and is accredited by the Department of Defense (DOD) ELAP program. A list of actual certified parameters is available upon request.

If you have any questions on these results, please do not hesitate to contact us.

Authorized signature



Stephen L. Knollmeyer Lab. Director

Date

9/23/2010

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

September 22, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: DEP 2496-10
Project Number:
Client Sample ID: SV-103 (7.5')

Lab Sample ID: 67789-1
Matrix: Solid
Percent Solid: 90
Dilution Factor: 3542
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Analysis Date: 09/17/10

VPH ANALYTICAL RESULTS				
RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics ¹	N/A	177000	µg/kg	2200000
Unadjusted C9-C12 Aliphatics ¹	N/A	177000	µg/kg	2330000
Benzene	C5-C8	7080	µg/kg	7970
Ethylbenzene	C9-C12	7080	µg/kg	U
Methyl-tert-butyl ether	C5-C8	7080	µg/kg	5980 J
Naphthalene	N/A	7080	µg/kg	U
Toluene	C5-C8	7080	µg/kg	8210
m- & p-Xylenes	C9-C12	14200	µg/kg	16500
o-Xylene	C9-C12	7080	µg/kg	5190 J
C5-C8 Aliphatic Hydrocarbons ^{1,2}	N/A	177000	µg/kg	2190000
C9-C12 Aliphatic Hydrocarbons ^{1,3}	N/A	177000	µg/kg	1260000
C9-C10 Aromatic Hydrocarbons ¹	N/A	35400	µg/kg	1050000
Surrogate % Recovery (2,5-Dibromotoluene) PID				*
Surrogate % Recovery (2,5-Dibromotoluene) FID				*
Surrogate Acceptance Range				70-130%
¹ Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. ² C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range ³ C9-C12 Aliphatic Hydrocarbons exclude conc. of Target Analytes eluting in that range and conc. of C9-C10 Aromatic Hydrocarbons. RL = Report Limit U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank				

METHODOLOGY: MADEP Volatile Petroleum Hydrocarbons (VPH), ORS Division of Environmental Analysis, Revision 1.1
May 2004

COMMENTS: Samples were received in accordance with method criteria unless noted on the sample receipt checklist.
Results are expressed on a dry weight basis.
* The surrogates were diluted out.

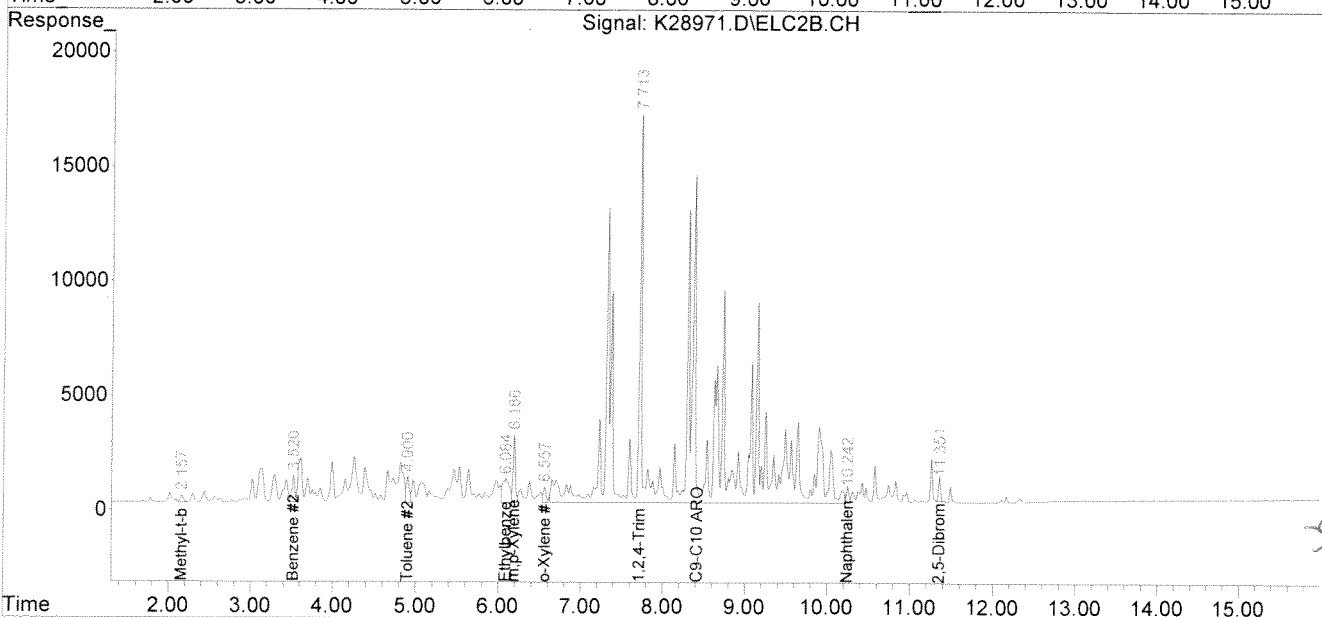
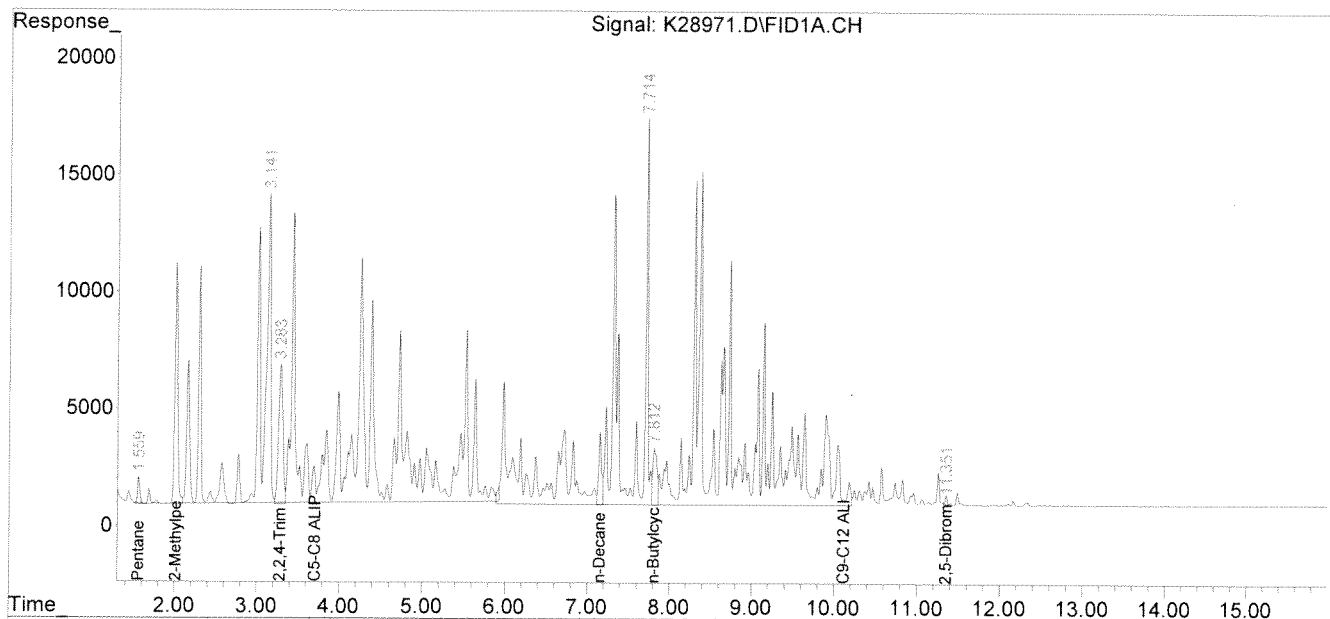
Authorized signature: 

