GEI Consultants

Geotechnical
Water Resources
Environmental and
Ecological Services

Limited Phase II Vapor Intrusion Investigation

42 School Street, Berwick, ME

Submitted to:
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333

Submitted by:
GEI Consultants, Inc.
74 Gray Road
Falmouth, ME 04105
(207) 797-8901

December 8, 2010

Project 10232-2

D. Todd Coffin, C.G., P.G.
Project Manager

Table of Contents

Appendices

A. Site Orthophoto
B. Soil Boring Logs
C. Monitoring Well Construction Logs
D. Field Data Sheets
E. Certified Laboratory Data Reports

KAW/TC/bdp:
Y:\PROJECTS\2010\102322 MDOT VI 42 School St, Berwick\Berwick Limited VI 120810.docx

Executive Summary

The following report presents the findings of a Limited Vapor Intrusion Investigation performed by GEI Consultants, Inc. (GEI). The work documented in this report was performed under federal funding received by the Maine Department of Environmental Protection (DEP) for a multi-site, statewide assessment of vapor intrusion risk at petroleum release sites.

The Limited Vapor Intrusion Investigation was performed for 42 School Street in Berwick, Maine. The 42 School Street Site consists of an approximately 0.32-acre parcel occupied by a single story Cumberland Farms, Inc. (CFI) convenience store. Cumberland Farms operates a gasoline filling station at the Site, including a pump island and three gasoline underground storage tanks (USTs).

The Phase I Environmental Site Assessment (ESA) written by Ransom Environmental Consultants, Inc. (Ransom) identified historic spills of gasoline at the Site and remediation involving excavation of gasoline contaminated soil. The potential for petroleum vapors in the Site subsurface poses vapor intrusion risk with respect to current or future buildings, utilities and neighboring properties. As a result, the Site had been identified for assessment under the Maine DEP vapor intrusion study program.

The Limited Vapor Intrusion Investigation by GEI identified no significant residual gasoline contamination of Site soils. Site remediation reports indicate releases of gasoline between 1993 and 2004. Therefore, the absence of significant soil contamination reflects either substantial natural attenuation of contamination, or the presence of impacted soils in areas not explored during the investigation program (e.g., former UST area beneath the current pump island).

Concentrations of petroleum hydrocarbons in groundwater from downgradient Site monitoring wells are below the Massachusetts vapor intrusion GW-2 standard but exceeded Maine DEP draft vapor intrusion screening levels. As a result, groundwater may be a pathway for off-site vapor migration. Concentrations of dissolved petroleum constituents exceeded Maine Maximum Exposure Guidelines at two monitoring well locations. The date indicate that releases of petroleum at the Site have reached groundwater through water table fluctuations across contaminated soils, downward migration of precipitation that comes into contact with contaminated soils, or a combination of the two.

The vapor intrusion investigation identified apparent gasoline constituents in soil gas at several locations in the vicinity of the former fuel pumps and former gasoline USTs. The detected concentrations of APH at five locations on the Site exceeded the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1). However, samples of soil gas collected from beneath the building slab and from the utility bedding of the water line identified no detected

compounds above the soil gas targets. Possible sources of the APH appear to be the former leaking USTs located in the area of the existing pump island and spills during vehicle fueling at the former pump island located in the area of the existing USTs.

The soil gas data collected to evaluate lateral attenuation indicate a decrease in APH contamination with distance from the source area. For example, a reduction in soil gas concentrations was observed between SV-4 (total hydrocarbons of 3,540 ug/m^3) and SV-6 (total hydrocarbons of 1,305 ug/m^3); SV-6 is about 30 feet upgradient of SV-4.

In summary, the investigation identified no significant soil contamination, but contamination of groundwater and soil gas was found above Maine DEP regulatory guidelines. Contaminated soil gas does not appear to be a threat to the store building, but groundwater moving off the Site could pose a vapor intrusion threat to off-Site receptors, a mix of commercial and residential properties. Site soils consist primarily of fine to medium sand, permitting moderate to high rates of soil vapor and groundwater movement. The sandy soils are also likely to reduce the likelihood of utility backfill acting as a preferred pathway for vapor migration.

The services and the contents of any project reports and associated documents provided by GEI are solely for the benefit of Maine DEP and the Site owners. Reliance or any use of this report by anyone other than Maine DEP and the Site owners, for whom it was prepared, is prohibited. Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to GEI's contract with Maine DEP. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

The Limited Vapor Intrusion Investigation was implemented in general accordance with the scope of work proposed in the Site-specific Quality Assurance Project Plan (SSQAPP). Revisions to the proposed scope of work and methodologies were implemented based on conditions encountered in the field and following consultation with Maine DEP personnel. Any revisions to the scope of work or methodologies outlined in the SSQAPP are discussed in this report.

1.0 Objectives

GEI presents this report documenting a Limited Vapor Intrusion Investigation for the site at 42 School Street in Berwick, Maine (Site). The work documented in this report was performed under federal funding received by the Maine DEP for a multi-site, statewide assessment of vapor intrusion risk at petroleum release sites.

The work was completed in accordance with the "Maine Vapor Intrusion Study Site-Specific Quality Assurance Project Plan" (SSQAPP) dated August 20, 2010 [1]. The SSQAPP was reviewed and approved by the Maine Department of Environmental Protection (Maine DEP). A Phase I ESA was completed by Ransom Environmental Consultants, Inc. (Ransom) in July 2010 [2].

The objective of the 42 School Street Site investigation was to collect data to evaluate whether contamination at the Site results in significant vapor intrusion risk and the implications relative to Maine DEP vapor intrusion regulations and guidance. The data from this Site investigation will be integrated with data from nine other sites for evaluation of vapor intrusion risk and to develop guidance for future vapor intrusion investigations.

2.0 Site Background

The 42 School Street Site consists of an approximately 0.32-acre parcel occupied by a single story CFI convenience store. Cumberland Farms operates a gasoline filling station at the Site, including a pump island and three gasoline USTs. Refer to Fig. 1 for the Site Location Plan. Surrounding neighbors include a vacant building to the west, formerly housing the Prime Tanning Facility, a church, residences, a school, and Stone Agency Real Estate business.

The Phase I ESA written by Ransom [2] identified historic spills of gasoline at the Site and remediation involving excavation of gasoline contaminated soil. The potential for petroleum vapors in the Site subsurface poses vapor intrusion risk with respect to current or future buildings, utilities and neighboring properties. As a result, the Site had been identified for assessment under the Maine DEP vapor intrusion study program.

As reported in their Phase I ESA, Ransom identified the following Recognized Environmental Conditions at the Site:

1. "Current and historic use of the Site as a gasoline filling station with reported, potentially unreported, and potential unknown releases of Oil and Hazardous Materials (OHM) associated with existing and/or former USTs containing gasoline, their product piping, and/or fuel dispensing activities at the Site.

2. Documented soil contamination associated with the 1997 UST removal, which reportedly remains at the Site. This residual contamination has the potential to impact on-site soil vapor conditions thereby representing a vapor intrusion risk to the Site building. Furthermore, petroleum contaminants have the potential to migrate off-site in the form of soil vapor through preferential pathways such as underground utility corridors, or as dissolved-phase contaminants in groundwater. Off-site migration of petroleum contaminants may represent a vapor intrusion risk to surrounding structures such as the school building or nearby residential properties."

Based on the available environmental data for the Site, GEI identified two primary Areas of Concern (AOCs):

AOC 1 – Former Pump Island

In 1993, a vehicular accident occurred at the gas pump causing a release of approximately 45-gallons of gasoline. Twenty gallons of gasoline were estimated to have been recovered. In 1997, UST piping replacement led to the discovery and excavation of approximately 42 tons of contaminated soils. The spill was believed to have resulted from overfills and piping or fitting leaks.

In 2003, approximately 10-gallons of unleaded gasoline were released on the concrete pump island pad as a result of a customer accidentally not attaching the fuel line to his vehicle's tank when he attempted to fill it. Product was not recovered, and was expected to have contaminated onsite media (concrete, soil).

Another similar incident occurred in 2004, where approximately five to ten-gallons of gasoline were released at the Site by a customer while fueling their automobile. Clean-up of the material was completed by the Berwick Fire Department using spill equipment (booms, sorbent socks).

AOC 2 – Former Gasoline UST Area (4 6,000 gallon fill tanks)

In 1991, a Maine DEP inspection documented a spill involving a release of an undisclosed quantity of unleaded gasoline which was identified by the fourth failure of a monthly statistical inventory analysis (SIA) for the two former 6,000-gallon regular unleaded gasoline USTs.

In 1997, during the removal of the four 6,000-gallon ASTs, nine gallons of gasoline were released from the USTs. Approximately 208 tons of contaminated soils were reported as excavated and removed from the Site.

A spill including approximately 50-gallons of super unleaded gasoline occurred during the transfer of product form the delivery tank to the UST in January 1998. The release impacted snow and ice, and reached a storm drain, reportedly impacting inland surface water. An estimated 50 gallons of contaminated snow and ice were removed from the Site.

All of the reported spills were managed through the Maine DEP, and "no further response action" was noted in each instance.

The Site-specific quality assurance project plan (SSQAPP) developed by GEI focused on assessment of the former fuel pump area and former UST removal area where incomplete removal of gasoline-contaminated soils was documented. The contaminants of concern (COCs) include volatile organic compounds contained in gasoline such as benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE).

3.0 Methodology

3.1 Introduction

Field activities were conducted by GEI and Maine DEP personnel on September 7 and 8, 2010, and are summarized in the following sections. The Limited Vapor Intrusion Investigation was designed to characterize the targeted AOCs and associated COCs as described in the SSQAPP. The scope of work for the Limited Vapor Intrusion Investigation included the collection of soil, water, and soil vapor samples from a series of soil borings, monitoring wells, and soil vapor points, as well as collection of a sub-slab soil vapor sample from the interior of the Subject Property building. Sampling locations are shown on Fig. 2; an orthophoto of the Site with exploration locations is included in Appendix A.

3.2 Soil Borings

Soil borings (B1, B3, B4 and B5) for installation of Microwells MW-1, MW-3, MW-4, and MW-5 and soil vapor points SV-1, SV-3, SV-4, SV-5, and SV-6 were completed using GeoProbe® direct-push methodology on September 8, 2010. Soil vapor point H1-SV-1 was installed using a shop vacuum and hand tools.

Soil samples at the GeoProbe locations were collected continuously utilizing a five-foot macro core sampler equipped with dedicated disposable acetate sampling sleeves. Soils encountered in the soil borings and hand auger sample location were classified using the Bermister Soil Classification System.

Soil samples collected from the borings were screened in the field for volatile organic compounds using a photo-ionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene and an instrument set point of 1. Soils from borings B1, B3, B4 and B5 were sampled for laboratory testing of VPH and total organic carbon; these soils appeared to be located within or near petroleum source areas.

3.3 Groundwater Sampling

The Microwells were constructed in borings MW-1, MW-3, MW-4, and MW-5 using 1-inch diameter schedule 40 polyvinyl chloride (PVC) casing. The borings were advanced to a depth of approximately 5 ft. below the water table and the well was screened at the bottom 10 ft. of the boring using 0.010-inch machine-slotted PVC casing. Descriptions of the materials encountered are included on the Soil Boring Logs (Appendix B). Well construction details are included on the Monitoring Well Installation Logs (Appendix C).

Groundwater samples were collected from the four monitoring wells on September 8, 2010. The wells were slowly purged with a peristaltic pump and dedicated tubing at a rate that would maintain a steady water level in the well until field readings of pH, specific conductivity,

temperature, oxidation reduction potential, turbidity, and dissolved oxygen stabilized. Groundwater samples were transferred directly to laboratory supplied sample containers, and placed under refrigerated conditions pending transport to the analytical laboratory.

3.4 Soil Vapor Sampling

Exterior soil gas samples were collected using 2.7 liter SUMMA canisters over a 15-minute period. The soil gas samples were collected once the probe or hand auger reached the desired depth for investigation. Probes were purged with a peristaltic pump using a flow rate of 200 mL/min until a minimum of three tubing volumes had been removed.

The soil gas sampling was conducted in accordance with MDEP SOP 21, "Direct Push Vapor Sample Collection Techniques – PRT System or Vapor Implant, May 2004" with the exception of the vacuum/hand-dug location. At that location, the vapor implant was installed by hand within the backfill of utility line. Soil vapor was screened in the field for oxygen and carbon dioxide to evaluate the vapor probe seal and subsurface conditions and for methane to evaluate potential biodegradation. Maine DEP obtained measurements of soil vacuum pressure at the soil vapor sampling locations. Paperwork associated with soil gas sampling is included in Appendix D.

3.5 Sub-Slab Vapor Sampling

A sub-slab sample (SS-1) was collected to evaluate vapor exposure risk within the Site building. The sub-slab sample was located inside the storage room of the Cumberland Farms store. A hole was cored through the concrete floor with a rotary percussion drill, followed by insertion of Teflon-lined tubing and stainless steel fittings sealed with hydraulic cement.

The sub-slab sample was collected in a 2.7-liter SUMMA canister over a 15-minute period. Sub-slab soil vapor was screened in the field for oxygen and carbon dioxide to evaluate the vapor probe seal and subsurface conditions. Maine DEP obtained measurements of soil vacuum pressure at the sub-slab vapor sampling location. Paperwork associated with sub-slab installation and sampling is included in Appendix D.

3.6 Laboratory Testing

Soil and groundwater samples were submitted to Katahdin Analytical Services of Scarborough, Maine for laboratory analysis. The soil gas samples were submitted to Alpha Analytical of Mansfield, Massachusetts for laboratory analysis. A checklist of chemical testing completed at each exploration location is included in Table 1.

Soils were tested for volatile petroleum hydrocarbons (VPH) and total organic carbon (TOC) to evaluate potential carbon absorption characteristics and residual contaminant concentrations.

The groundwater samples were tested for VPH. The soil vapor samples were tested for air phase petroleum hydrocarbons (APH), oxygen and carbon dioxide.

Samples collected for laboratory analysis during this investigation were handled and transported under chain-of-custody procedures. Chain-of-custody documentation is included in the laboratory reports (Appendix E).

3.7 Deviations from Work Plan

We did not investigate in the area approximately 20 feet northwest of the dumpsters, originally designed to assess soil contamination that may have been impacted by spills. We did an additional investigation south of the pump island (a boring, soil vapor point, and monitoring well) and west of the pump island (a boring). We also added monitoring well MW-4 at the southeast corner of the pump island, which was originally scoped as a soil vapor point only. Soils were not screened for metals using a Niton X-Ray Fluorescence (XRF) instrument as identified in the SSQAPP.

4.0 Results

The following subsections document the results of the Limited Vapor Intrusion investigation activities. A summary of field and laboratory testing is included in Table 1. Laboratory analytical results are summarized by media in Table 2 through Table 4. Certified laboratory analytical reports are included in Appendix E.

Analytical results were compared to regulatory guidelines published by the Maine DEP and the Massachusetts Department of Environmental Protection. These guidelines apply to the remediation of petroleum contaminated sites, vapor intrusion investigation and response, and remedial action guidelines for soil and groundwater contaminated with hazardous substances. The guidelines include:

1. Petroleum Soil Remediation Guideline (Excavation Construction Worker and Outdoor Commercial Worker).
2. Current Groundwater Maximum Exposure Guideline.
3. Massachusetts Groundwater Standard (GW-2).
4. Maine Groundwater VI Screening Guideline (draft).
5. Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1).

4.1 Subsurface Conditions

According to the 2004 Surficial Geological Map of Maine, surficial soils at the Site are identified as glaciomarine deposits (Ms), which consist of sand, gravel, and minor amounts of silt. The soil borings conducted at the Site encountered primarily sand and gravel, consistent with the geologic mapping. The upper 4 to 6 ft of soil in many areas is likely fill placed to support development of the property. Bedrock was not encountered during drilling which was terminated at a maximum depth of 15 ft below grade.

Groundwater was encountered at depths ranging from 7.7 to 9.3 ft below grade. Based on measured groundwater elevations, groundwater is interpreted to flow generally west-southwest towards the Salmon Falls River. Groundwater elevations were measured on September 8, 2010. A groundwater contour plan is included in Fig 3.

4.2 Source Area Soil

PID screening results are listed on the boring logs. No PID readings were detected above zero parts per million. VPH were not detected in B1, B3, B4, or B5. We noted no visual or olfactory evidence of old, weathered, or new fuel in the soil borings. The VPH results are consistent with the field PID readings.

TOC was detected in soils at two of the four borings submitted for analysis at concentrations ranging from 810 mg/kg (B1) to 3,200 mg/kg (B5). With the exception of B5, all TOC concentrations were less than 1,000 mg/kg and may be indicative of naturally occurring organic carbon available for absorption. The higher concentration at B5 appears to indicate impact from gasoline contamination given similar soil properties as the other boring locations (sand).

4.3 Groundwater

We observed the installation of four monitoring wells (MW-1, MW-3, MW-4, and MW-5). Monitoring wells MW-1, MW-3, and MW-4 were installed of the former UST area and monitoring well MW-5 was installed in the former pump island area.