Data Path : C:\msdchem\1\DATA\091710-K\
 Data File : K28971.D
 Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
 Acq On : 17 Sep 2010 7:32 pm
 Operator : JJL
 Sample : 67789-1,50X
 Misc : 2,8.43,SOIL
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Sep 20 11:14:46 2010
 Quant Method : C:\msdchem\1\METHODS\VPH072210.M
 Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
 QLast Update : Fri Jul 23 15:04:23 2010
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

gg 9/20/10

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



JJLW

September 22, 2010

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

SAMPLE DATA

Lab Sample ID: 67789-1
Matrix: Solid
Percent Solid: 90
Dilution Factor: 1.1
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Extraction Date: 09/16/10
Analysis Date: 09/18/10

CLIENT SAMPLE ID

Project Name: DEP 2496-10
Project Number:
Client Sample ID: SV-103 (7.5')

EPH ANALYTICAL RESULTS			
RANGE/TARGET ANALYTE	RL	Units	Result
Unadjusted C11-C22 Aromatics ¹	28800	µg/kg	39900
Diesel PAH Analytes	Naphthalene	288	µg/kg
	2-Methylnaphthalene	288	µg/kg
	Phenanthrene	288	µg/kg
	Acenaphthene	288	µg/kg
Other Target PAH Analytes	Acenaphthylene	288	µg/kg
	Fluorene	288	µg/kg
	Anthracene	288	µg/kg
	Fluoranthene	288	µg/kg
	Pyrene	288	µg/kg
	Benzo[a]anthracene	288	µg/kg
	Chrysene	288	µg/kg
	Benzo[b]fluoranthene	288	µg/kg
	Benzo[k]fluoranthene	288	µg/kg
	Benzo[a]pyrene	288	µg/kg
	Indeno[1,2,3-cd]pyrene	288	µg/kg
	Dibenz[a,h]anthracene	288	µg/kg
	Benzo[g,h,i]perylene	288	µg/kg
C9-C18 Aliphatic Hydrocarbons ¹	57400	µg/kg	93500
C19-C36 Aliphatic Hydrocarbons ¹	57400	µg/kg	U
C11-C22 Aromatic Hydrocarbons ^{1,2}	28800	µg/kg	37500
Aliphatic Surrogate % Recovery (1-Chloro-octadecane)			61
Aromatic Surrogate % Recovery (O-Terphenyl)			73
Sample Surrogate Acceptance Range	--	--	40-140%
#1 Fractionation Surrogate % Recovery (2-Fluorobiphenyl)			66
#2 Fractionation Surrogate % Recovery (2-Bromonaphthalene)			65
Fractionation Surrogate Acceptance Range	--	--	40-140%
¹ Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that			
² C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.			
RL = Report Limit			
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY:MADEP Extractable Petroleum Hydrocarbons (EPH), ORS Division of Environmental Analysis, May 2004
Revision I.1. Samples were extracted in accordance with SW-846 Method 3545

COMMENTS: EPH analyses utilized the use of a GC/MS system to detect and quantify ranges and target analytes. Samples were received in accordance with method criteria unless noted on the sample receipt checklist.
Results are expressed on a dry weight basis.

SIGNATURE: M. Bull

Quantitation Report

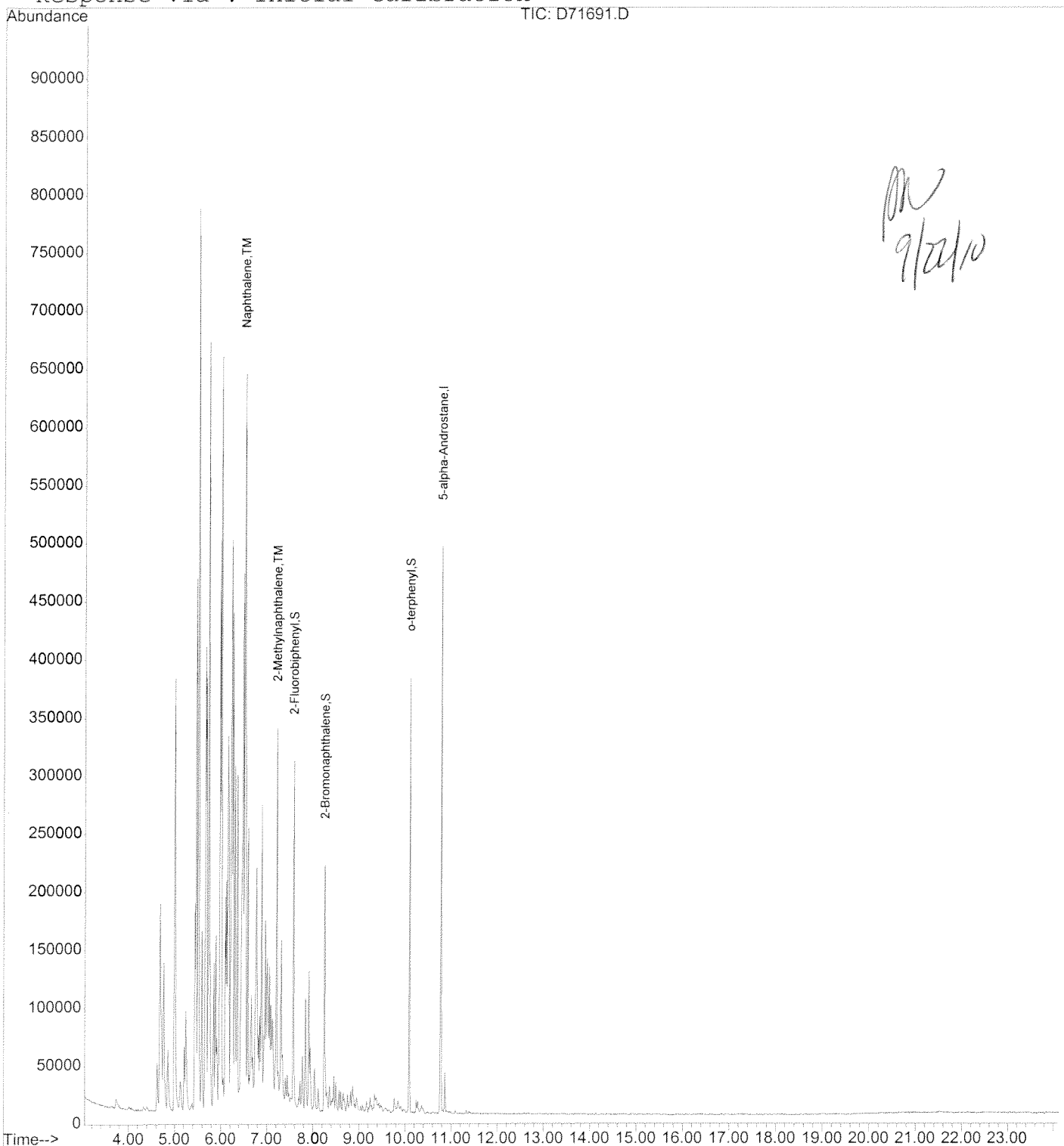
Data File : D:\HPCHEM\1\DATA\091710-D\D71691.D
Acq On : 18 Sep 2010 6:02 am
Sample : 67789-1
Misc : SOIL,ARO
MS Integration Params: RTEINT.P
Quant Time: Sep 20 11:10 2010

Vial: 16
Operator: AR
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: ARM80410.RES

Method : D:\HPCHEM\1\METHODS\ARM80410.M (RTE Integrator)
Title : EPH MS AROMATICS
Last Update : Fri Sep 17 23:59:59 2010
Response via : Initial Calibration

292010



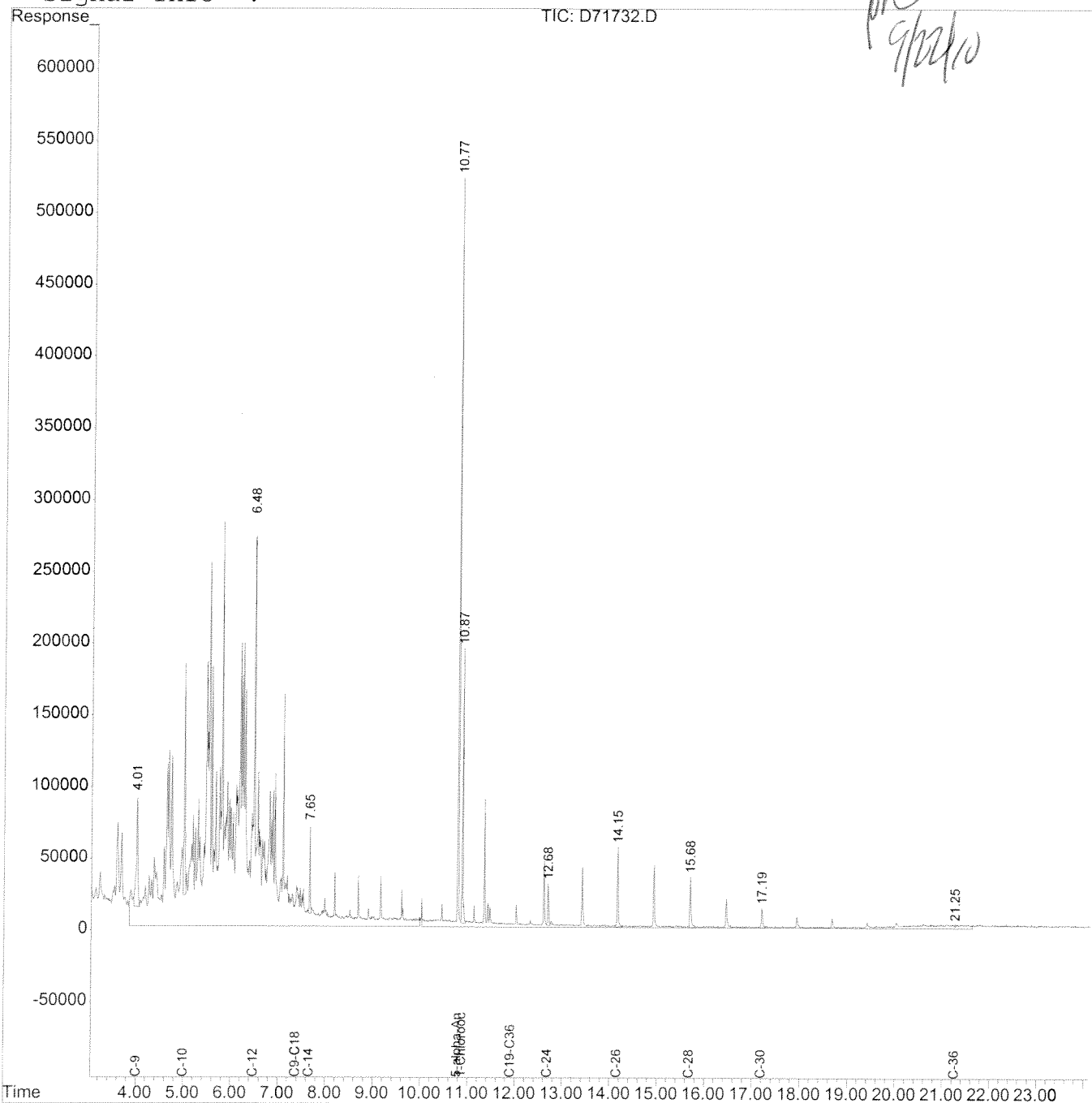
Data File : D:\HPCHEM\1\DATA\092010-D\D71732.D
Acq On : 21 Sep 2010 4:12 am
Sample : 67789-1
Misc : SOIL,ALI,1:2
IntFile : EVENTS.E
Quant Time: Sep 21 22:44 2010

Vial: 7
Operator: AR
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : D:\HPCHEM\1\METHODS\ALG80410.M (Chemstation Integrator)
Title : EPH GC ALIPHATICS
Last Update : Wed Sep 08 00:42:26 2010
Response via : Multiple Level Calibration
DataAcq Meth : EPHJ

Volume Inj. :
Signal Phase :
Signal Info :

AR
9/21/10



Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

September 21, 2010

CLIENT SAMPLE ID

Project Name: DEP 2496-10
Project Number:
Client Sample ID: GW-103

SAMPLE DATA

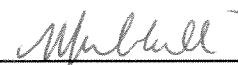
Lab Sample ID: 67789-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 100
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Analysis Date: 09/17/10

VPH ANALYTICAL RESULTS				
RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics ¹	N/A	5000	µg/L	9060
Unadjusted C9-C12 Aliphatics ¹	N/A	5000	µg/L	40200
Benzene	C5-C8	200	µg/L	U
Ethylbenzene	C9-C12	200	µg/L	1870
Methyl-tert-butyl ether	C5-C8	200	µg/L	U
Naphthalene	N/A	200	µg/L	664
Toluene	C5-C8	200	µg/L	132 J
m- & p-Xylenes	C9-C12	400	µg/L	9500
o-Xylene	C9-C12	200	µg/L	3320
C5-C8 Aliphatics Hydrocarbons ^{1,2}	N/A	5000	µg/L	8930
C9-C12 Aliphatic Hydrocarbons ^{1,3}	N/A	5000	µg/L	14300
C9-C10 Aromatic Hydrocarbons ¹	N/A	1000	µg/L	11300
Surrogate % Recovery (2,5-Dibromotoluene) PID				*
Surrogate % Recovery (2,5-Dibromotoluene) FID				*
Surrogate Acceptance Range				70-130%

¹Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
²C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range
³C9-C12 Aliphatic Hydrocarbons exclude conc. of Target Analytes eluting in that range and conc. of C9-C10 Aromatic Hydrocarbons.
 RL = Report Limit
 U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: MADEP Volatile Petroleum Hydrocarbons (VPH), ORS Division of Environmental Analysis, Revision 1.1 May 2004.

COMMENTS: Samples were received in accordance with method criteria unless noted on the sample receipt checklist.
 * The surrogates were diluted out.