VPH was detected in all monitoring wells except for MW-4. The Current Groundwater Maximum Exposure Guideline was exceeded in MW-1 (benzene) and MW-5 (C5-C8 aliphatic hydrocarbons, C9-C10 aromatic hydrocarbons, and benzene). The detection limits for VPH were below the maximum exposure guideline except for benzene. The guideline is 4 ug/l and the concentration of benzene was not detected above 5 ug/l in MW-3 or MW-4.

Petroleum constituent concentrations in MW-1 and MW-5 exceeded the Maine DEP Draft Groundwater Vapor Intrusion Screening Levels, but were below guidelines published by the Massachusetts Department of Environmental Protection (GW-2 Standard). Laboratory detection limits for the remaining monitoring wells were substantially greater than the Maine DEP vapor screening levels. However, soil vapor at these locations was characterized directly by collecting soil vapor samples, as discussed in Sections 3.4 and 4.4.

4.4 Soil Vapor

1,3-butadiene and benzene were detected above the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1) at SV-1 (downgradient of former UST area), SV-4 (cross/upgradient of former UST area), and SV-6 (former building footprint). Additional detected exceedances include 1,3-butadiene at SV-3 (cross gradient of former UST area), benzene at SV-5 (former pump island area), and C5-C8 aliphatic hydrocarbons at SV-4 (cross/upgradient of former UST area). In some cases, laboratory reporting limits of 1,3-butadiene, benzene, and naphthalene were greater than the soil gas target.

Sample SV-6 was collected to evaluate lateral attenuation and was located approximately 30 feet from SV-4 (former UST source area sample). A reduction in soil gas concentrations was observed between SV-4 (total hydrocarbons of 3,540 ug/m^3) and SV-6 (total hydrocarbons of 1,305 ug/m^3).

Sample H1-SV-1 was collected to evaluate utility bedding of the water line as a possible preferential pathway for soil gas migration. Detected concentrations of APH in this sample were

below the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1) and generally lower than soil gas concentrations in neighboring soil gas sample location (SV-4).

The sub-slab sample (SS-1) inside the CFI building was approximately 65 feet east of SV-4 where the highest soil gas concentrations were detected. Relatively low concentrations of total APH (550 ug/m^3) were detected in SS-1.

Field measurements for methane at each soil gas sample location were non-detect. Subsurface pressure readings were less than 0.005 inches of water; H1-SV-1 (utility backfill) was not measured.

4.5 Quality Assurance

Concentrations of carbon dioxide in the soil vapor were consistently at least an order of magnitude greater than those in the ambient air. Oxygen concentrations in the soil vapor were 18 to 98 percent of those detected in the ambient air. The enriched carbon dioxide in the soil vapor indicates a good surface seal at the soil vapor sampling location; the oxygen data is inconclusive relative to surface seal quality.

GEI also collected oxygen and carbon dioxide readings in the field prior to and after collecting the analytical sample with the Summa can. The readings before and after the sample were within 20% of each other, indicating no obvious breach of the surface seal during sampling. The oxygen data is less conclusive given similar atmospheric and subgrade concentrations at some locations.

Laboratory test results for oxygen in soil vapor were within 1 to 3 percent of the values obtained with the field instrument, indicating generally good correlation. The laboratory results for carbon dioxide could not be directly compared to the field data given exceedance of the field instrument maximum of 1 percent for each sample (except for at SV-1); the laboratory results ranged from about 1.2 to 18.4 percent. At SV-1, the laboratory result for carbon dioxide was only 4% less than the field data.

5.0 Conclusions

The Limited Vapor Intrusion Investigation by GEI identified no significant residual gasoline contamination of Site soils. Site remediation reports indicate releases of gasoline between 1993 and 2004. The absence of significant soil contamination indicates either substantial natural attenuation of contamination, or the presence of impacted soils in areas not explored during the investigation program (e.g., former UST area beneath the current pump island).

Concentrations of petroleum hydrocarbons in groundwater from downgradient Site monitoring wells are below the Massachusetts vapor intrusion GW-2 standard but exceeded Maine DEP draft vapor intrusion screening levels. As a result, groundwater may be a pathway for off-site vapor migration. Concentrations of dissolved petroleum constituents exceeded Maine Maximum Exposure Guidelines at two monitoring well locations. The date indicate that releases of petroleum at the Site have reached groundwater through water table fluctuations across contaminated soils, downward migration of precipitation that comes into contact with contaminated soils, or a combination of the two.

The vapor intrusion investigation identified apparent gasoline constituents in soil gas at several locations in the vicinity of the former fuel pumps and former gasoline USTs. The detected concentrations of APH at five locations on the Site exceeded the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1). However, samples of soil gas collected from beneath the building slab and from the utility bedding of the water line identified no detected compounds above the soil gas targets. Possible sources of the APH appear to be the former leaking USTs located in the area of the existing pump island and spills during vehicle fueling at the former pump island located in the area of the existing USTs.

The soil gas data collected to evaluate lateral attenuation indicate a decrease in APH contamination with distance from the source area. For example, a reduction in soil gas concentrations was observed between SV-4 (total hydrocarbons of 3,540 ug/m^3) and SV-6 (total hydrocarbons of 1,305 ug/m^3); SV-6 is about 30 feet upgradient of SV-4.

In summary, the investigation identified no significant soil contamination, but contamination of groundwater and soil gas was found above Maine DEP regulatory guidelines. Contaminated soil gas does not appear to be a threat to the store building, but groundwater moving off the Site could pose a vapor intrusion threat to off-Site receptors, a mix of commercial and residential properties. Site soils consist primarily of fine to medium sand, permitting moderate to high rates of soil vapor and groundwater movement. The sandy soils are also likely to reduce the likelihood of utility backfill acting as a preferred pathway for vapor migration.

The services and the contents of any project reports and associated documents provided by GEI are solely for the benefit of Maine DEP and the Site owners. Reliance or any use of this report by anyone other than Maine DEP and the Site owners, for whom it was prepared, is prohibited. Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to GEI's contract with Maine DEP. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

The Limited Vapor Intrusion Investigation was implemented in general accordance with the scope of work proposed in the SSQAPP. Revisions to the proposed scope of work and methodologies were implemented based on conditions encountered in the field and following consultation with Maine DEP personnel. Any revisions to the scope of work or methodologies outlined in the SSQAPP are discussed in this report.

6.0 Signature(s) of Environmental Professional(s)

GEI performed services in a manner consistent with the guidelines set forth in the American Society for Testing and Materials (ASTM) E 1903-97 (Standard Practices for Environmental Site Assessments: Phase II Environmental Site Assessment Process), and in accordance with the scope of work and standard operating procedures outlined in the SSQAPP.

The following GEI personnel possess the sufficient training and experience necessary to conduct a Phase II Environmental Site Assessment, and from the information generated by such activities, have the ability to develop opinions and conclusions regarding recognized environmental conditions in connection with the Site.

Environmental Professionals:

Krista A. Wolfe
Environmental Engineer III

D. Todd Coffin, C.G., P.G.
Senior Geologist

7.0 References

[1] GEI, 2010. "Maine Vapor Intrusion Study Site-Specific Quality Assurance Project Plan (SSQAPP)," August 20.

[2] Ransom Environmental Inc., 2010. "Phase I Environmental Site Assessment, 42 School Street, Berwick, Maine," July 16.

Table 1. Laboratory Testing and Field Screening Summary
Cumberland Farms
42 School Street
Berwick, Maine

	Media			Laboratory Analyses					Field Screening				
	Soil	**GW**	**SV**	**VPH**	**TOC**	**APH**	**CO_2**	**O_2**	**CO_2**	**O_2**	**CH_4**	**VOC**	**YSI**
B1	X			X	X							X	
B3	X			X	X							X	
B4	X			X	X							X	
B5	X			X	X							X	
MW-1		X		X									X
MW-3		X		X									X
MW-4		X		X									X
MW-5		X		X									X
H1-SV-1			X			X	X	X	X	X	X	X	
SV-1			X			X	X	X	X	X	X	X	
SV-3			X			X	X	X	X	X	X	X	
SV-4			X			X	X	X	X	X	X	X	
SV-5			X			X	X	X	X	X	X	X	
SV-6			X			X	X	X	X	X	X	X	
SS-1			X			X	X	X	X	X	X	X	

General Notes:

1. GW = Groundwater
2. SV = Soil Vapor
3. VPH = Volatile Petroleum Hydrocarbons
4. TOC = Total Organic Carbon
5. APH = Aromatic Petroleum Hydrocarbons
6. CO_2 = Carbon Dioxide
7. O_2 = Oxygen
8. CH_4 = Methane
9. YSI = Parameters typically read on a YSI brand instrument, including pH, temperature, specific conductivity, turbidity, oxidation-reduction potential, and dissolved oxygen.

Table 2. Chemical Testing Results - Soil
Cumberland Farms
42 School Street
Berwick, Maine

Method			D2216			LLOYDKAHN			MADEP-VPH								
Parameter			SOLIDS-TOTAL RESIDUE (TS)			TOTAL ORGANIC CARBON			C5-C8 ALIPHATIC HYDROCARBONS			C9-C10 AROMATIC HYDROCARBONS			C9-C12 ALIPHATIC HYDROCARBONS		
Sample Point	Sample Date/Time	Depth (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
B1	9/8/2010 8:15 AM	6.5		92	%		810	UG/G	<	26,000	UG/KG	<	26,000	UG/KG	<	26,000	UG/KG
B3	9/8/2010 10:03 AM	5		91	%	<	440	UG/G	<	27,000	UG/KG	<	27,000	UG/KG	<	27,000	UG/KG
B4	9/8/2010 10:43 AM	5		92	%	<	430	UG/G	<	28,000	UG/KG	<	28,000	UG/KG	<	28,000	UG/KG
B5	9/8/2010 11:30 AM	5		92	%		3200	UG/G	<	27,000	UG/KG	<	27,000	UG/KG	<	27,000	UG/KG
PETROLEUM SOIL REMEDIATION GUIDELINE - EXCAVATION CONSTRUCTION WORKER				NA			NA			10000000	UG/KG		5500000	UG/KG		9800000	UG/KG
PETROLEUM SOIL REMEDIATION GUIDELINE - OUTDOOR COMMERCIAL WORKER				NA			NA			10000000	UG/KG		5100000	UG/KG		10000000	UG/KG

General Notes:
1. UG/G = micrograms per gram.
2. UG/KG = micrograms per kilogram.
3. NA = not available.
4. < = not detected above reporting limit (under Concentration).
5. Generally, analytes detected in at least one sample are reported here. For a complete list of analytes, see the laboratory data sheets.

Table 3. Chemical Testing Results - Groundwater
Cumberland Farms
42 School Street
Berwick, Maine

Method			MADEP-VPH																
Parameter		Screened	C5-C8 ALIPHATIC HYDROCARBONS			C9-C10 AROMATIC HYDROCARBONS			C9-C12 ALIPHATIC HYDROCARBONS			BENZENE			ETHYLBENZENE			M,P-XYLENE		
Sample Point	Sample Date/Time	Interval (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
MW-1	9/8/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-1	9/8/2010 11:00 AM	4.5-14.5	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**		**140**	**UG/L**		**13**	**UG/L**	**<**	**5**	**UG/L**	<	10	UG/L
MW-1	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-1	9/20/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-3	9/8/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-3	9/8/2010 2:40 PM	4.5-14.5	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**	**<**	**5**	**UG/L**	**<**	**5**	**UG/L**	<	10	UG/L
MW-3	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-3	9/20/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-4	9/8/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-4	9/8/2010 11:50 AM	4.5-14.5	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**	**<**	**5**	**UG/L**	**<**	**5**	**UG/L**	<	10	UG/L
MW-4	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-5	9/8/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-5	9/8/2010 12:40 PM	4.5-14.5		**360**	**UG/L**		**540**	**UG/L**		**140**	**UG/L**		**130**	**UG/L**		**11**	**UG/L**		11	UG/L
MW-5	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
MW-5	9/20/2010	4.5-14.5		NT			NT			NT			NT			NT			NT	
CURRENT MAXIMUM EXPOSURE GUIDELINE				300	UG/L		200	UG/L		700	UG/L		4	UG/L		30	UG/L		NA	
MAINE'S DRAFT VAPOR INTRUSION SCREENING LEVELS				0.77	UG/L		32	UG/L		0.64	UG/L		1.4	UG/L		3	UG/L		NA	
MASSACHUSETTS GROUNDWATER STANDARD (GW-2)				3000	UG/L		7000	UG/L		5000	UG/L		2000	UG/L		20000	UG/L		NA	

General Notes:
1. UG/L = micrograms per liter.
2. IN H20 = inches of water.
3. NT = not tested.
4. NA = not available.
5. SD FT = site datum (feet).
6. FMP = feet from measuring point.
7. < = not detected above reporting limit (under Concentration).
8. Values in bold exceed an applicable guideline.
9. Generally, analytes detected in at least one sample are reported here. For a complete list of analytes, see the laboratory data sheets.

Table 3. Chemical Testing Results - Groundwater
Cumberland Farms
42 School Street
Berwick, Maine

Method												FIELD										
Parameter		Screened	METHYL-TERT-BUTYL ETHER (MTBE)			O-XYLENE			TOLUENE			SUBSURFACE PRESSURE			MEASURING POINT ELEVATION			WATER LEVEL DEPTH			WATER LEVEL ELEVATION		
Sample Point	Sample Date/Time	Interval (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
MW-1	9/8/2010	4.5-14.5		NT			NT			NT			NT			93.59	SD FT		9.32	FMP		84.27	SD FT
MW-1	9/8/2010 11:00 AM	4.5-14.5		20	UG/L	<	5	UG/L	<	5	UG/L		NT			NT			NT			NT	
MW-1	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			9.3	FMP		NT	
MW-1	9/20/2010	4.5-14.5		NT			NT			NT		<	0.005	IN H20		NT			NT			NT	
MW-3	9/8/2010	4.5-14.5		NT			NT			NT			NT			93.63	SD FT		9.17	FMP		84.46	SD FT
MW-3	9/8/2010 2:40 PM	4.5-14.5		5.1	UG/L	<	5	UG/L	<	5	UG/L		NT			NT			NT			NT	
MW-3	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			9.1	FMP		NT	
MW-3	9/20/2010	4.5-14.5		NT			NT			NT		<	0.005	IN H20		NT			NT			NT	
MW-4	9/8/2010	4.5-14.5		NT			NT			NT			NT			94.45	SD FT		9.22	FMP		85.23	SD FT
MW-4	9/8/2010 11:50 AM	4.5-14.5	<	5	UG/L	<	5	UG/L	<	5	UG/L		NT			NT			NT			NT	
MW-4	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			9.2	FMP		NT	
MW-5	9/8/2010	4.5-14.5		NT			NT			NT			NT			93.76	SD FT		7.67	FMP		86.09	SD FT
MW-5	9/8/2010 12:40 PM	4.5-14.5		29	UG/L		13	UG/L		110	UG/L		NT			NT			NT			NT	
MW-5	9/9/2010	4.5-14.5		NT			NT			NT			NT			NT			7.7	FMP		NT	
MW-5	9/20/2010	4.5-14.5		NT			NT			NT		<	0.005	IN H20		NT			NT			NT	
CURRENT MAXIMUM EXPOSURE GUIDELINE				35	UG/L		NA			600	UG/L		NA			NA			NA			NA	
MAINE'S DRAFT VAPOR INTRUSION SCREENING LEVELS				390	UG/L		NA			3800	UG/L		NA			NA			NA			NA	
MASSACHUSETTS GROUNDWATER STANDARD (GW-2)				50000	UG/L		NA			50000	UG/L		NA			NA			NA			NA	

General Notes:
1. UG/L = micrograms per liter.
2. IN H20 = inches of water.
3. NT = not tested.
4. NA = not available.
5. SD FT = site datum (feet).
6. FMP = feet from measuring point.
7. < = not detected above reporting limit (under Concentration).
8. Values in bold exceed an applicable guideline.
9. Generally, analytes detected in at least one sample are reporte

Table 4. Chemical Testing Results - Soil Gas
Cumberland Farms
42 School Street
Berwick, Maine

Method			EPA METHOD 3C						FIELD											
Parameter			CARBON DIOXIDE			OXYGEN GAS			CARBON DIOXIDE			METHANE			OXYGEN GAS			PID SOIL GAS SCREEN		
Sample Point	Sample/Field Test Date/Time	Depth (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
H1-SV-1	9/8/2010	Ambient		NT			NT			0.03	%		NT			20.7	%		NT	
H1-SV-1	9/8/2010 11:33 AM	2.58		NT			NT		>	1	%	<	0.000001	%		9.7	%		0.00005	%
H1-SV-1	9/8/2010 11:46 AM	2.58	D	9.95	%	D	8.33	%	>	1	%		NT			10.9	%		NT	
SV-1	9/8/2010	Ambient		NT			NT			0.03	%		NT			20.9	%		NT	
SV-1	9/8/2010 10:46 AM	6		NT			NT			0.435	%	<	0.000001	%		20	%		0.00008	%
SV-1	9/8/2010 10:57 AM	6	D	0.417	%	D	18.4	%		0.55	%		NT			19.7	%		NT	
SV-1	9/20/2010	6		NT			NT			NT			NT			NT			NT	
SV-3	9/8/2010	Ambient		NT			NT			0.03	%		NT			20	%		NT	
SV-3	9/8/2010 2:35 PM	7		NT			NT		>	1	%	<	0.000001	%		16.3	%		0.00009	%
SV-3	9/8/2010 2:55 PM	7	D	3.23	%	D	15.5	%	>	1	%		NT			16.9	%		NT	
SV-3	9/20/2010	7		NT			NT			NT			NT			NT			NT	
SV-4	9/8/2010	Ambient		NT			NT			0.04	%		NT			20.4	%		NT	
SV-4	9/8/2010 1:50 PM	7		NT			NT		>	1	%	<	0.000001	%		3.6	%		0.0002	%
SV-4	9/8/2010 2:03 PM	7	D	18.4	%	<	2.13	%	>	1	%		NT			3.4	%		NT	
SV-4	9/20/2010	7		NT			NT			NT			NT			NT			NT	
SV-5	9/8/2010	Ambient		NT			NT			0.03	%		NT			20.4	%		NT	
SV-5	9/8/2010 12:30 PM	5		NT			NT		>	1	%	<	0.000001	%		10.8	%		0.00007	%
SV-5	9/8/2010 12:43 PM	5	D	8.58	%	D	8.70	%	>	1	%		NT			10.3	%		NT	
SV-5	9/20/2010	5		NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010	Ambient		NT			NT			0.03	%		NT			20.5	%		NT	
SV-6	9/8/2010 12:55 AM	7		NT			NT		>	1	%	<	0.000001	%		12.7	%		0.00017	%
SV-6	9/8/2010 1:22 PM	7		NT			NT		>	1	%		NT			12.5	%		NT	
SV-6	9/8/2010 1:32 PM	7	D	6.93	%	D	11.0	%		NT			NT			NT			NT	
SV-6	9/20/2010	7		NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010	Ambient		NT			NT			0.2	%		NT			20.6	%		NT	
SS-1	9/8/2010 1:45 PM	0.68		NT			NT			0.2	%	<	0.000001	%		20.1	%		0	%
SS-1	9/8/2010 2:00 PM	0.68	D	1.23	%	D	17.6	%		0.2	%		NT			20	%		NT	
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)				NA			NA			NA			NA			NA			NA	

General Notes:
1. UG/M3 = micrograms per cubic meter.
2. IN H20 = inches of water.
3. NT = not tested.
4. NA = not available.
5. FMP = feet from measuring point.
6. < = not detected above reporting limit (under Concentration).
7. > = greater than the reporting limit (under Concentration).
8. D = sample result that required dilution.
9. Values in bold exceed the applicable guideline.
10. Generally, analytes detected in at least one sample are reported here. For a complete list of analytes, see the laboratory data sheets.