Authorized signature: 

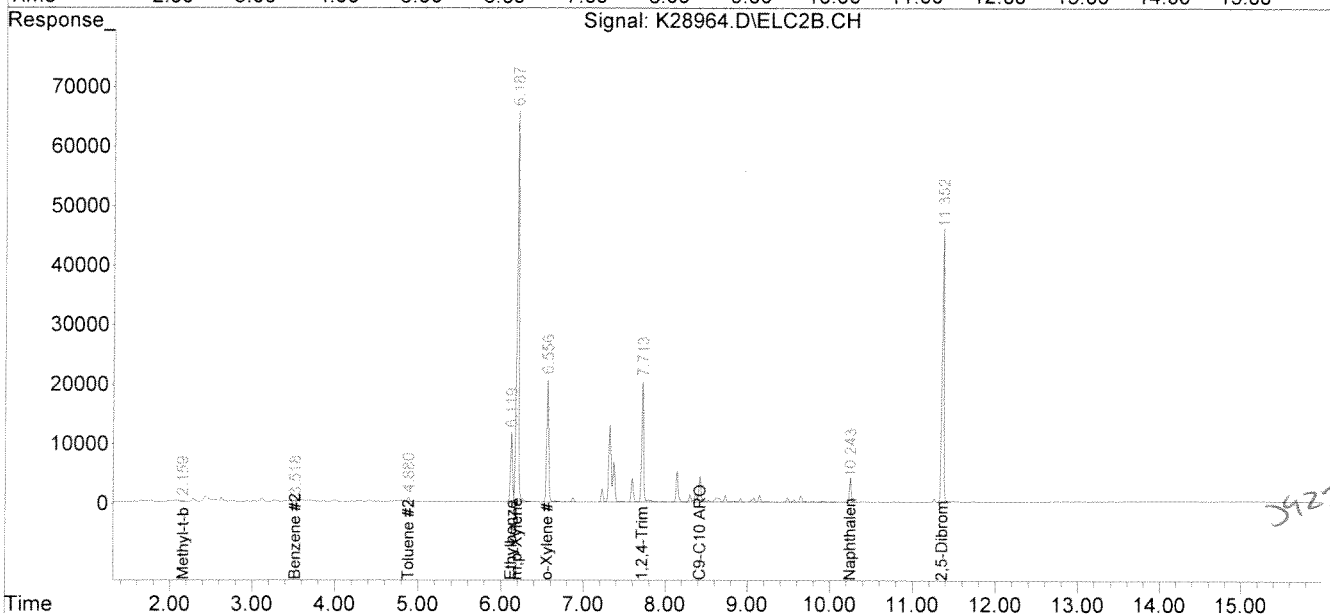
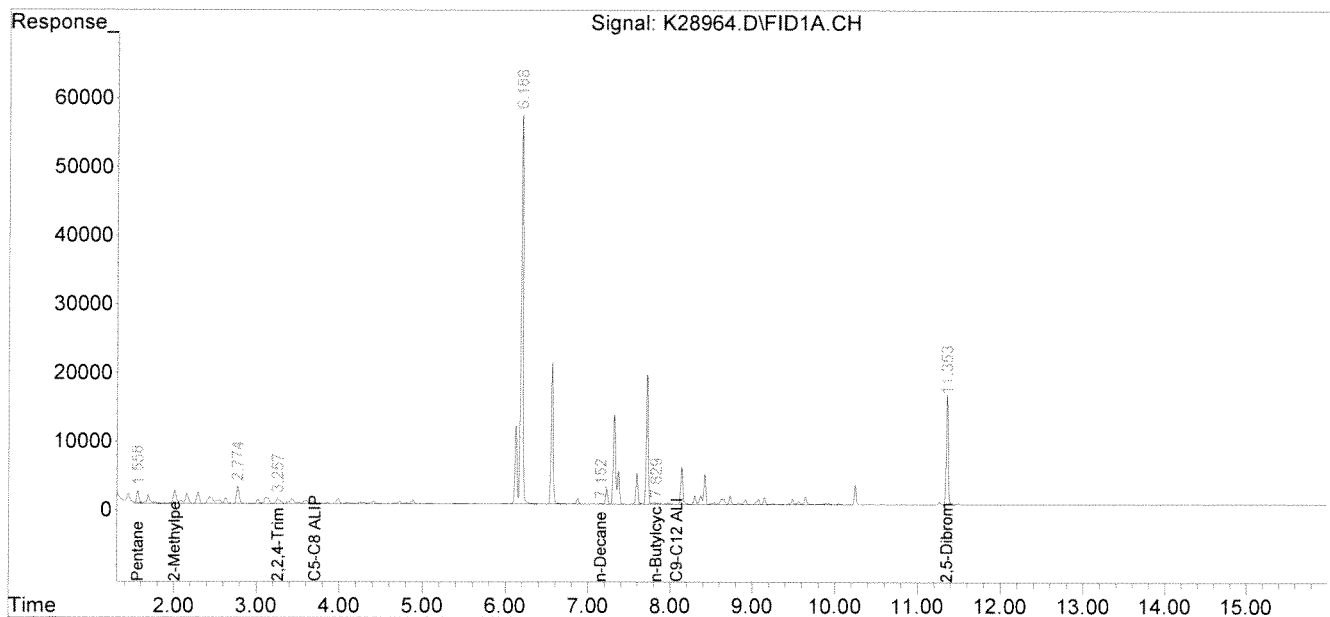
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091710-K\
Data File : K28964.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 17 Sep 2010 4:39 pm
Operator : JJL
Sample : 67789-2,100X
Misc : 50
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 20 10:47:27 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

JJL 9/20/10

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



JJL

Mr. Herb Kodis
 Maine Environmental Laboratory, Inc.
 PO Box 1107
 Yarmouth, ME 04096-1107

September 21, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: DEP 2496-10
Project Number:
Client Sample ID: GW-104

Lab Sample ID: 67789-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Analysis Date: 09/16/10

VPH ANALYTICAL RESULTS				
RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics ¹	N/A	50	μg/L	U
Unadjusted C9-C12 Aliphatics ¹	N/A	50	μg/L	U
Benzene	C5-C8	2	μg/L	U
Ethylbenzene	C9-C12	2	μg/L	U
Methyl-tert-butyl ether	C5-C8	2	μg/L	U
Naphthalene	N/A	2	μg/L	U
Toluene	C5-C8	2	μg/L	U
m- & p-Xylenes	C9-C12	4	μg/L	U
o-Xylene	C9-C12	2	μg/L	U
C5-C8 Aliphatics Hydrocarbons ^{1,2}	N/A	50	μg/L	U
C9-C12 Aliphatic Hydrocarbons ^{1,3}	N/A	50	μg/L	U
C9-C10 Aromatic Hydrocarbons ¹	N/A	10	μg/L	U
Surrogate % Recovery (2,5-Dibromotoluene) PID				85
Surrogate % Recovery (2,5-Dibromotoluene) FID				81
Surrogate Acceptance Range				70-130%
¹ Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. ² C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range ³ C9-C12 Aliphatic Hydrocarbons exclude conc. of Target Analytes eluting in that range and conc. of C9-C10 Aromatic Hydrocarbons. RL = Report Limit U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank				

METHODOLOGY: MADEP Volatile Petroleum Hydrocarbons (VPH), ORS Division of Environmental Analysis, Revision 1.1 May 2004.

COMMENTS: Samples were received in accordance with method criteria unless noted on the sample receipt checklist.