Table 4. Chemical Testing Results - Soil Gas
Cumberland Farms
42 School Street
Berwick, Maine

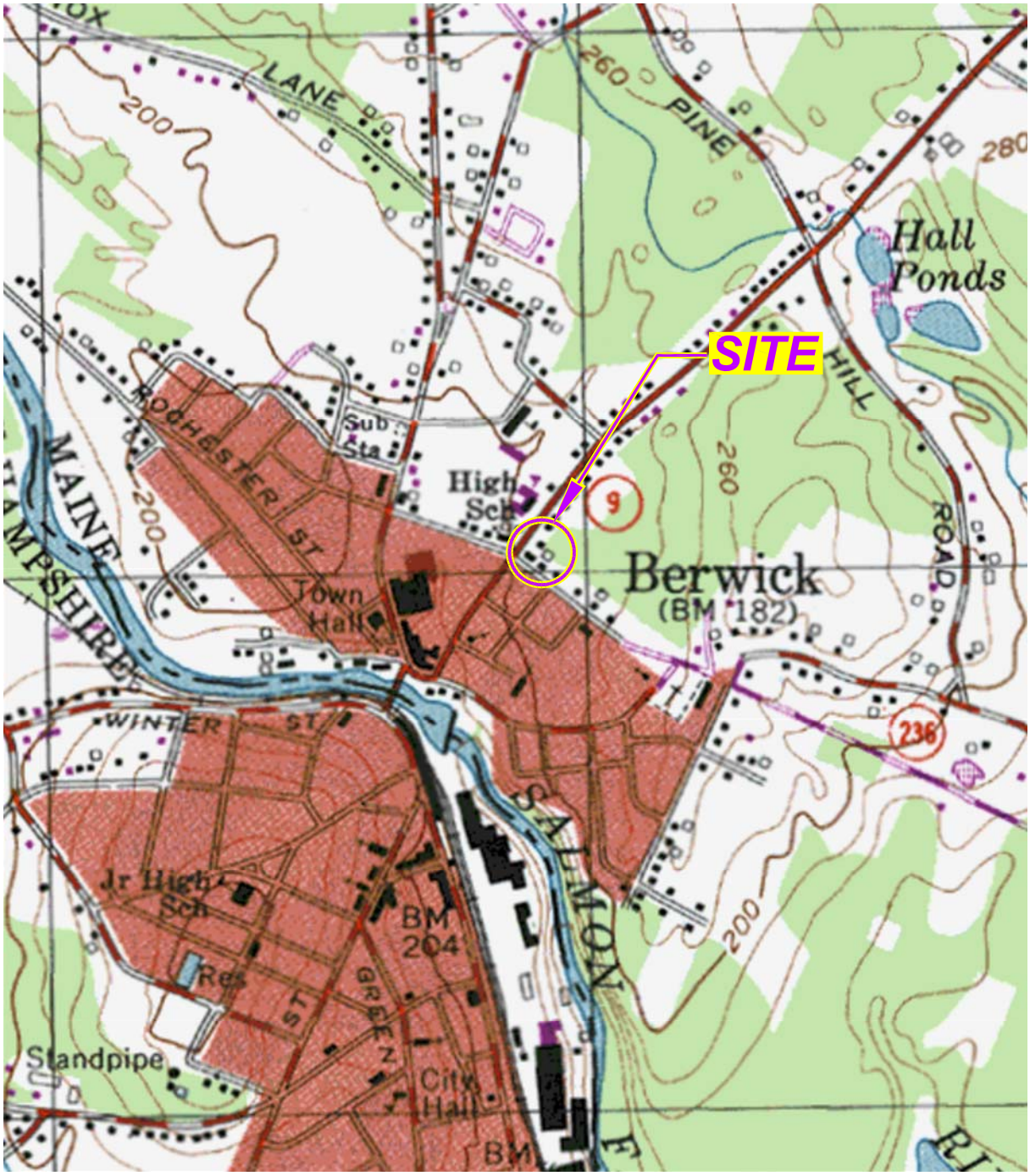
Method																									
Parameter			SUBSURFACE PRESSURE			WATER LEVEL DEPTH			C5-C8 ALIPHATIC HYDROCARBON			C9-C10 AROMATIC HYDROCARBO			C9-C12 ALIPHATIC HYDROCARBO			1,3-BUTADIENE			BENZENE		
Sample Point	Sample/Field Test Date/Time	Depth (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	oncentratio	Units	Qualifier	oncentratio	Units	Qualifier	oncentratio	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
H1-SV-1	9/8/2010	Ambient		NT		<	9.55	FMP		NT			NT			NT			NT			NT	
H1-SV-1	9/8/2010 11:33 AM	2.58		NT			NT			NT			NT			NT			NT			NT	
H1-SV-1	9/8/2010 11:46 AM	2.58		NT			NT		D	670	UG/M3	<	100	UG/M3	<	140	UG/M3	**<**	**20**	**UG/M3**	**<**	**20**	**UG/M3**
SV-1	9/8/2010	Ambient		NT		<	9.4	FMP		NT			NT			NT			NT			NT	
SV-1	9/8/2010 10:46 AM	6		NT			NT			NT			NT			NT			NT			NT	
SV-1	9/8/2010 10:57 AM	6		NT			NT			620	UG/M3		53	UG/M3		100	UG/M3		**23**	**UG/M3**		**30**	**UG/M3**
SV-1	9/20/2010	6	<	0.005	IN H20		NT			NT			NT			NT			NT			NT	
SV-3	9/8/2010	Ambient		NT		<	9	FMP		NT			NT			NT			NT			NT	
SV-3	9/8/2010 2:35 PM	7		NT			NT			NT			NT			NT			NT			NT	
SV-3	9/8/2010 2:55 PM	7		NT			NT			1300	UG/M3		28	UG/M3		180	UG/M3		**41**	**UG/M3**		14	UG/M3
SV-3	9/20/2010	7	<	0.005	IN H20		NT			NT			NT			NT			NT			NT	
SV-4	9/8/2010	Ambient		NT		>	7	FMP		NT			NT			NT			NT			NT	
SV-4	9/8/2010 1:50 PM	7		NT			NT			NT			NT			NT			NT			NT	
SV-4	9/8/2010 2:03 PM	7		NT			NT		**D**	**3300**	**UG/M3**	<	100	UG/M3	D	240	UG/M3	**D**	**41**	**UG/M3**	**D**	**55**	**UG/M3**
SV-4	9/20/2010	7	<	0.005	IN H20		NT			NT			NT			NT			NT			NT	
SV-5	9/8/2010	Ambient		NT		<	7.76	FMP		NT			NT			NT			NT			NT	
SV-5	9/8/2010 12:30 PM	5		NT			NT			NT			NT			NT			NT			NT	
SV-5	9/8/2010 12:43 PM	5		NT			NT		D	990	UG/M3	<	100	UG/M3	<	140	UG/M3	**<**	**20**	**UG/M3**	**D**	**34**	**UG/M3**
SV-5	9/20/2010	5	<	0.005	IN H20		NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010	Ambient		NT		>	7	FMP		NT			NT			NT			NT			NT	
SV-6	9/8/2010 12:55 AM	7		NT			NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010 1:22 PM	7		NT			NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010 1:32 PM	7		NT			NT			1200	UG/M3		23	UG/M3		82	UG/M3		**22**	**UG/M3**		**25**	**UG/M3**
SV-6	9/20/2010	7	<	0.005	IN H20		NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010 1:45 PM	0.68		NT			NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010 2:00 PM	0.68		NT			NT			160	UG/M3	<	10	UG/M3		390	UG/M3	<	2.0	UG/M3	<	2.0	UG/M3
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)				NA			NA			2085.71	UG/M3		521.43	UG/M3		2085.71	UG/M3		4.06	UG/M3		15.6	UG/M3

General Notes:
1. UG/M3 = micrograms per cubic meter.
2. IN H20 = inches of water.
3. NT = not tested.
4. NA = not available.
5. FMP = feet from measuring point.
6. < = not detected above reporting limit (under Concentrati
7. > = greater than the reporting limit (under Concentration).
8. D = sample result that required dilution.
9. Values in bold exceed the applicable guideline.
10. Generally, analytes detected in at least one sample are

Table 4. Chemical Testing Results - Soil Gas
Cumberland Farms
42 School Street
Berwick, Maine

Method		MADEP-APH																		
Parameter			ETHYLBENZENE			M,P-XYLENE			METHYL-TERT-BUTYL ETHER (MTBE)			NAPHTHALENE			O-XYLENE			TOLUENE		
Sample Point	Sample/Field Test Date/Time	Depth (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
H1-SV-1	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
H1-SV-1	9/8/2010 11:33 AM	2.58		NT			NT			NT			NT			NT			NT	
H1-SV-1	9/8/2010 11:46 AM	2.58	<	20	UG/M3	<	40	UG/M3	<	20	UG/M3	**<**	**20**	**UG/M3**	<	20	UG/M3	<	20	UG/M3
SV-1	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-1	9/8/2010 10:46 AM	6		NT			NT			NT			NT			NT			NT	
SV-1	9/8/2010 10:57 AM	6		24	UG/M3		48	UG/M3		30	UG/M3	<	2.0	UG/M3		18	UG/M3		170	UG/M3
SV-1	9/20/2010	6		NT			NT			NT			NT			NT			NT	
SV-3	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-3	9/8/2010 2:35 PM	7		NT			NT			NT			NT			NT			NT	
SV-3	9/8/2010 2:55 PM	7		5.5	UG/M3		11	UG/M3	<	2.0	UG/M3	<	2.0	UG/M3		4.6	UG/M3		200	UG/M3
SV-3	9/20/2010	7		NT			NT			NT			NT			NT			NT	
SV-4	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-4	9/8/2010 1:50 PM	7		NT			NT			NT			NT			NT			NT	
SV-4	9/8/2010 2:03 PM	7	<	20	UG/M3	<	40	UG/M3	D	28	UG/M3	**<**	**20**	**UG/M3**	<	20	UG/M3	D	310	UG/M3
SV-4	9/20/2010	7		NT			NT			NT			NT			NT			NT	
SV-5	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-5	9/8/2010 12:30 PM	5		NT			NT			NT			NT			NT			NT	
SV-5	9/8/2010 12:43 PM	5	<	20	UG/M3	<	40	UG/M3	<	20	UG/M3	**<**	**20**	**UG/M3**	<	20	UG/M3	<	20	UG/M3
SV-5	9/20/2010	5		NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010 12:55 AM	7		NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010 1:22 PM	7		NT			NT			NT			NT			NT			NT	
SV-6	9/8/2010 1:32 PM	7		11	UG/M3		18	UG/M3		9.9	UG/M3	<	2.0	UG/M3		7.4	UG/M3		340	UG/M3
SV-6	9/20/2010	7		NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010	Ambient		NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010 1:45 PM	0.68		NT			NT			NT			NT			NT			NT	
SS-1	9/8/2010 2:00 PM	0.68	<	2.0	UG/M3	<	4.0	UG/M3	<	2.0	UG/M3	<	2.0	UG/M3	<	2.0	UG/M3	<	2.0	UG/M3
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)				48.67	UG/M3		NA			467.95	UG/M3		3.58	UG/M3		NA			52142.86	UG/M3

General Notes:
1. UG/M3 = micrograms per cubic meter.
2. IN H20 = inches of water.
3. NT = not tested.
4. NA = not available.
5. FMP = feet from measuring point.
6. < = not detected above reporting limit (under Concentrati
7. > = greater than the reporting limit (under Concentration).
8. D = sample result that required dilution.
9. Values in bold exceed the applicable guideline.
10. Generally, analytes detected in at least one sample are



0 500 1000 2000 3000

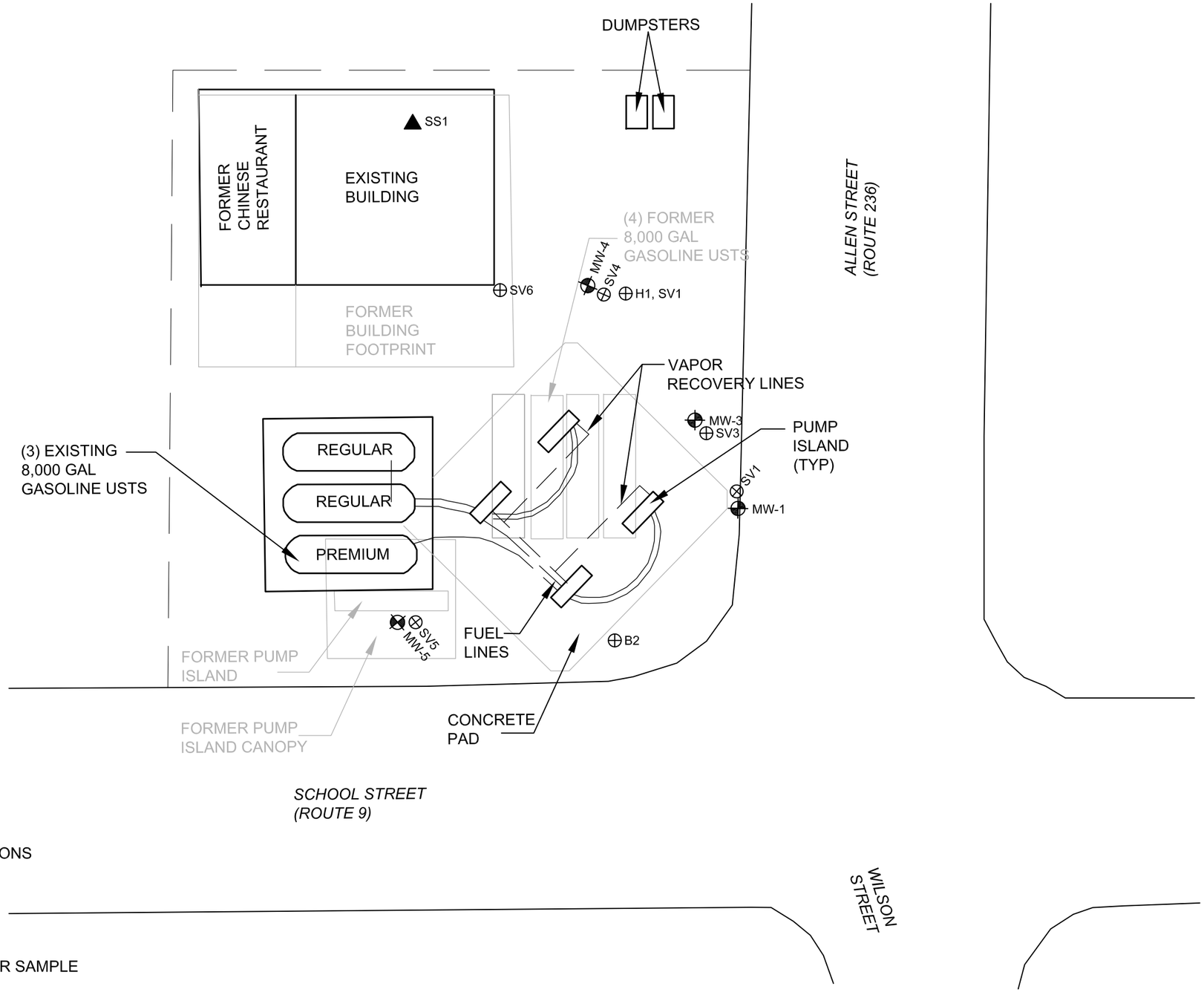
SCALE, FEET

This Image provided by MapTech is from USGS
Topographic 7.5 Minute Series.
Somersworth, ME-NH Quadrangle, 1998.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 20 Feet.