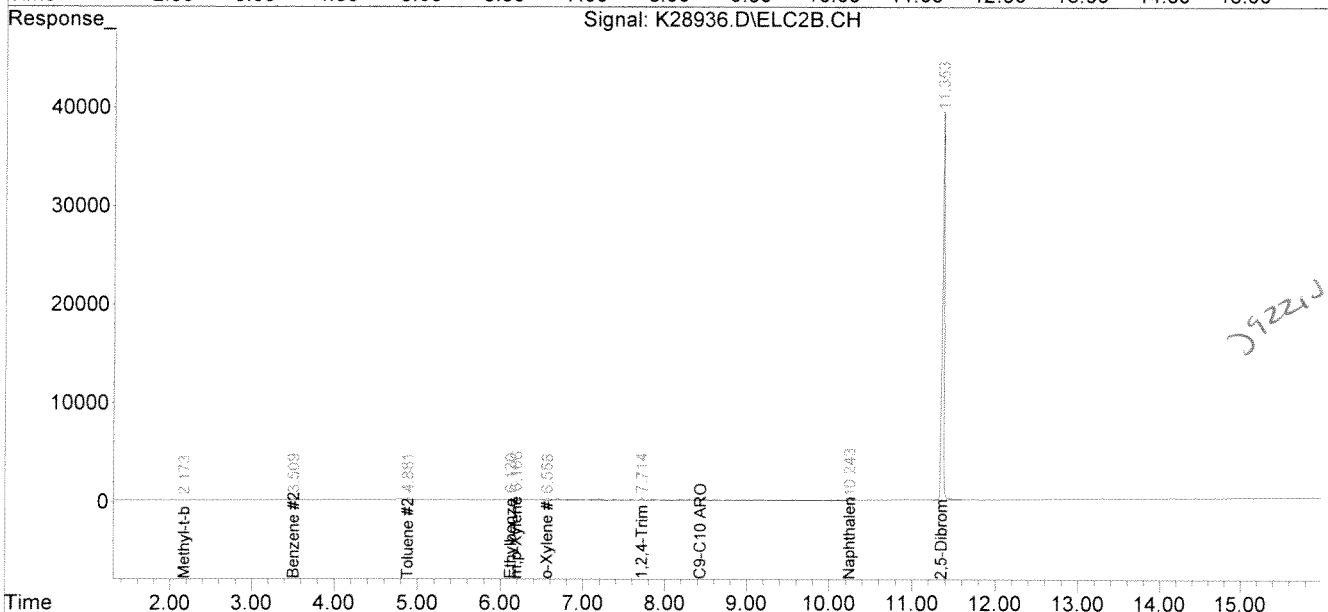
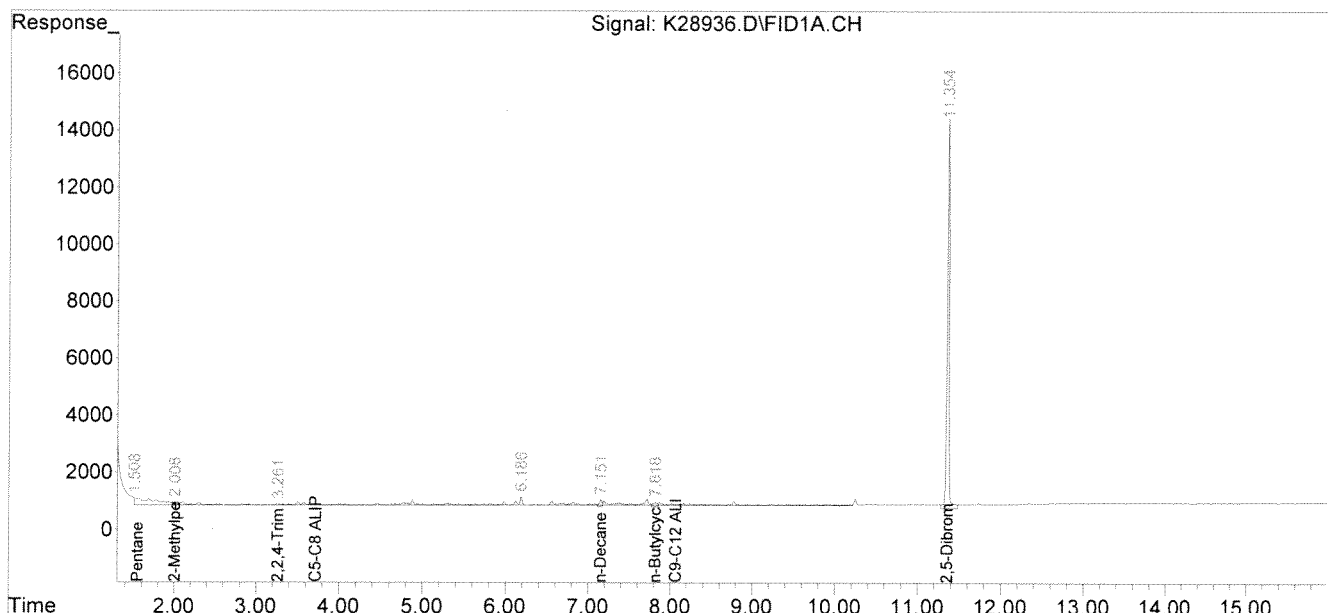
Authorized signature: *M. B. Hill*

Data Path : C:\msdchem\1\DATA\091610-K\
Data File : K28936.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 16 Sep 2010 4:18 pm
Operator : JJL
Sample : 67789-3
Misc : 5000
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 10:27:40 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

JJL 9/17/10

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



JJL

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

September 21, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: DEP 2496-10
Project Number:
Client Sample ID: GW-105

Lab Sample ID: 67789-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Analysis Date: 09/16/10

VPH ANALYTICAL RESULTS				
RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics ¹	N/A	50	µg/L	U
Unadjusted C9-C12 Aliphatics ¹	N/A	50	µg/L	U
Benzene	C5-C8	2	µg/L	U
Ethylbenzene	C9-C12	2	µg/L	U
Methyl-tert-butyl ether	C5-C8	2	µg/L	U
Naphthalene	N/A	2	µg/L	U
Toluene	C5-C8	2	µg/L	U
m- & p-Xylenes	C9-C12	4	µg/L	U
o-Xylene	C9-C12	2	µg/L	U
C5-C8 Aliphatic Hydrocarbons ^{1,2}	N/A	50	µg/L	U
C9-C12 Aliphatic Hydrocarbons ^{1,3}	N/A	50	µg/L	U
C9-C10 Aromatic Hydrocarbons ¹	N/A	10	µg/L	U
Surrogate % Recovery (2,5-Dibromotoluene) PID				78
Surrogate % Recovery (2,5-Dibromotoluene) FID				72
Surrogate Acceptance Range				70-130%
¹ Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. ² C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range ³ C9-C12 Aliphatic Hydrocarbons exclude conc. of Target Analytes eluting in that range and conc. of C9-C10 Aromatic Hydrocarbons. RL = Report Limit U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank				

METHODOLOGY: MADEP Volatile Petroleum Hydrocarbons (VPH), ORS Division of Environmental Analysis, Revision 1.1 May 2004.

COMMENTS: Samples were received in accordance with method criteria unless noted on the sample receipt checklist.