MAINE
QUADRANGLE LOCATION

Cumberland Farms 42 School Street Berwick, Maine	GEI Consultants	SITE LOCATION MAP
Maine Department of Environmental Protection Augusta, Maine	Project 10232-2	December 2010 Fig. 1

Y:\DRAFTING\102322 MDOT VI Berwick\Site Location Map Fig 1



LEGEND:

▲ SS1	SUBSLAB SAMPLE LOCATIONS
⊕ MW-1	MONITORING WELL
⊕ B1	SOIL BORING
⊕ H1, SV1	HAND BORING WITH VAPOR SAMPLE

NOTES:

1. PLAN BASED ON SITE DETAIL PLAN PREPARED BY RANSOM ENVIRONMENTAL CONSULTANTS, INC. JULY 2010.

0 25 50

APPROXIMATE SCALE, FEET

Cumberland Farms
42 School Street
Berwick, Maine

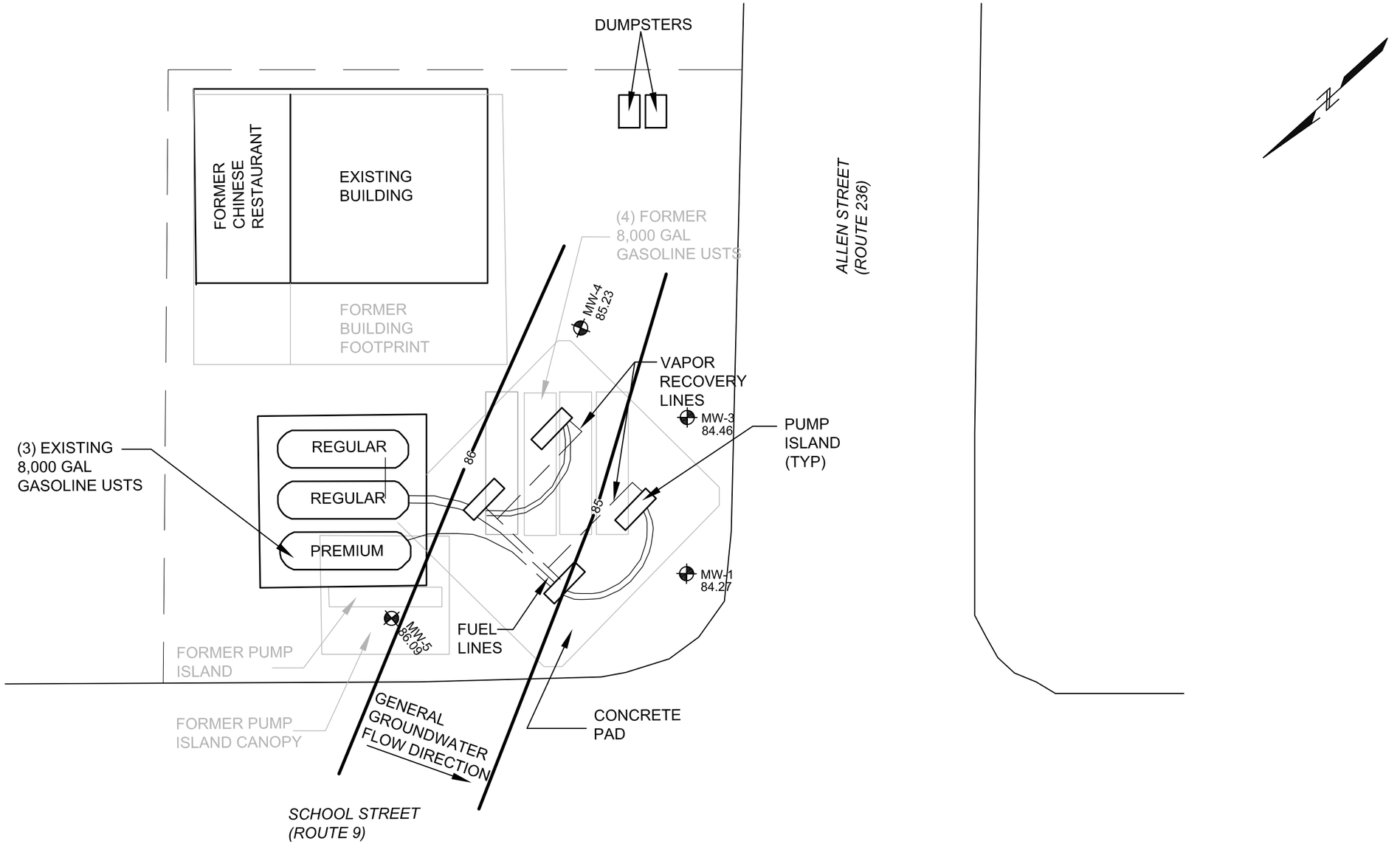
Maine Department of Environmental Protection
Augusta, Maine

GEI Consultants

SITE EXPLORATION PLAN

Project 10232-2 | December 2010 | Fig. 2

Y:\DRAFTING\102322 MDOT VI Berwick\Site Exploration Plan Fig 2



LEGEND:

MW-1 84.27 — MONITORING WELL AND GROUNDWATER ELEVATION

NOTES:

1. PLAN BASED ON SITE DETAIL PLAN PREPARED BY RANSOM ENVIRONMENTAL CONSULTANTS, INC. JULY 2010.

0 25 50

APPROXIMATE SCALE, FEET

Cumberland Farms
42 School Street
Berwick, Maine

Maine Department of Environmental Protection
Augusta, Maine

GEI Consultants

GROUNDWATER CONTOUR PLAN
9/8/2010

Project 10232-2 | December 2010 | Fig. 3

Y:\DRAFTING\102322 MDOT VI Berwick\Groundwater Contour Plan Fig 3

Appendix A

Site Orthophoto


Vapor Instrusion
CFI Study Sites
CUMBERLAND FARMS 1817
42 SCHOOL STREET
BERWICK
School St
Wilson St
Allen St
MW-5
SV-5
B-2
SV-6
MW-1
SV-1
MW-4
SV-4
MW-3
H1-SV-1
SV-3
0 10 20 40 Feet
Prepared By: Christian Halsted
Maine DEP GIS Unit
Date: 11/23/2010 10:56 AM
BRWM.Sample_Location
BURIED ELECTRIC
BURIED TELEPHONE
CATCH BASIN
CLEANOUT
GAS VENT
MANHOLE
SEWER
TRAFIC LIGHT
UTILITY POLE
WATER SHUT-OFF
BRWM.Tank
BRWM.Registered_Tank
Piping_BRWM
Junctions
Mains
BRWM.Transportation
BRWM.Stream
BRWM.Piping
BRWM.Boundary_Line
Roads_E911
GIS.Railroads
GIS.Streams
Organized Towns
Tax Parcels (DEP-Partial Towns)
BRWM.Structure
BRWM.Boundary_Area
GIS.Ponds_and_Lakes

Appendix B

Soil Boring Logs

Gei Consultants

CLIENT: Maine Dept of Environmental Protection
PROJECT NAME: CFI - Berwick
CITY/STATE: Berwick, Maine
GEI PROJECT NUMBER: 10232-2

BORING LOG

PAGE 1 of 1

B1

GROUND SURFACE ELEVATION (FT): NM **LOCATION:** Berwick
NORTHING: NM **EASTING:** NM **TOTAL DEPTH (FT):** 15.0
DRILLED BY: MAI / Seth **DATUM VERT. / HORZ.:** NA
LOGGED BY: K. Wolfe **DATE START / END:** 9/8/2010 - 9/8/2010
DRILLING DETAILS: Geoprobe / Track-mounted Geoprobe
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	32	0.0		S1 (0-1 in.) ASPHALT S1 (1-13 in.) ~65% Fine to coarse SAND, ~35% gravel up to 1 in., brown, dry
				0.0		S1 (13-18 in.) CRUSHED STONE, white, dry
				0.0		S1 (18-32 in.) ~75% Fine to coarse SAND, ~15% gravel up to 1/2 in., ~10% fines, light brown, dry
5	S2	5.0	41	0.0 Dry 0.0 Wet		S2: Similar to S1 (18-32 in.) but wet at 29 in. Collected sample 102322-B1 (6.5 ft.) at 0815 for VPH and TOC.
10	S3	5.0	48	0.00		S3: (0-44 in.) Similar to S1 (18-32 in.) but wet
				0.0		S3: (44-48 in.) ~60% Gravel up to 1 in., ~40 fine to medium sand, gray, wet, slight organic odor
15						Bottom of borehole at 15.0 feet. Installed well MW-1 (see log). Moved over 2 ft. and installed SV-1 at 6 ft. deep.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG BERWICK CFI.GPJ GEI CONSULTANTS.GDT 9/15/10

GEI Consultants

Gei Consultants

CLIENT: Maine Dept of Environmental Protection
PROJECT NAME: CFI - Berwick
CITY/STATE: Berwick, Maine
GEI PROJECT NUMBER: 10232-2

BORING LOG

PAGE 1 of 1

B2

GROUND SURFACE ELEVATION (FT): NM **LOCATION:** Berwick
NORTHING: NM **EASTING:** NM **TOTAL DEPTH (FT):** 15.0
DRILLED BY: MAI / Seth **DATUM VERT. / HORZ.:** NA
LOGGED BY: K. Wolfe **DATE START / END:** 9/8/2010 - 9/8/2010
DRILLING DETAILS: Geoprobe / Track-mounted Geoprobe
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	17	0.0		S1 (0-3 in.) ASPHALT S1 (3-14 in.) ~60% Fine to coarse SAND, ~40% gravel up to 3/4 in., light brown/gray, dry
		1.4		0.0		S1 (14-17 in.) CRUSHED STONE, white, dry
5	S2	5.0	37	0.0		S2 (0-18 in.) Similar to S1 (3-14 in.)
				0.0		S2 (18-19 in.) CRUSHED STONE, dark gray, dry
				0.0		S2 (19-37 in.) Similar to S1 (3-14 in.) except light brown and wet
10	S3	5.0	60	0.0		S3: ~75% Fine to coarse SAND, ~20% gravel up to 1 in., <5% fines, light brown, wet
15						Bottom of borehole at 15.0 feet. Backfilled with sand

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG BERWICK CFI.GPJ GEI CONSULTANTS.GDT 9/15/10

GEI Consultants

Gei Consultants

CLIENT: Maine Dept of Environmental Protection
PROJECT NAME: CFI - Berwick
CITY/STATE: Berwick, Maine
GEI PROJECT NUMBER: 10232-2

BORING LOG

PAGE 1 of 1

B3

GROUND SURFACE ELEVATION (FT): NM **LOCATION:** Berwick
NORTHING: NM **EASTING:** NM **TOTAL DEPTH (FT):** 15.0
DRILLED BY: MAI / Seth **DATUM VERT. / HORZ.:** NA
LOGGED BY: K. Wolfe **DATE START / END:** 9/8/2010 - 9/8/2010
DRILLING DETAILS: Geoprobe / Track-mounted Geoprobe
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	39	0.0		S1 (0-3 in.) ASPHALT S1 (3-16 in.) ~70% Fine to coarse SAND, ~30% gravel up to 1 in., light brown, dry
				0.0		S1 (16-22 in.) CRUSHED STONE, white, dry
				0.0		S1 (22-39 in.) SImilar to S1 (3-16 in.)
5	S2	5.0	39	0.0 Dry		S2: SImilar to S1 (3-16 in.) but wet at 19 in. Collected sample 102322-B3 (5') at 1003 for VPH and TOC
				0.0 Wet		
10	S3	5.0		0.0		S3: ~75% Fine to coarse SAND, ~25% gravel up to 3/4 in., gray, wet
15						Bottom of borehole at 15.0 feet. Installed well MW-3 (see log). Moved over ~2 ft. and installed SV-3 at 7 ft. deep

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG BERWICK CFI.GPJ GEI CONSULTANTS.GDT 9/15/10

GEI Consultants

Gei Consultants

CLIENT: Maine Dept of Environmental Protection
PROJECT NAME: CFI - Berwick
CITY/STATE: Berwick, Maine
GEI PROJECT NUMBER: 10232-2

BORING LOG

PAGE 1 of 1

B4

GROUND SURFACE ELEVATION (FT): NM **LOCATION:** Berwick
NORTHING: NM **EASTING:** NM **TOTAL DEPTH (FT):** 15.0
DRILLED BY: MAI / Seth **DATUM VERT. / HORZ.:** NA
LOGGED BY: K. Wolfe **DATE START / END:** 9/8/2010 - 9/8/2010
DRILLING DETAILS: Geoprobe / Track-mounted Geoprobe
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	25	0.0 0.0 0.0		S1 (0-2 in.) ASPHALT S1 (2-9 in.) ~65% Fine to coarse SAND, ~35% gravel up to 1 in., light brown, dry S1 (9-19 in.) Similar to S1 (2-9 in.) but brown S1 (19-25 in.) SImilar to S1 (2-9 in.)
5	S2	5.0	37	0.0 Dry 0.0 Wet		S2: Similar to S1 (2-9 in.) but wet at 22 in. Collected sample 102322-B4 (5') at 1043 for VPH and TOC
10	S3	5.0	32	0.0		S3: Similar to S1 (2-9 in.) except wet
15						Bottom of borehole at 15.0 feet. Installed well MW-4 (see log). Moved over ~2 ft. and installed SV-4 at 7 ft. deep

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG BERWICK CFI.GPJ GEI CONSULTANTS.GDT 9/15/10

GEI Consultants	CLIENT: Maine Dept of Environmental Protection	BORING LOG
	PROJECT NAME: CFI - Berwick	PAGE 1 of 1
	CITY/STATE: Berwick, Maine	B5
	GEI PROJECT NUMBER: 10232-2	

GROUND SURFACE ELEVATION (FT): NM **LOCATION:** Berwick
NORTHING: NM **EASTING:** NM **TOTAL DEPTH (FT):** 15.0
DRILLED BY: MAI / Seth **DATUM VERT. / HORZ.:** NA
LOGGED BY: K. Wolfe **DATE START / END:** 9/8/2010 - 9/8/2010
DRILLING DETAILS: Geoprobe / Track-mounted Geoprobe
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	27	0.0 0.0 0.0		S1 (0-2 in.) ASPHALT S1 (2-11 in.) ~60% Fine to coarse SAND, ~40% gravel up to 1 in., light brown, dry S1 (11-16 in.) CRUSHED STONE, white, dry S1 (16-27 in.) ~70% Fine to coarse SAND, ~30% gravel up to 1/2 in., light brown/gray, dry
5	S2	5.0	50	0.0 Dry 0.0 Wet		S2: Similar to S1 (16-27 in.) but wet at 18 in. Collected sample 102322-B5 (5') at 1130 for VPH and TOC
10	S3	5.0	56	0.0		S3: ~85% Fine to coarse SAND, ~15% gravel up to 1/2 in., light brown/gray, wet
15						Bottom of borehole at 15.0 feet. Installed well MW-5 (see log). Moved over ~2 ft. and installed SV-5 at 5 ft. deep

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

GEI Consultants

Gei Consultants

CLIENT: Maine Dept of Environmental Protection
PROJECT NAME: CFI - Berwick
CITY/STATE: Berwick, Maine
GEI PROJECT NUMBER: 10232-2

BORING LOG

PAGE 1 of 1

B6

GROUND SURFACE ELEVATION (FT): NM **LOCATION:** Berwick
NORTHING: NM **EASTING:** NM **TOTAL DEPTH (FT):** 7.0
DRILLED BY: MAI / Seth **DATUM VERT. / HORZ.:** NA
LOGGED BY: K. Wolfe **DATE START / END:** 9/8/2010 - 9/8/2010
DRILLING DETAILS: Geoprobe / Track-mounted Geoprobe
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	27	0.0		S1 (0-3 in.) ASPHALT
				0.0		S1 (3-11 in.) ~70% Fine to coarse SAND, ~30% gravel up to 1/4 in., light brown, dry
				0.0		S1 (11-18 in.) ~60% Fine to coarse SAND, gravel up to 1 in., black, dry, wood and glass fragments observed
						S1 (18-27 in.) Similar to S1 (3-11 in.)
5	S2	2.0	24	0.0		S2 (0-11 in.) Similar to S1 (3-11 in.)
				0.0		S2 (11-24 in.) ~90% Fine to coarse SAND, ~10% gravel up to 1/4 in., light brown/gray, dry
						Bottom of borehole at 7.0 feet. Installed SV-6 at 7 ft. deep

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG BERWICK CFI.GPJ GEI CONSULTANTS.GDT 9/15/10

GEI Consultants

Gei Consultants

CLIENT: Maine Dept of Environmental Protection
PROJECT NAME: CFI - Berwick
CITY/STATE: Berwick, Maine
GEI PROJECT NUMBER: 10232-2

BORING LOG

PAGE 1 of 1

H1

GROUND SURFACE ELEVATION (FT): NM
LOCATION: Berwick
NORTHING: NM **EASTING:** NM
TOTAL DEPTH (FT): 2.6
DRILLED BY: MAI / Seth
DATUM VERT. / HORZ.: NA
LOGGED BY: K. Wolfe
DATE START / END: 9/8/2010 - 9/8/2010
DRILLING DETAILS: Auger / Hand-Dug with Auger Shop Vac
WATER LEVEL DEPTHS (FT): Water level not measured.

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
0	H1	2.6		0.0		0-3 in. ASPHALT 3-15 in. ~60% Fine to coarse SAND, ~40% gravel up to 2 in., light brown, dry
				0.0		15-31 in. ~70% Fine to coarse SAND, ~30% gravel up to 2 in., brown, dry, 6 in. bounder at 20 in. but worked around it
						Bottom of borehole at 2.58 feet. Bottom of Hole at 31 in.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG BERWICK CFI.GPJ GEI CONSULTANTS.GDT 9/21/10

Appendix C

Monitoring Well Construction Logs

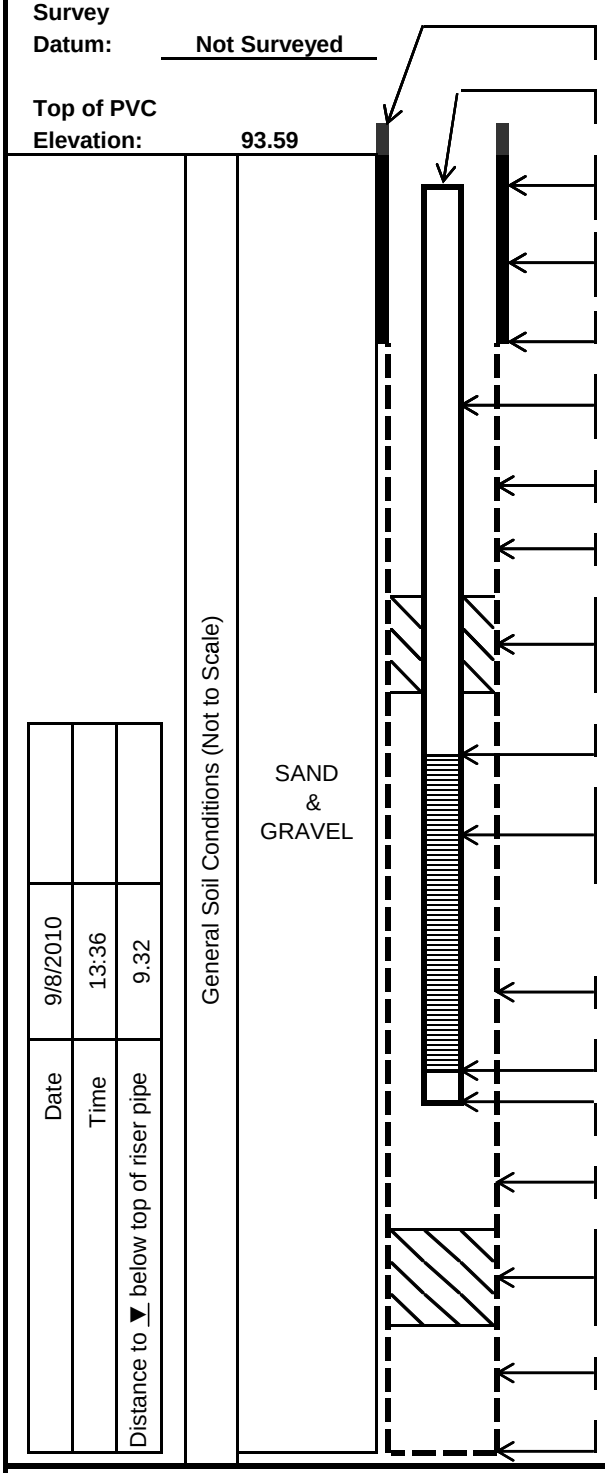
Groundwater Well Installation Log

MW-1

Project	CFI - Berwick	**GEI Proj. No.**	10232-2
City / Town	Berwick, Maine	**Location**	W of Pump Island
Client	Maine Department of Environmental Protection		
Contractor	MAI		
Driller	Seth **GEI Rep.** Krista Wolfe	**Install Date**	9/8/2010

Survey Datum: **Not Surveyed**

Top of PVC Elevation: **93.59**



Length of Surface Casing above Ground	Flush Mount
Dist. Top of Surf. Casing to Top of Riser Pipe	~1"
Type and Thickness of Seal around Surface Casing	Concrete
ID of Surface Casing	4"
Type of Surface Casing	Steel Roadbox
Depth Bottom of Surface Casing	7"
ID and OD of Riser Pipe	1"/1.25"
Type of Riser Pipe	Sch. 40 PVC
Type of Backfill around Riser Pipe	N/A
Diameter of Borehole	2.25"
Depth Top of Seal	1
Type of Seal	Bentonite Chips
Depth Bottom of Seal	3.5
Depth Top of Screened Section	4.5'
Type of Screen	Sch. 40 PVC
Description of Screen Openings	0.010" Slots
ID and OD of Screened Section	1"/1.25"
Type of Filter Material	No. 2 Sand
Depth Bottom of Screened Section	14.5'
Depth Bottom of Silt Trap	15'
Depth Bottom of Filter Material	15'
Depth Top of Seal	N/A
Type of Seal	N/A
Depth Bottom of Seal	N/A
Type of Backfill below Filter Material	N/A
Bottom of Borehole	15'

Notes:

GEI Consultants

M:\Drafting\Office\Forms\Well Install Log Blank Form

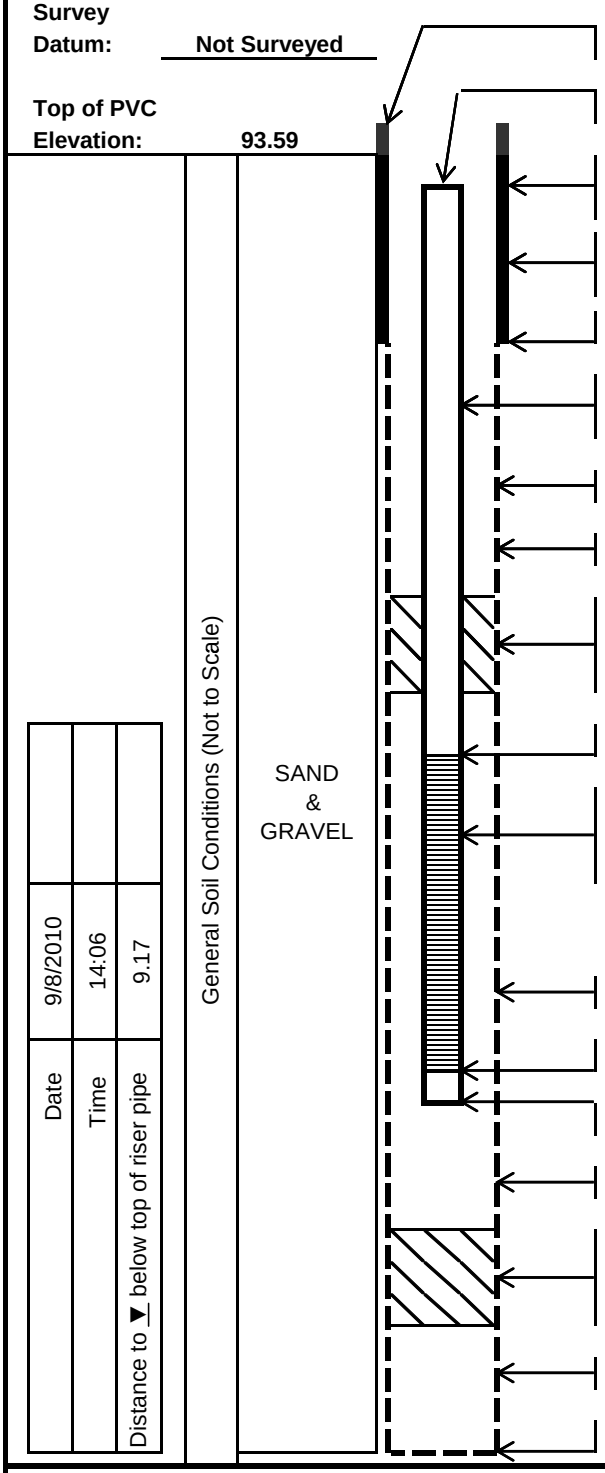
Groundwater Well Installation Log

MW-3

Project	CFI - Berwick	**GEI Proj. No.**	10232-2
City / Town	Berwick, Maine	**Location**	S of Pump Island
Client	Maine Department of Environmental Protection		
Contractor	MAI		
Driller	Seth **GEI Rep.** Krista Wolfe	**Install Date**	9/8/2010

Survey Datum: **Not Surveyed**

Top of PVC Elevation: **93.59**



Length of Surface Casing above Ground	Flush Mount
Dist. Top of Surf. Casing to Top of Riser Pipe	~1"
Type and Thickness of Seal around Surface Casing	Concrete
ID of Surface Casing	4"
Type of Surface Casing	Steel Roadbox
Depth Bottom of Surface Casing	7"
ID and OD of Riser Pipe	1"/1.25"
Type of Riser Pipe	Sch. 40 PVC
Type of Backfill around Riser Pipe	N/A
Diameter of Borehole	2.25"
Depth Top of Seal	1
Type of Seal	Bentonite Chips
Depth Bottom of Seal	3.5
Depth Top of Screened Section	4.5'
Type of Screen	Sch. 40 PVC
Description of Screen Openings	0.010" Slots
ID and OD of Screened Section	1"/1.25"
Type of Filter Material	No. 2 Sand
Depth Bottom of Screened Section	14.5'
Depth Bottom of Silt Trap	15'
Depth Bottom of Filter Material	15'
Depth Top of Seal	N/A
Type of Seal	N/A
Depth Bottom of Seal	N/A
Type of Backfill below Filter Material	N/A
Bottom of Borehole	15'

Notes:

GEI Consultants

M:\Drafting\Office\Forms\Well Install Log Blank Form

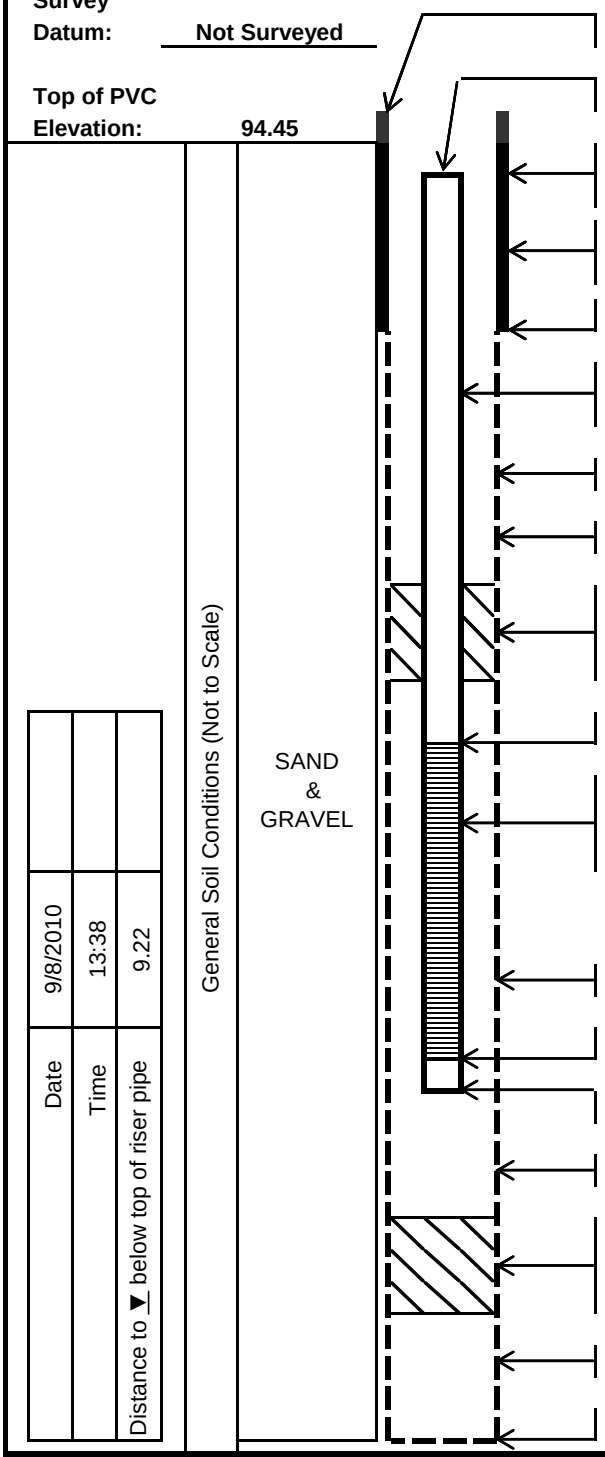
Groundwater Well Installation Log

MW-4

Project	CFI - Berwick	**GEI Proj. No.**	10232-2
City / Town	Berwick, Maine	**Location**	SE Corner of Pump Island Concrete Pad
Client	Maine Department of Environmental Protection		
Contractor	MAI		
Driller	Seth **GEI Rep.** Krista Wolfe	**Install Date**	9/8/2010

Survey Datum: **Not Surveyed**

Top of PVC Elevation: **94.45**



Length of Surface Casing above Ground	Flush Mount
Dist. Top of Surf. Casing to Top of Riser Pipe	~1"
Type and Thickness of Seal around Surface Casing	Concrete
ID of Surface Casing	4"
Type of Surface Casing	Steel Roadbox
Depth Bottom of Surface Casing	7"
ID and OD of Riser Pipe	1"/1.25"
Type of Riser Pipe	Sch. 40 PVC
Type of Backfill around Riser Pipe	N/A
Diameter of Borehole	2.25"
Depth Top of Seal	1
Type of Seal	Bentonite Chips
Depth Bottom of Seal	3.5
Depth Top of Screened Section	4.5'
Type of Screen	Sch. 40 PVC
Description of Screen Openings	0.010" Slots
ID and OD of Screened Section	1"/1.25"
Type of Filter Material	No. 2 Sand
Depth Bottom of Screened Section	14.5'
Depth Bottom of Silt Trap	15'
Depth Bottom of Filter Material	15'
Depth Top of Seal	N/A
Type of Seal	N/A
Depth Bottom of Seal	N/A
Type of Backfill below Filter Material	N/A
Bottom of Borehole	15'

Notes:

GEI Consultants

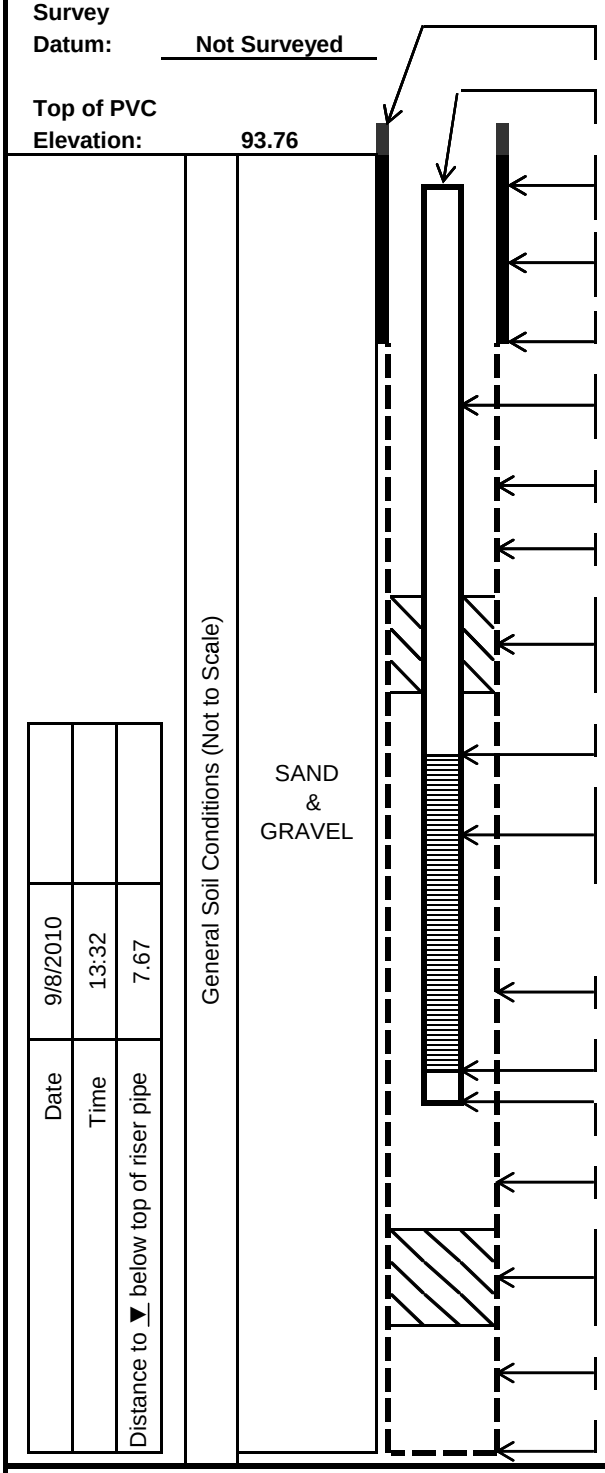
Groundwater Well Installation Log

MW-5

Project	CFI - Berwick	**GEI Proj. No.**	10232-2
City / Town	Berwick, Maine	**Location**	N of Pump Island
Client	Maine Department of Environmental Protection		
Contractor	MAI		
Driller	Seth **GEI Rep.** Krista Wolfe	**Install Date**	9/8/2010