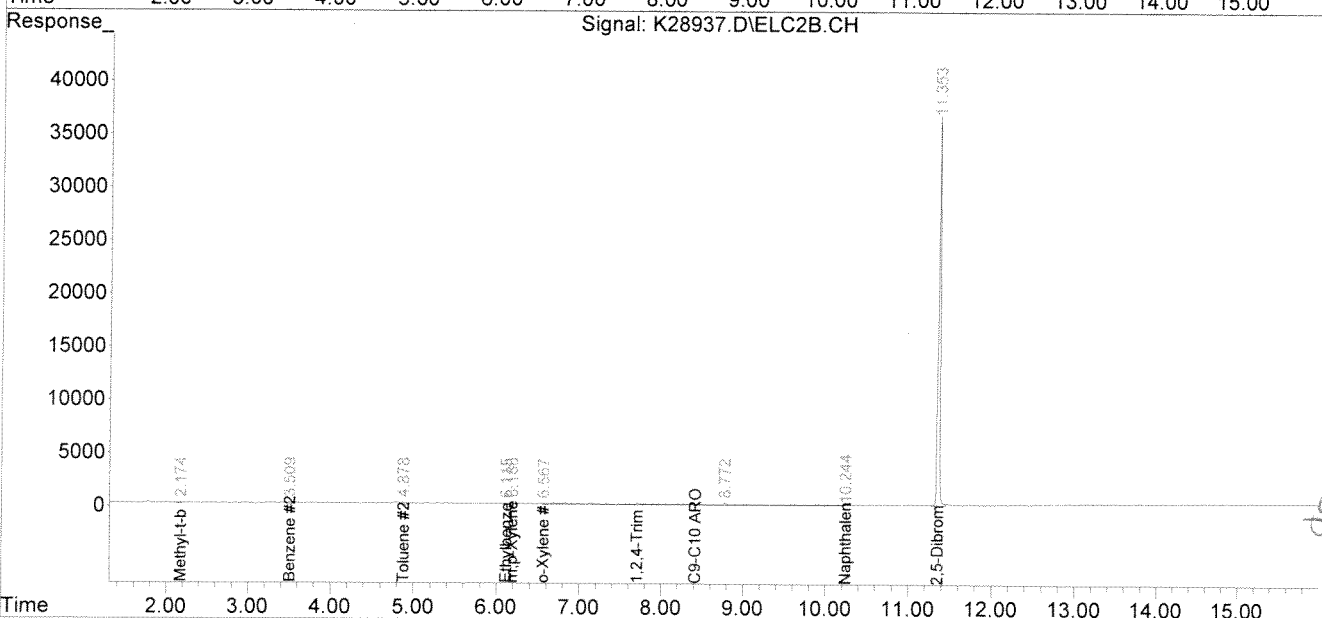
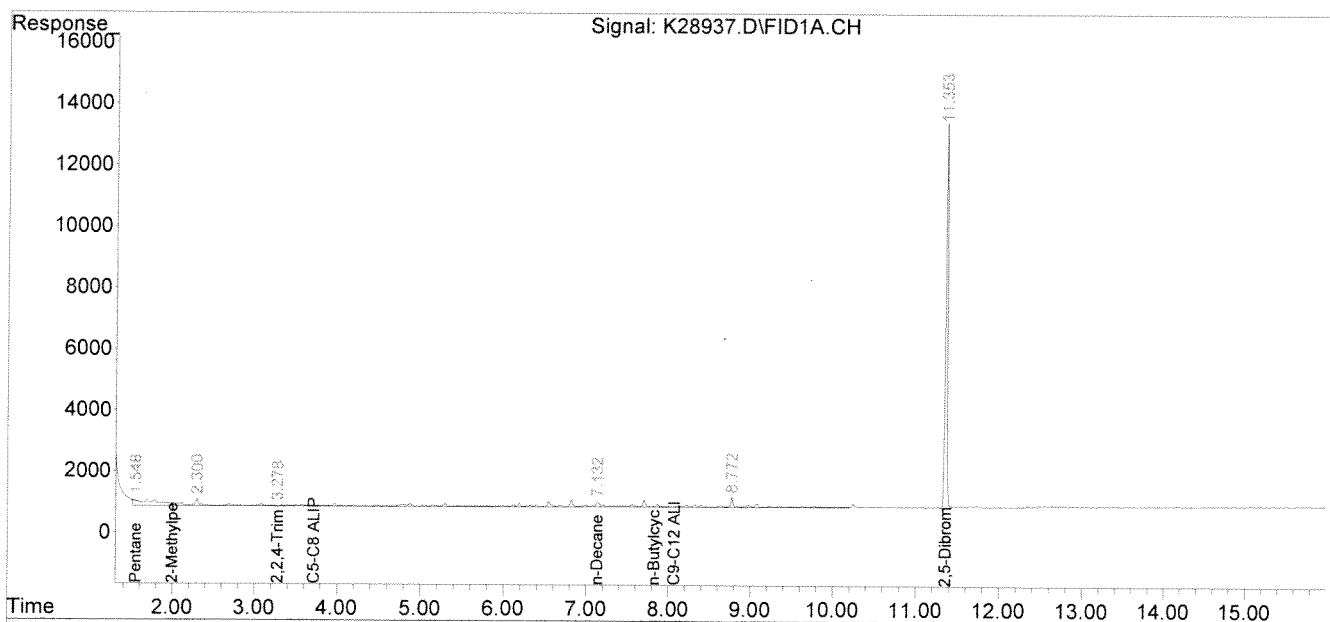
Authorized signature: M. L. Hill

Data Path : C:\msdchem\1\DATA\091610-K\
 Data File : K28937.D
 Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
 Acq On : 16 Sep 2010 4:42 pm
 Operator : JJL
 Sample : 67789-4
 Misc : 5000
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Sep 17 10:29:41 2010
 Quant Method : C:\msdchem\1\METHODS\VPH072210.M
 Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
 QLast Update : Fri Jul 23 15:04:23 2010
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

JJL 9/17/10

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



JJL

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

September 21, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: DEP 2496-10
Project Number:
Client Sample ID: Trip Blank (aq)

Lab Sample ID: 67789-5
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Analysis Date: 09/17/10

VPH ANALYTICAL RESULTS				
RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics ¹	N/A	50	µg/L	U
Unadjusted C9-C12 Aliphatics	N/A	50	µg/L	U
Benzene	C5-C8	2	µg/L	U
Ethylbenzene	C9-C12	2	µg/L	U
Methyl-tert-butyl ether	C5-C8	2	µg/L	U
Naphthalene	N/A	2	µg/L	U
Toluene	C5-C8	2	µg/L	U
m- & p-Xylenes	C9-C12	4	µg/L	U
o-Xylene	C9-C12	2	µg/L	U
C5-C8 Aliphatic Hydrocarbons ^{1,2}	N/A	50	µg/L	U
C9-C12 Aliphatic Hydrocarbons ^{1,3}	N/A	50	µg/L	U
C9-C10 Aromatic Hydrocarbons ¹	N/A	10	µg/L	U
Surrogate % Recovery (2,5-Dibromotoluene) PID				88
Surrogate % Recovery (2,5-Dibromotoluene) FID				90
Surrogate Acceptance Range				70-130%

¹ Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
² C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range
³ C9-C12 Aliphatic Hydrocarbons exclude conc. of Target Analytes eluting in that range and conc. of C9-C10 Aromatic Hydrocarbons.
 RL = Report Limit
 U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: MADEP Volatile Petroleum Hydrocarbons (VPH), ORS Division of Environmental Analysis, Revision 1.1 May 2004.

COMMENTS: Samples were received in accordance with method criteria unless noted on the sample receipt checklist.

Authorized signature: *Michael*

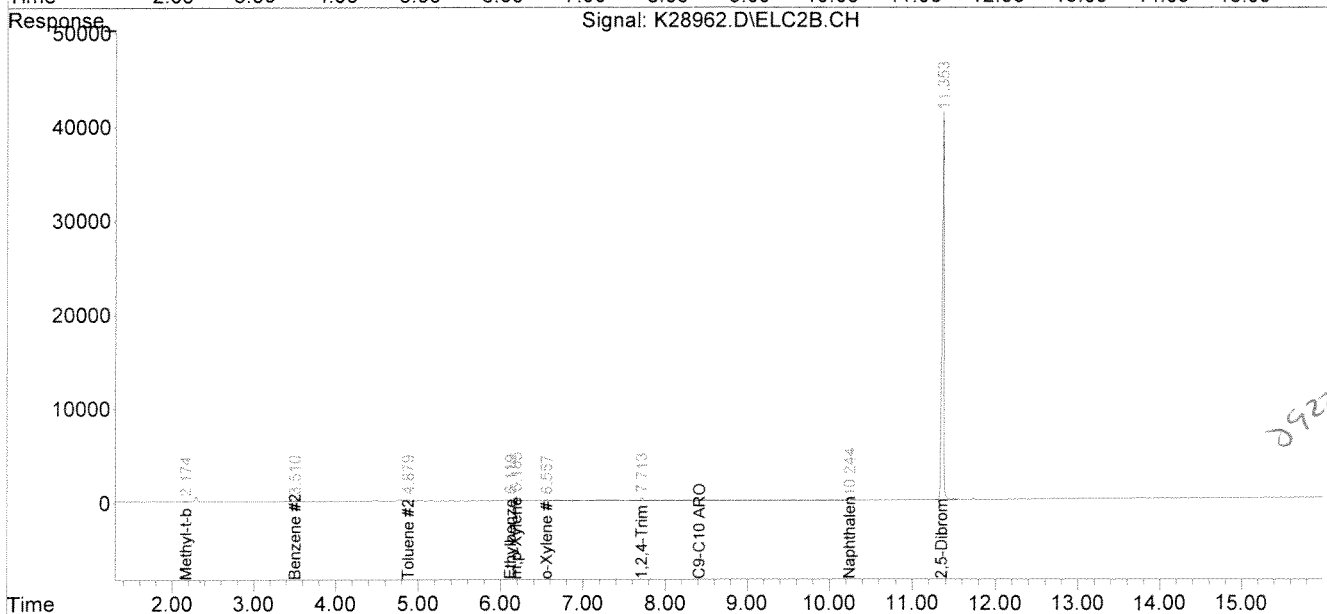
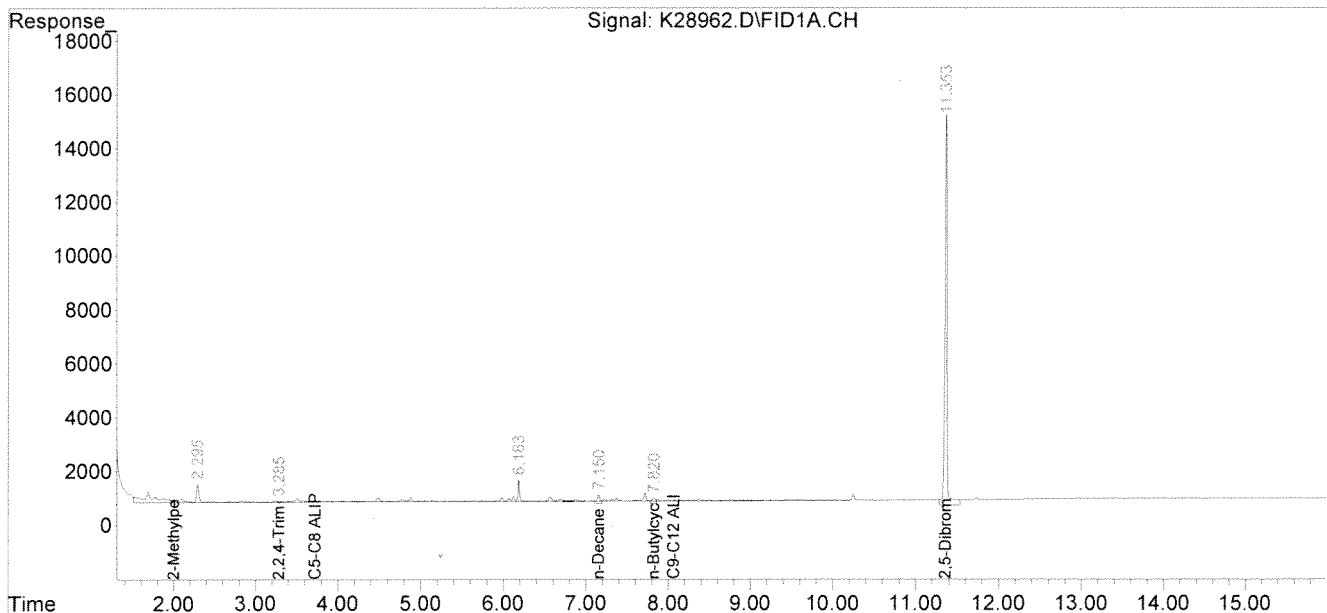
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\091710-K\
Data File : K28962.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 17 Sep 2010 3:50 pm
Operator : JJJ
Sample : 67789--5
Misc : 5000
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 20 10:45:34 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

JJG 9/20/10

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



0922w

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

September 21, 2010

CLIENT SAMPLE ID

Project Name: DEP 2496-10
Project Number:
Client Sample ID: Trip Blank (s)

SAMPLE DATA

Lab Sample ID: 67789-6
Matrix: Solid
Percent Solid: 100
Dilution Factor: 50
Collection Date: 09/10/10
Lab Receipt Date: 09/15/10
Analysis Date: 09/16/10

VPH ANALYTICAL RESULTS				
RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics ¹	N/A	2500	µg/kg	U
Unadjusted C9-C12 Aliphatics ¹	N/A	2500	µg/kg	U
Benzene	C5-C8	100	µg/kg	U
Ethylbenzene	C9-C12	100	µg/kg	U
Methyl-tert-butyl ether	C5-C8	100	µg/kg	U
Naphthalene	N/A	100	µg/kg	U
Toluene	C5-C8	100	µg/kg	U
m- & p-Xylenes	C9-C12	200	µg/kg	U
o-Xylene	C9-C12	100	µg/kg	U
C5-C8 Aliphatics Hydrocarbons ^{1,2}	N/A	2500	µg/kg	U
C9-C12 Aliphatic Hydrocarbons ^{1,3}	N/A	2500	µg/kg	U
C9-C10 Aromatic Hydrocarbons ¹	N/A	500	µg/kg	U
Surrogate % Recovery (2,5-Dibromotoluene) PID				82
Surrogate % Recovery (2,5-Dibromotoluene) FID				75
Surrogate Acceptance Range				70-130%
¹ Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. ² C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range ³ C9-C12 Aliphatic Hydrocarbons exclude conc. of Target Analytes eluting in that range and conc. of C9-C10 Aromatic Hydrocarbons. RL = Report Limit U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank				

METHODOLOGY: MADEP Volatile Petroleum Hydrocarbons (VPH), ORS Division of Environmental Analysis, Revision 1.1
May 2004

COMMENTS: Samples were received in accordance with method criteria unless noted on the sample receipt checklist.
Results are expressed on a dry weight basis.