Survey Datum: **Not Surveyed**

Top of PVC Elevation: **93.76**



Length of Surface Casing above Ground	Flush Mount
Dist. Top of Surf. Casing to Top of Riser Pipe	~1"
Type and Thickness of Seal around Surface Casing	Concrete
ID of Surface Casing	4"
Type of Surface Casing	Steel Roadbox
Depth Bottom of Surface Casing	7"
ID and OD of Riser Pipe	1"/1.25"
Type of Riser Pipe	Sch. 40 PVC
Type of Backfill around Riser Pipe	N/A
Diameter of Borehole	2.25"
Depth Top of Seal	1
Type of Seal	Bentonite Chips
Depth Bottom of Seal	3.5
Depth Top of Screened Section	4.5'
Type of Screen	Sch. 40 PVC
Description of Screen Openings	0.010" Slots
ID and OD of Screened Section	1"/1.25"
Type of Filter Material	No. 2 Sand
Depth Bottom of Screened Section	14.5'
Depth Bottom of Silt Trap	15'
Depth Bottom of Filter Material	15'
Depth Top of Seal	N/A
Type of Seal	N/A
Depth Bottom of Seal	N/A
Type of Backfill below Filter Material	N/A
Bottom of Borehole	15'

Notes:

GEI Consultants

M:\Drafting\Office\Forms\Well Install Log Blank Form

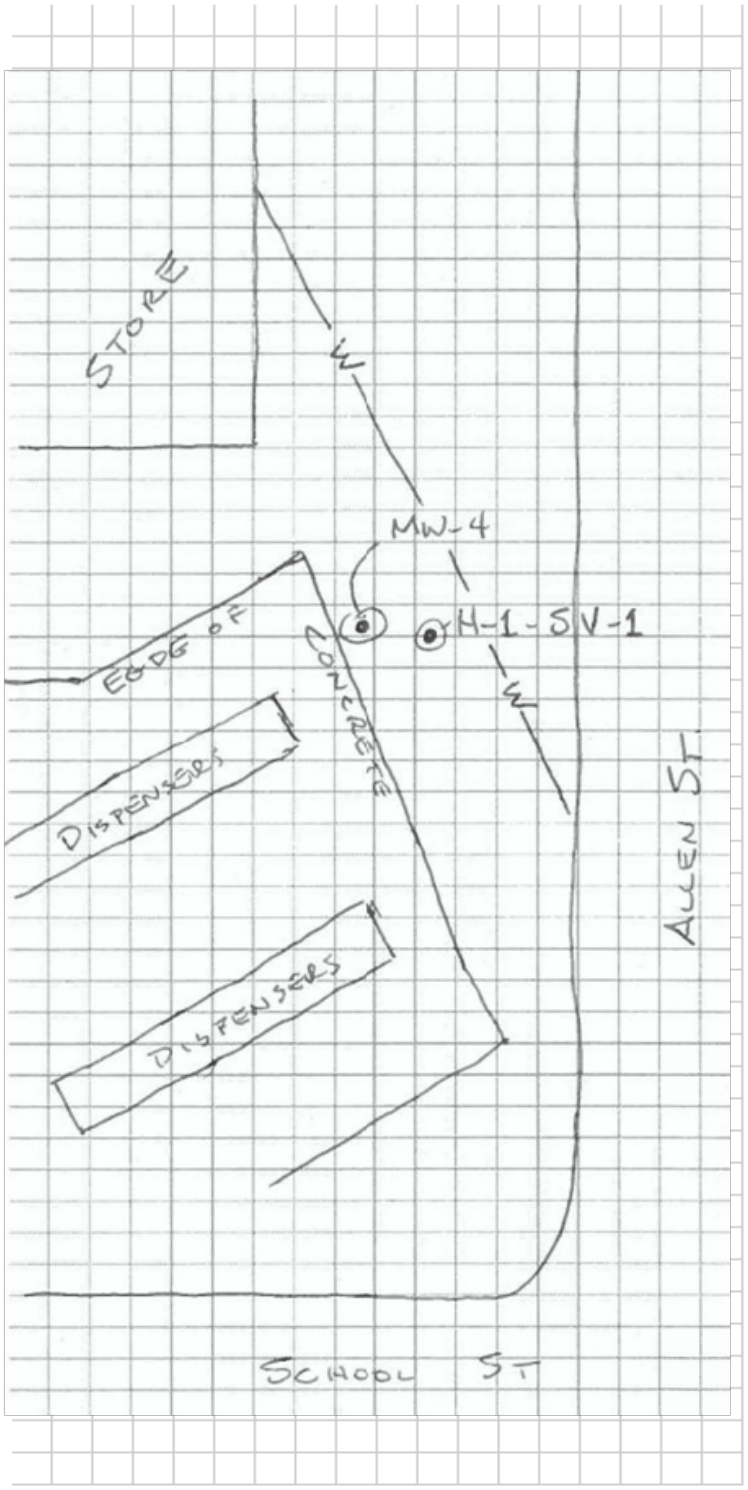
Appendix D

Field Data Sheets

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	Berwick, ME
Date:	9/8/2010
Sample I.D.:	H1-SV-1
Sampling Personnel:	Woodruff
Project Manager:	Eremita / Andolser
Collection Device:	(Suma Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.7
CO_2:	300
Flow rate:	200
Cannister I.D.:	368
Controller I.D.:	0067
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	31 in.
Depth to Water:	9.55 BTOC
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	11:33
Initial Vacuum:	<-30
Sampling End Time:	11:46
Final Vaccum:	-7

Sample Location Sketch

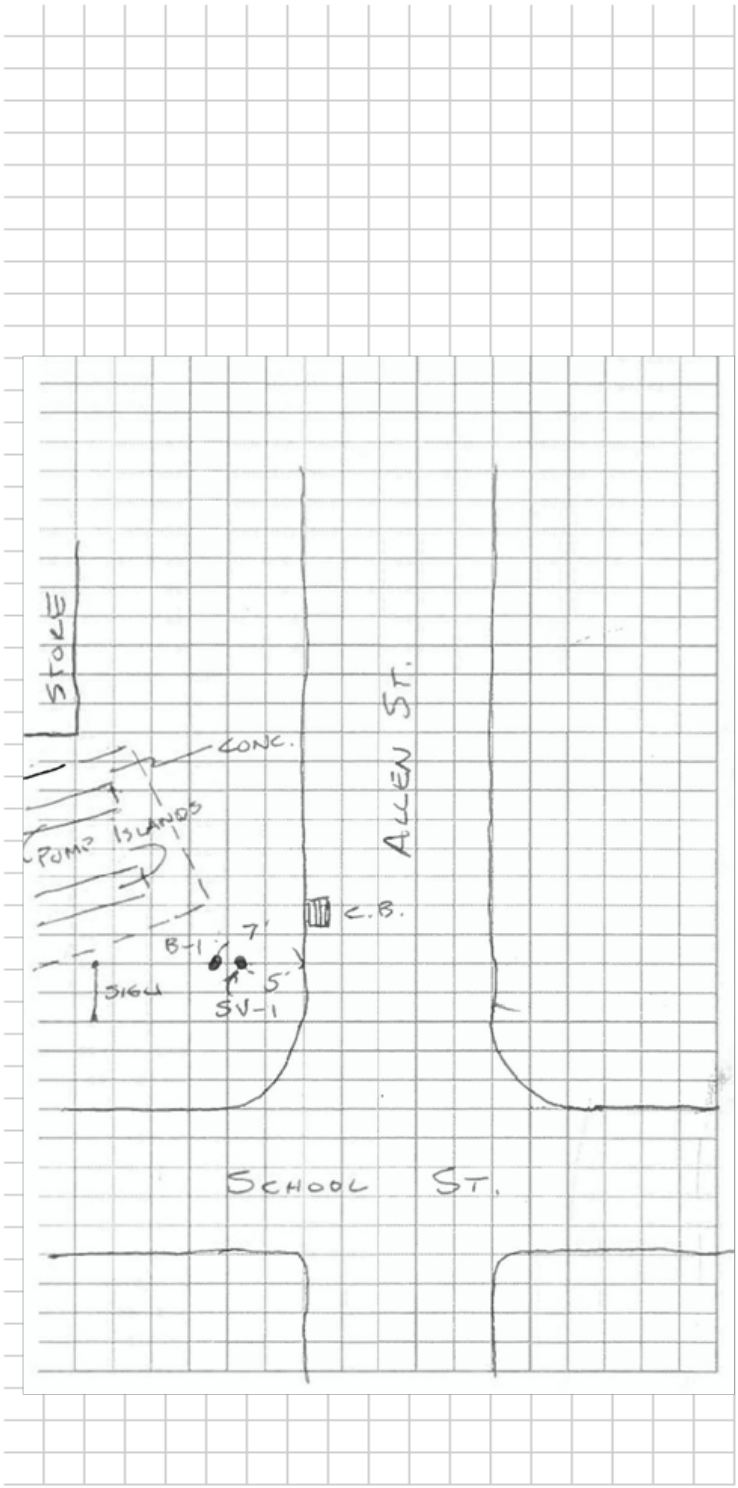


Notes: Begin Purge 11:22
End Purge 11:29
Post Sample PID = 0.5 ppm

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	Berwick, ME
Date:	9/8/2010
Sample I.D.:	SV-1
Sampling Personnel:	Woodruff
Project Manager:	Eremita / Andolser
Collection Device:	(Suma Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.9
CO_2:	300
Flow rate:	200
Cannister I.D.:	340
Controller I.D.:	0337
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	6 ft.
Depth to Water:	9.4 BGS
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	10:46
Initial Vacuum:	<-30
Sampling End Time:	10:57
Final Vaccum:	-5

Sample Location Sketch

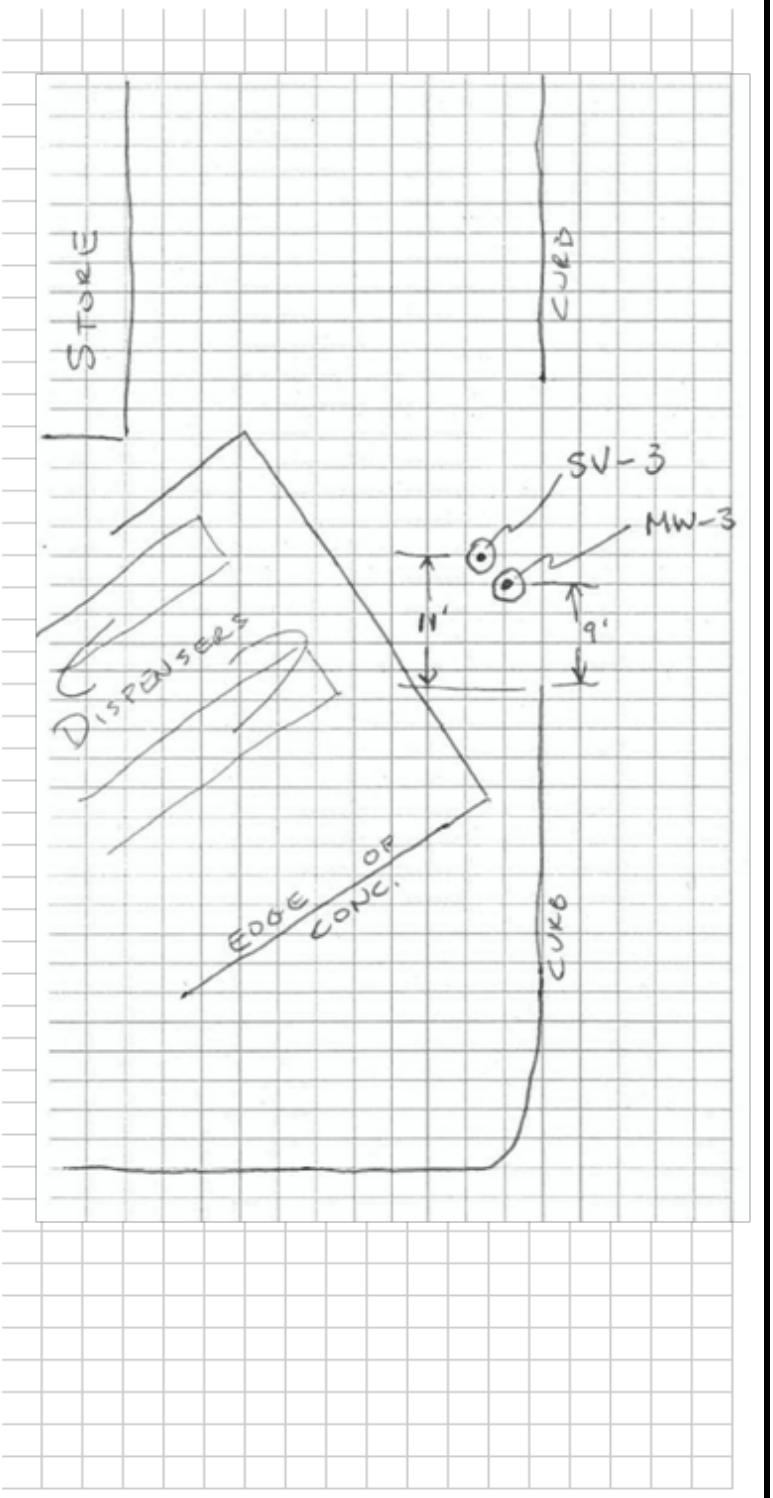


Notes: Begin Purge 10:28
End Purge 10:38
Post Sample PID = 0.6 ppm

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	Berwick, ME
Date:	9/8/2010
Sample I.D.:	SV-3
Sampling Personnel:	Woodruff
Project Manager:	Eremita / Andolser
Collection Device:	(Suma Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.0
CO_2:	300
Flow rate:	200
Cannister I.D.:	536
Controller I.D.:	0023
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	7 ft.
Depth to Water:	9 ft.
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	14:35
Initial Vacuum:	<-30
Sampling End Time:	14:55
Final Vaccum:	-3

Sample Location Sketch

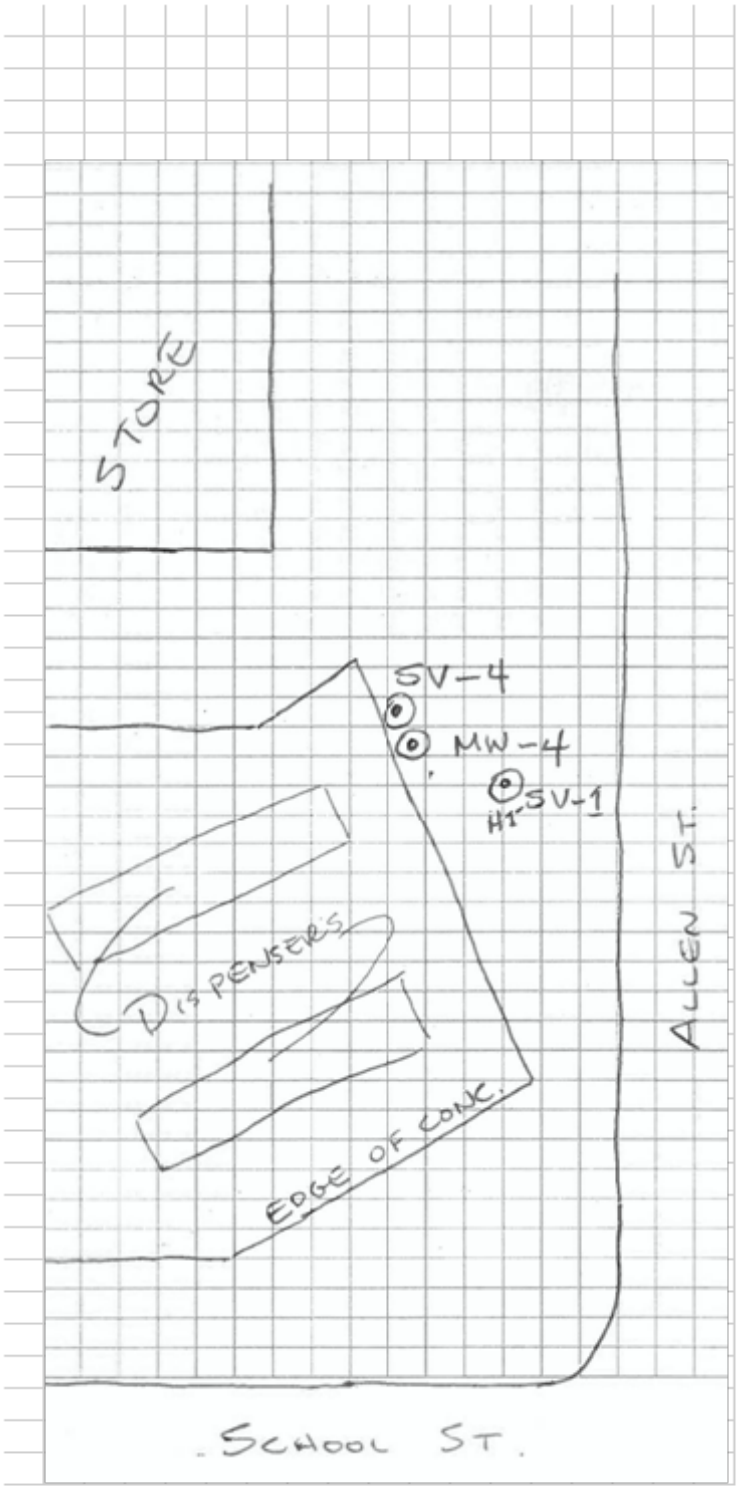


Notes: Begin Purge 14:20
End Purge 14:27
Note: Some water in tubing.

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	Berwick, ME
Date:	9/8/2010
Sample I.D.:	SV-4
Sampling Personnel:	Woodruff
Project Manager:	Eremita / Andolser
Collection Device:	(Suma Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.4
CO_2:	400
Flow rate:	200
Cannister I.D.:	1727
Controller I.D.:	0445
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	7 ft.
Depth to Water:	
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	13:50
Initial Vacuum:	<-30
Sampling End Time:	14:03
Final Vaccum:	-7

Sample Location Sketch

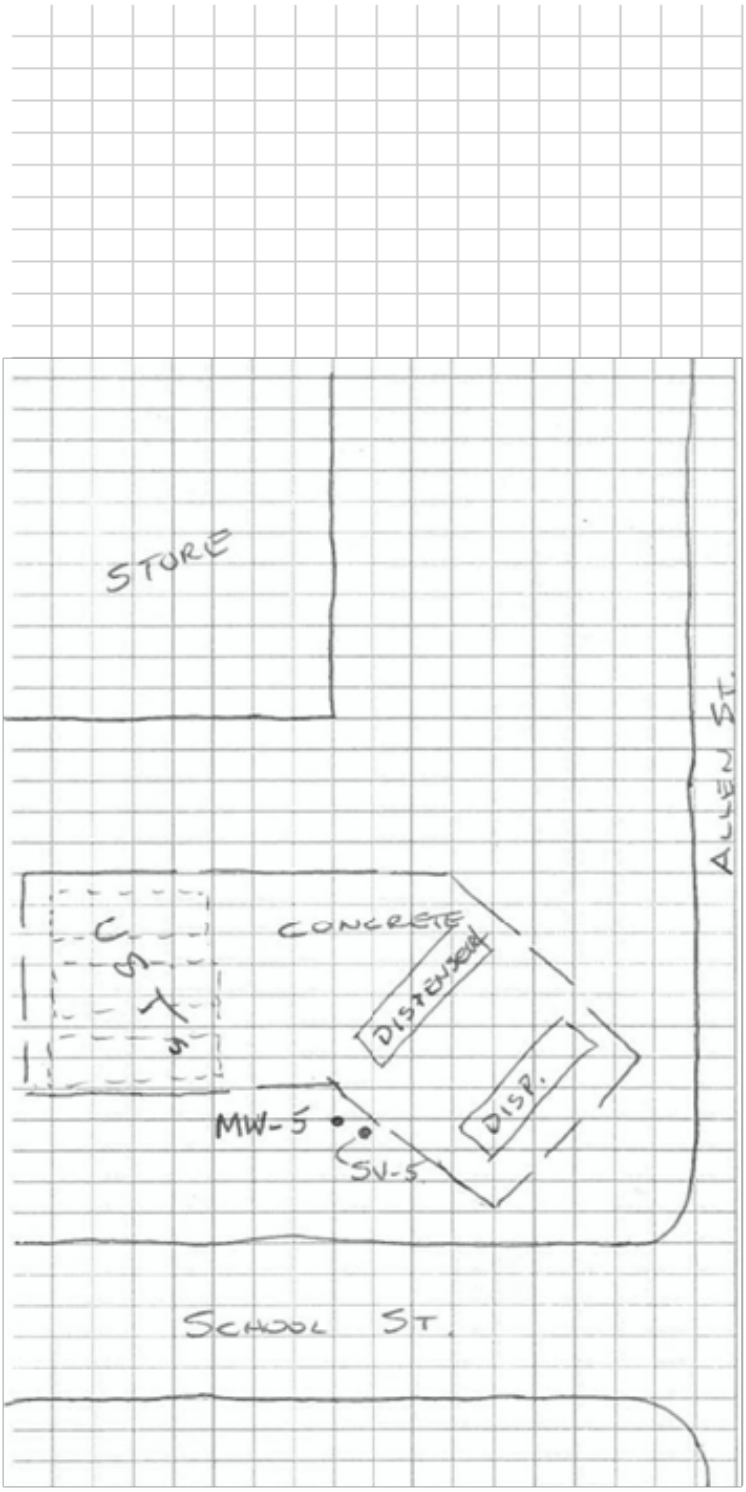


Notes: Begin Purge 13:37
End Purge 13:46
Post Sample PID = 1.4 ppm

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	Berwick, ME
Date:	9/8/2010
Sample I.D.:	SV-5
Sampling Personnel:	Woodruff
Project Manager:	Eremita / Andolser
Collection Device:	(Suma Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.4
CO_2:	300
Flow rate:	200
Cannister I.D.:	215
Controller I.D.:	0018
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	5 ft.
Depth to Water:	7.76 BTOC
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	12:30
Initial Vacuum:	<-30
Sampling End Time:	12:43
Final Vaccum:	-6

Sample Location Sketch

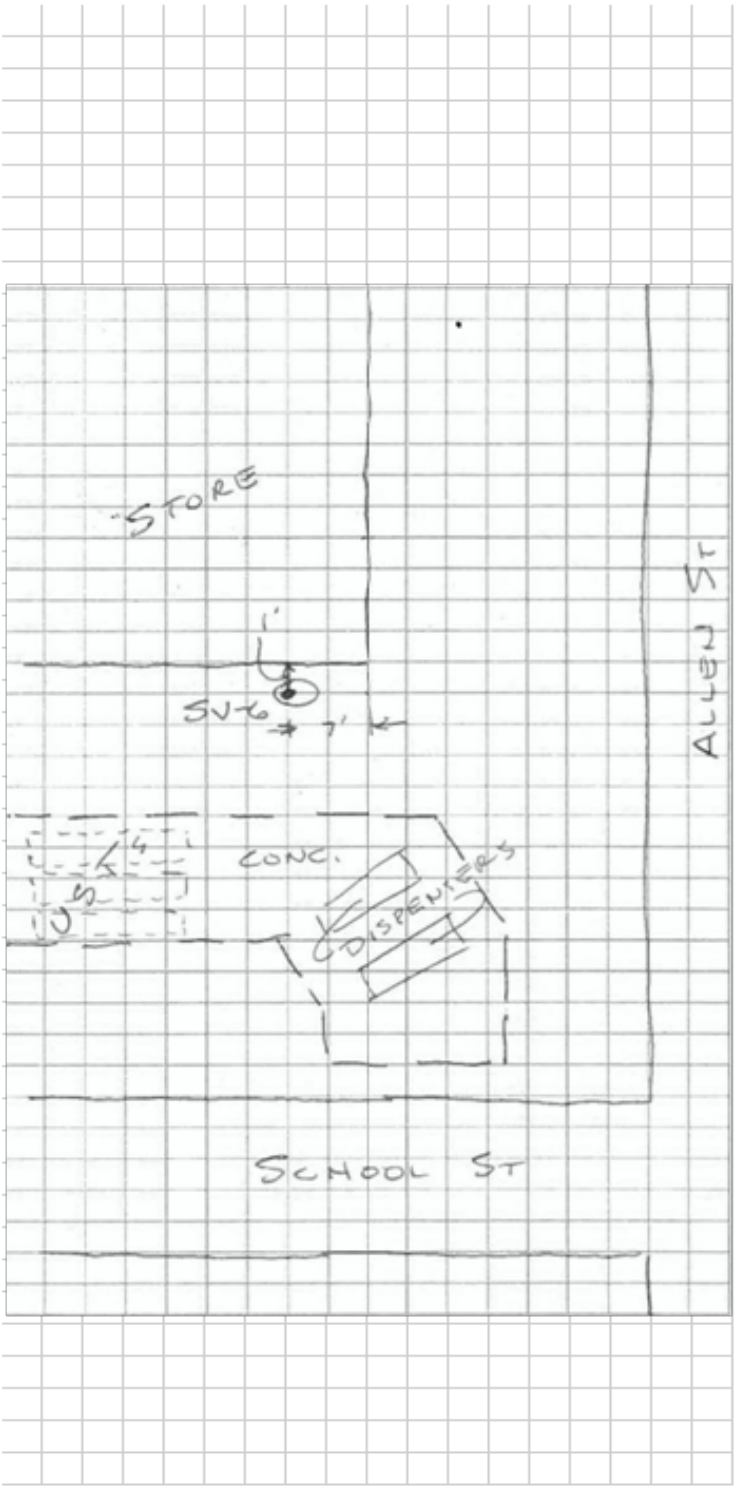


Notes: Begin Purge 12:14
End Purge 12:27
Post Sample PID = 0.6 ppm

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	Berwick, ME
Date:	9/8/2010
Sample I.D.:	SV-6
Sampling Personnel:	Woodruff
Project Manager:	Eremita / Andolser
Collection Device:	(Suma Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.5
CO_2:	300
Flow rate:	200
Cannister I.D.:	257
Controller I.D.:	0068
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	7 ft.
Depth to Water:	
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	13:12
Initial Vacuum:	<-28.5
Sampling End Time:	13:22
Final Vaccum:	-6

Sample Location Sketch



Notes: Begin Purge 12:56
End Purge 13:08
Post Sample PID = 0.9 ppm

Appendix E

Certified Laboratory Data Reports

Katahdin
ANALYTICAL SERVICES

nelac
Cert. No. E87604

September 21, 2010

Mr. Todd Coffin
GEI Consultants
74 Gray Road
Falmouth,ME 04105

RE: Katahdin Lab Number: SD5518
Project ID: Maine VI Study
Project Manager: Ms. Shelly Brown
Sample Receipt Date(s): September 08, 2010

Dear Mr. Coffin:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Quality Control Data Summary
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert.html for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Deborah J. Nadeau
Authorized Signature

09/21/2010
Date

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticide/Aroclor analyte when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U	Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.
E	Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.
J	Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).
I-7	The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.
A-4	Please refer to cover letter or narrative for further information.
MCL	Maximum Contaminant Level
NL	No limit
NFL	No Free Liquid Present
FLP	Free Liquid Present
NOD	No Odor Detected
TON	Threshold Odor Number
H1	Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
H2	Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
H3	Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
H4	Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-B1 (6.5')	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-1	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	14-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	SL	**Percent Solids:**	92.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	26	26	mg/Kgdrywt	1	14-SEP-10	U
Unadjusted C9-C12 Aliphatics	26	26	mg/Kgdrywt	1	14-SEP-10	U
C5-C8 Aliphatics	26	26	mg/Kgdrywt	1	14-SEP-10	U
C9-C12 Aliphatics	26	26	mg/Kgdrywt	1	14-SEP-10	U
C9-C10 Aromatics	26	26	mg/Kgdrywt	1	14-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Ethylbenzene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Methyl tert-butylether	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Naphthalene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Toluene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
m+p-Xylene	2.6	2.6	mg/Kgdrywt	1	14-SEP-10	U
o-Xylene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	100	70-130	14-SEP-10	
2,5-Dibromotoluene (PID)	96	70-130	14-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Report of Analytical Results

Client: Todd Coffin
GEI Consultants
74 Gray Road
Falmouth,ME 04105

Lab Sample ID: SD5518-1
Report Date: 16-SEP-10
Client PO:
Project: Maine VI Study
SDG: SD5518

Sample Description	Matrix	Date Sampled	Date Received
102322-B1 (6.5')	SL	08-SEP-10	08-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	810 ug/gdrywt	430	LLOYDKAHN	WG82025	10-SEP-10 11:32:06	N/A	N/A	BDS	
Total Solids	92. %	1	SM2540G	WG81992	10-SEP-10 09:48:00	ASTM D2216	09-SEP-10	CP	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-B4 (5')	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-2	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	14-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	SL	**Percent Solids:**	92.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	28	28	mg/Kgdrywt	1	14-SEP-10	U
Unadjusted C9-C12 Aliphatics	28	28	mg/Kgdrywt	1	14-SEP-10	U
C5-C8 Aliphatics	28	28	mg/Kgdrywt	1	14-SEP-10	U
C9-C12 Aliphatics	28	28	mg/Kgdrywt	1	14-SEP-10	U
C9-C10 Aromatics	28	28	mg/Kgdrywt	1	14-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.4	1.4	mg/Kgdrywt	1	14-SEP-10	U
Ethylbenzene	1.4	1.4	mg/Kgdrywt	1	14-SEP-10	U
Methyl tert-butylether	1.4	1.4	mg/Kgdrywt	1	14-SEP-10	U
Naphthalene	1.4	1.4	mg/Kgdrywt	1	14-SEP-10	U
Toluene	1.4	1.4	mg/Kgdrywt	1	14-SEP-10	U
m+p-Xylene	2.8	2.8	mg/Kgdrywt	1	14-SEP-10	U
o-Xylene	1.4	1.4	mg/Kgdrywt	1	14-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	127	70-130	14-SEP-10	
2,5-Dibromotoluene (PID)	104	70-130	14-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Report of Analytical Results

Client: Todd Coffin
GEI Consultants
74 Gray Road
Falmouth,ME 04105

Lab Sample ID: SD5518-2
Report Date: 16-SEP-10
Client PO:
Project: Maine VI Study
SDG: SD5518

Sample Description	Matrix	Date Sampled	Date Received
102322-B4 (5')	SL	08-SEP-10	08-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	U430 ug/gdrywt	430	LLOYDKAHN	WG82025	10-SEP-10 11:54:17	N/A	N/A	BDS	
Total Solids	92. %	1	SM2540G	WG81992	10-SEP-10 09:50:00	ASTM D2216	09-SEP-10	CP	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-B5 (5')	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-3	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	14-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	SL	**Percent Solids:**	92.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	14-SEP-10	U
Unadjusted C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	14-SEP-10	U
C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	14-SEP-10	U
C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	14-SEP-10	U
C9-C10 Aromatics	27	27	mg/Kgdrywt	1	14-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Ethylbenzene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Methyl tert-butylether	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Naphthalene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
Toluene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U
m+p-Xylene	2.7	2.7	mg/Kgdrywt	1	14-SEP-10	U
o-Xylene	1.3	1.3	mg/Kgdrywt	1	14-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	96	70-130	14-SEP-10	
2,5-Dibromotoluene (PID)	97	70-130	14-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Report of Analytical Results

Client: Todd Coffin
GEI Consultants
74 Gray Road
Falmouth,ME 04105

Lab Sample ID: SD5518-3
Report Date: 16-SEP-10
Client PO:
Project: Maine VI Study
SDG: SD5518

Sample Description	Matrix	Date Sampled	Date Received
102322-B5 (5')	SL	08-SEP-10	08-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	3200 ug/gdrywt	430	LLOYDKAHN	WG82025	10-SEP-10 12:08:42	N/A	N/A	BDS	
Total Solids	92. %	1	SM2540G	WG81992	10-SEP-10 09:51:00	ASTM D2216	09-SEP-10	CP	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-MW-1	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-4	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	15-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	AQ	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	100	100	ug/L	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	140	100	ug/L	1	15-SEP-10	
C5-C8 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C9-C12 Aliphatics	140	100	ug/L	1	15-SEP-10	
C9-C10 Aromatics	100	100	ug/L	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	13	5	ug/L	1	15-SEP-10	
Ethylbenzene	5.0	5	ug/L	1	15-SEP-10	U
Methyl tert-butylether	20	5	ug/L	1	15-SEP-10	
Naphthalene	5.0	5	ug/L	1	15-SEP-10	U
Toluene	5.0	5	ug/L	1	15-SEP-10	U
m+p-Xylene	10	10	ug/L	1	15-SEP-10	U
o-Xylene	5.0	5	ug/L	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	96	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	100	70-130	15-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-MW-4	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-5	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	15-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	AQ	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	100	100	ug/L	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C5-C8 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C9-C12 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C9-C10 Aromatics	100	100	ug/L	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	5.0	5	ug/L	1	15-SEP-10	U
Ethylbenzene	5.0	5	ug/L	1	15-SEP-10	U
Methyl tert-butylether	5.0	5	ug/L	1	15-SEP-10	U
Naphthalene	5.0	5	ug/L	1	15-SEP-10	U
Toluene	5.0	5	ug/L	1	15-SEP-10	U
m+p-Xylene	10	10	ug/L	1	15-SEP-10	U
o-Xylene	5.0	5	ug/L	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	97	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	101	70-130	15-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-MW-5	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-6DL	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	17-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	AQ	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	630	100	ug/L	1	17-SEP-10	
Unadjusted C9-C12 Aliphatics	710	100	ug/L	1	17-SEP-10	
C5-C8 Aliphatics	360	100	ug/L	1	17-SEP-10	
C9-C12 Aliphatics	140	100	ug/L	1	17-SEP-10	
C9-C10 Aromatics	540	200	ug/L	2	17-SEP-10	