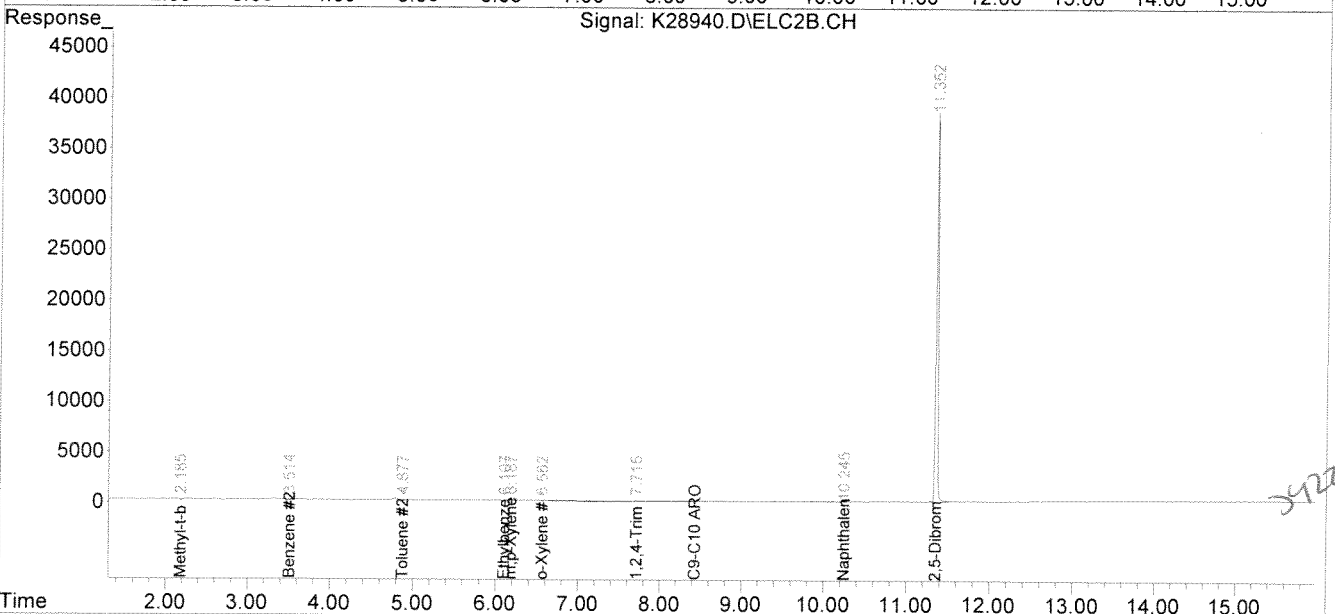
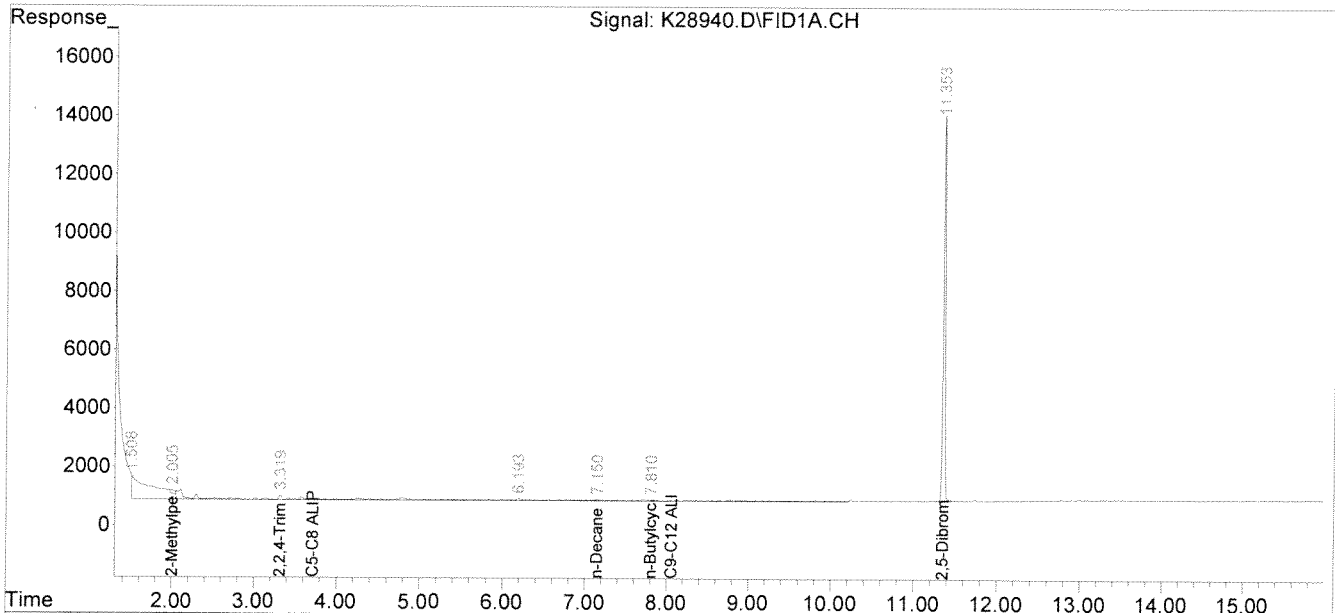
Authorized signature: *M. Whittell*

Data Path : C:\msdchem\1\DATA\091610-K\
 Data File : K28940.D
 Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
 Acq On : 16 Sep 2010 5:56 pm
 Operator : JJL
 Sample : 67789-6
 Misc : 100,10.00,SOIL
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Sep 17 10:33:12 2010
 Quant Method : C:\msdchem\1\METHODS\VPH072210.M
 Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
 QLast Update : Fri Jul 23 15:04:23 2010
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

JJL 9/17/10

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



51220

ANALYTICS SAMPLE RECEIPT CHECKLIST



AEL LAB#: 67789

COOLER NUMBER: 69

CLIENT: MEL

NUMBER OF COOLERS: 1

PROJECT: DEP 2496.10

DATE RECEIVED: 9/15/10

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 9/15/10

1. Cooler received by (initials): LT

Date Received: 9/15/10

2. Circle one:

Hand delivered
(If so, skip 3)

Shipped

3. Did cooler come with a shipping slip?

Y N/A

3a. Enter carrier name and airbill number here:

4. Were custody seals on the outside of cooler?

Y N

How many & where: _____ Seal Date: _____

Seal Name: _____

5. Did the custody seals arrive unbroken and intact upon arrival?

Y N/A

6. COC#: N/A

7. Were Custody papers filled out properly (ink, signed, etc)?

Y N

8. Were custody papers sealed in a plastic bag?

Y N

9. Did you sign the COC in the appropriate place?

Y N

10. Was the project identifiable from the COC papers?

Y N

11. Was enough ice used to chill the cooler? Y N

Temp. of cooler: 3°

B. Log-In: Date samples were logged in: 091610

By: R

12. Type of packing in cooler (bubble wrap, popcorn)

Y N

13. Were all bottles sealed in separate plastic bags?

Y N

14. Did all bottles arrive unbroken and were labels in good condition?

Y N

15. Were all bottle labels complete (ID, Date, time, etc.)

Y N *

16. Did all bottle labels agree with custody papers?

Y N

17. Were the correct containers used for the tests indicated?

Y N

18. Were samples received at the correct pH?

Y N/A

19. Was sufficient amount of sample sent for the tests indicated?

Y N

20. Were bubbles absent in VOA samples?

Y N

If NO, List Sample ID's and Lab #'s: TRIP BLANK 67789.5.A CONTAINED BUBBLE SMALLER THAN PEA SIZE

* SV.103 (67789-1.A) AND GW.104 (67789-3.A) HAD TIME OMITTED FROM LABEL

21. Laboratory labeling verified by (initials): CP

Date: 9/15/10