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	130	5	ug/L	1	17-SEP-10	
Ethylbenzene	11	5	ug/L	1	17-SEP-10	
Methyl tert-butylether	29	5	ug/L	1	17-SEP-10	
Naphthalene	5.0	5	ug/L	1	17-SEP-10	U
Toluene	110	5	ug/L	1	17-SEP-10	
m+p-Xylene	11	10	ug/L	1	17-SEP-10	
o-Xylene	13	5	ug/L	1	17-SEP-10	

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	94	70-130	17-SEP-10	
2,5-Dibromotoluene (PID)	97	70-130	17-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-B3(5')	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-7	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	14-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	SL	**Percent Solids:**	91.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	15-SEP-10	U
C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	15-SEP-10	U
C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	15-SEP-10	U
C9-C10 Aromatics	27	27	mg/Kgdrywt	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.3	1.3	mg/Kgdrywt	1	15-SEP-10	U
Ethylbenzene	1.3	1.3	mg/Kgdrywt	1	15-SEP-10	U
Methyl tert-butylether	1.3	1.3	mg/Kgdrywt	1	15-SEP-10	U
Naphthalene	1.3	1.3	mg/Kgdrywt	1	15-SEP-10	U
Toluene	1.3	1.3	mg/Kgdrywt	1	15-SEP-10	U
m+p-Xylene	2.7	2.7	mg/Kgdrywt	1	15-SEP-10	U
o-Xylene	1.3	1.3	mg/Kgdrywt	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	108	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	108	70-130	15-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Report of Analytical Results

Client: Todd Coffin
GEI Consultants
74 Gray Road
Falmouth,ME 04105

Lab Sample ID: SD5518-7
Report Date: 16-SEP-10
Client PO:
Project: Maine VI Study
SDG: SD5518

Sample Description	Matrix	Date Sampled	Date Received
102322-B3(5')	SL	08-SEP-10	08-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	U440 ug/gdrywt	440	LLOYDKAHN	WG82025	10-SEP-10 12:29:39	N/A	N/A	BDS	
Total Solids	91. %	1	SM2540G	WG81992	10-SEP-10 09:52:00	ASTM D2216	09-SEP-10	CP	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5518
Client Sample ID:	102322-MW-3	**Date Collected:**	08-SEP-10
KAS Sample ID:	SD5518-8	**Date Received:**	08-SEP-10
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	15-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	21-SEP-10
Matrix:	AQ	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	100	100	ug/L	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C5-C8 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C9-C12 Aliphatics	100	100	ug/L	1	15-SEP-10	U
C9-C10 Aromatics	100	100	ug/L	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	5.0	5	ug/L	1	15-SEP-10	U
Ethylbenzene	5.0	5	ug/L	1	15-SEP-10	U
Methyl tert-butylether	5.1	5	ug/L	1	15-SEP-10	
Naphthalene	5.0	5	ug/L	1	15-SEP-10	U
Toluene	5.0	5	ug/L	1	15-SEP-10	U
m+p-Xylene	10	10	ug/L	1	15-SEP-10	U
o-Xylene	5.0	5	ug/L	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	99	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	96	70-130	15-SEP-10	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

FORM 4

VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG82101-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY SDG No.: SD5518

Lab File ID: 9DI1057 Lab Sample ID: WG82101-1

Date Analyzed: 09/14/10 Time Analyzed: 1535

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG82101-LCS	WG82101-2	9DI1058	09/14/10	1631
02	WG82101-LCSD	WG82101-3	9DI1059	09/14/10	1728
03	102322-B1 (6.5')	SD5518-1	9DI1063	09/14/10	2120
04	102322-B4 (5')	SD5518-2	9DI1064	09/14/10	2217
05	102322-B5 (5')	SD5518-3	9DI1065	09/14/10	2315
06	102322-B3(5')	SD5518-7	9DI1066	09/15/10	0013
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVVPH

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG82101-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY SDG No.: SD5518

Lab File ID: 9DI2057 Lab Samp1e ID: WG82101-1

Date Analyzed: 09/14/10 Time Analyzed: 1535

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG82101-LCS	WG82101-2	9DI2058	09/14/10	1631
02	WG82101-LCSD	WG82101-3	9DI2059	09/14/10	1728
03	102322-B1 (6.5')	SD5518-1	9DI2063	09/14/10	2120
04	102322-B4 (5')	SD5518-2	9DI2064	09/14/10	2217
05	102322-B5 (5')	SD5518-3	9DI2065	09/14/10	2315
06	102322-B3(5')	SD5518-7	9DI2066	09/15/10	0013
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVVPH

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

| WG82152-BLANK |

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY SDG No.: SD5518

Lab File ID: 9DI1073 Lab Sample ID: WG82152-1

Date Analyzed: 09/15/10 Time Analyzed: 1003

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG82152-LCS	WG82152-2	9DI1074	09/15/10	1100
02	WG82152-LCSD	WG82152-3	9DI1075	09/15/10	1156
03	102322-MW-1	SD5518-4	9DI1077	09/15/10	1422
04	102322-MW-4	SD5518-5	9DI1078	09/15/10	1518
05	102322-MW-5	SD5518-6	9DI1079	09/15/10	1615
06	102322-MW-3	SD5518-8	9DI1081	09/15/10	1808
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVVPH

FORM 4

VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG82152-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY SDG No.: SD5518

Lab File ID: 9DI2073 Lab Sample ID: WG82152-1

Date Analyzed: 09/15/10 Time Analyzed: 1003

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG82152-LCS	WG82152-2	9DI2074	09/15/10	1100
02	WG82152-LCSD	WG82152-3	9DI2075	09/15/10	1156
03	102322-MW-1	SD5518-4	9DI2077	09/15/10	1422
04	102322-MW-4	SD5518-5	9DI2078	09/15/10	1518
05	102322-MW-5	SD5518-6	9DI2079	09/15/10	1615
06	102322-MW-3	SD5518-8	9DI2081	09/15/10	1808
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG82230-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY SDG No.: SD5518

Lab File ID: 9DI1106 Lab Sample ID: WG82230-1

Date Analyzed: 09/17/10 Time Analyzed: 1000

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG82230-LCS	WG82230-2	9DI1107	09/17/10	1058
02	WG82230-LCSD	WG82230-3	9DI1108	09/17/10	1155
03	102322-MW-5	SD5518-6DL	9DI1109	09/17/10	1409
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVVPH

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG82230-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY SDG No.: SD5518

Lab File ID: 9DI2106 Lab Sample ID: WG82230-1

Date Analyzed: 09/17/10 Time Analyzed: 1000

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG82230-LCS	WG82230-2	9DI2107	09/17/10	1058
02	WG82230-LCSD	WG82230-3	9DI2108	09/17/10	1155
03	102322-MW-5	SD5518-6DL	9DI2109	09/17/10	1409
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVVPH

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SD5518
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG82101-1	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	14-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	SL	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	14-sep-2010 15:35	U
Unadjusted C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	14-sep-2010 15:35	U
C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	14-sep-2010 15:35	U
C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	14-sep-2010 15:35	U
C9-C10 Aromatics	27	27	mg/Kgdrywt	1	14-sep-2010 15:35	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.3	1.3	mg/Kgdrywt	1	14-sep-2010 15:35	U
Ethylbenzene	1.3	1.3	mg/Kgdrywt	1	14-sep-2010 15:35	U
Methyl tert-butylether	1.3	1.3	mg/Kgdrywt	1	14-sep-2010 15:35	U
Naphthalene	1.3	1.3	mg/Kgdrywt	1	14-sep-2010 15:35	U
Toluene	1.3	1.3	mg/Kgdrywt	1	14-sep-2010 15:35	U
m+p-Xylene	2.7	2.7	mg/Kgdrywt	1	14-sep-2010 15:35	U
o-Xylene	1.3	1.3	mg/Kgdrywt	1	14-sep-2010 15:35	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	98	70-130	14-sep-2010 15:35	
2,5-Dibromotoluene (PID)	100	70-130	14-sep-2010 15:35	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SD5518
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG82152-1	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	15-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	AQ	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	100	100	ug/L	1	15-sep-2010 10:03	U
Unadjusted C9-C12 Aliphatics	100	100	ug/L	1	15-sep-2010 10:03	U
C5-C8 Aliphatics	100	100	ug/L	1	15-sep-2010 10:03	U
C9-C12 Aliphatics	100	100	ug/L	1	15-sep-2010 10:03	U
C9-C10 Aromatics	100	100	ug/L	1	15-sep-2010 10:03	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	5.0	5	ug/L	1	15-sep-2010 10:03	U
Ethylbenzene	5.0	5	ug/L	1	15-sep-2010 10:03	U
Methyl tert-butylether	5.0	5	ug/L	1	15-sep-2010 10:03	U
Naphthalene	5.0	5	ug/L	1	15-sep-2010 10:03	U
Toluene	5.0	5	ug/L	1	15-sep-2010 10:03	U
m+p-Xylene	10	10	ug/L	1	15-sep-2010 10:03	U
o-Xylene	5.0	5	ug/L	1	15-sep-2010 10:03	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	103	70-130	15-sep-2010 10:03	
2,5-Dibromotoluene (PID)	108	70-130	15-sep-2010 10:03	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SD5518
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG82230-1	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	17-SEP-10
Prep Method:	SW846 5030B	**Date Reported:**	20-SEP-10
Matrix:	AQ	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	100	100	ug/L	1	17-sep-2010 10:00	U
Unadjusted C9-C12 Aliphatics	100	100	ug/L	1	17-sep-2010 10:00	U
C5-C8 Aliphatics	100	100	ug/L	1	17-sep-2010 10:00	U
C9-C12 Aliphatics	100	100	ug/L	1	17-sep-2010 10:00	U
C9-C10 Aromatics	100	100	ug/L	1	17-sep-2010 10:00	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	5.0	5	ug/L	1	17-sep-2010 10:00	U
Ethylbenzene	5.0	5	ug/L	1	17-sep-2010 10:00	U
Methyl tert-butylether	5.0	5	ug/L	1	17-sep-2010 10:00	U
Naphthalene	5.0	5	ug/L	1	17-sep-2010 10:00	U
Toluene	5.0	5	ug/L	1	17-sep-2010 10:00	U
m+p-Xylene	10	10	ug/L	1	17-sep-2010 10:00	U
o-Xylene	5.0	5	ug/L	1	17-sep-2010 10:00	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	112	70-130	17-sep-2010 10:00	
2,5-Dibromotoluene (PID)	115	70-130	17-sep-2010 10:00	

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 the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG82101-2,WG82101-3
Preparative Method: SW846 5030B
Analytical Method: MA DEP VPH 04-1.1
Analytical Batch: WG82101

Matrix: SL
Preparative Date: 14-SEP-10
Analytical Date: 14-SEP-10

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
C9-C12 Aliphatics	mg/Kgdrywt	33	34	34	103	100	70-130	0	25
Methyl tert-butylether	mg/Kgdrywt	50	45	45	89	89	70-130	0	25
m+p-Xylene	mg/Kgdrywt	67	56	55	84	82	70-130	2	25
Toluene	mg/Kgdrywt	50	41	41	82	81	70-130	0	25
C9-C10 Aromatics	mg/Kgdrywt	33	33	35	100	105	70-130	6	25
Ethylbenzene	mg/Kgdrywt	17	14	14	85	85	70-130	0	25
Benzene	mg/Kgdrywt	17	14	14	87	86	70-130	0	25
C5-C8 Aliphatics	mg/Kgdrywt	167	150	148	90	89	70-130	1	25
Naphthalene	mg/Kgdrywt	33	29	27	88	82	70-130	7	25
o-Xylene	mg/Kgdrywt	33	27	26	81	80	70-130	4	25

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG82152-2,WG82152-3
Preparative Method: SW846 5030B
Analytical Method: MA DEP VPH 04-1.1
Analytical Batch: WG82152

Matrix: AQ
Preparative Date: 15-SEP-10
Analytical Date: 15-SEP-10

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
C5-C8 Aliphatics	ug/L	300	327	325	109	108	70-130	1	25
C9-C12 Aliphatics	ug/L	100	105	103	105	103	70-130	2	25
Methyl tert-butylether	ug/L	100	95	85	95	85	70-130	11	25
o-Xylene	ug/L	100	82	81	82	81	70-130	1	25
Ethylbenzene	ug/L	100	85	84	85	84	70-130	1	25
C9-C10 Aromatics	ug/L	100	111	102	111	102	70-130	8	25
Naphthalene	ug/L	100	102	86	102	86	70-130	17	25
Benzene	ug/L	100	87	86	87	86	70-130	1	25
m+p-Xylene	ug/L	200	174	172	87	86	70-130	1	25
Toluene	ug/L	100	85	83	85	83	70-130	2	25

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG82230-2,WG82230-3
Preparative Method: SW846 5030B
Analytical Method: MA DEP VPH 04-1.1
Analytical Batch: WG82230

Matrix: AQ
Preparative Date: 17-SEP-10
Analytical Date: 17-SEP-10

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
C9-C12 Aliphatics	ug/L	100	108	108	108	108	70-130	0	25
C5-C8 Aliphatics	ug/L	300	318	315	106	105	70-130	1	25
m+p-Xylene	ug/L	200	168	169	84	84	70-130	0	25
Methyl tert-butylether	ug/L	100	93	93	93	93	70-130	0	25
Naphthalene	ug/L	100	102	106	102	106	70-130	4	25
Ethylbenzene	ug/L	100	82	82	82	82	70-130	0	25
Toluene	ug/L	100	83	83	83	83	70-130	0	25
o-Xylene	ug/L	100	80	80	80	80	70-130	0	25
Benzene	ug/L	100	83	85	83	85	70-130	2	25
C9-C10 Aromatics	ug/L	100	105	105	105	105	70-130	0	25

Quality Control Report

Blank Sample Summary Report

TOC in Soil

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG82025	Lloyd Kahn	10-SEP-10	N/A	U 300 ug/gdrywt	400 ug/gdrywt

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG81992	ASTM D2216	10-SEP-10	09-SEP-10	U 1 %	1 %

Quality Control Report

Laboratory Control Sample Summary Report

TOC In Soil

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG82025-2	LCS	WG82025	10-SEP-10	N/A	ug/gdrywt	400000.000	420000	106	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG81992-2	LCS	WG81992	10-SEP-10	09-SEP-10	%	90	90.	100	80-120	
WG81992-3	LCSD	WG81992	10-SEP-10	09-SEP-10	%	90	90.	100	80-120	0

Quality Control Report

Duplicate Sample Summary Report

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG81992-4	SD5518-1	WG81992	10-SEP-10	%	92.	92.	1	20

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Client: MEDEP	KAS PM: SMB	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: Client
KAS Work Order#: SD 5518	KIMS Review By:	Received By: GN
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 9-8-10 / 16:25

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea	✓				
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?	✓			✓ GN	
Methanol covering soil?	✓			✓ GN	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client:	Contact:	Phone #:	Fax #:
Maine DEP	Pete Eremita	(207) 822-6364	( )
Address: 312 Canco Road	City: ~~Portland~~ Berwick	State: Maine	Zip Code: 04103
Purchase Order #:	Proj. Name/No.: Maine VI Study (10232-1)		Katahdin Quote #:
Email: Send Data to BOTH Pete.M.Eremita@Maine.gov AND Diana.M.McKenzie@Maine.gov			
Bill (if different than above):	Address:		
Sampler (Print/Sign): Krista Wolfe K. Wolfe			Copies To:

LAB USE ONLY
Work Order #: SD5518
Katahdin Project Number
Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

*	Sample Description	Date/Time Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: VPH by MAVPH (Filt. Y/N)	~~TSTAL~~ Fraction of Organic Carbon (Filt. Y/N)	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N
	10a322 - B1 (6.5')	9/8/10 0915	SO	4	X	X								
	" - B4 (5')	1043	SO	4	X	X								
	" - B5 (5')	1130	SO	4	X	X								
	" - MW-1	1100	GW	3	X									
	" - MW-4	1150	GW	3	X									
	" - MW-5	1340	GW	3	X									
	" - B3 (5')	9/8/10 1003	SO	4	X	X								
	" - B MW-3	9/8/10 1440	GW	3	X									

COMMENTS: Data Deliverables both on website and by email. EDD Format "MEDEP EDD", aka "KAS064-XLS".

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
K. Wolfe	9/8/10 1625				
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

Login Number: SD5518

Account: GEICON001 Web

GEI Consultants Inc.

Project:

Quote/Incoming: GEIMAINEVISTUDY

Primary Report Address:

Todd Coffin
GEI Consultants
74 Gray Road

Falmouth,ME 04105

Primary Invoice Address:

Accounts Payable
GEI Consultants Inc.
400 Unicorn Park Drive

Woburn,MA 01810

Report CC Addresses:

Invoice CC Addresses:

Login Information

ANALYSIS INSTRUCTIONS	:	need to rpt all dilutions for VPH, Merge results for EDD
CHECK NO.	:	
CLIENT PO#	:	
COOLER TEMPERATURE	:	2.7
DELIVERY SERVICES	:	Client
EDD FORMAT	:	KAS064-XLS
LOGIN INITIALS	:	GN
PM	:	SMB
PROJECT NAME	:	Maine VI Study
QC LEVEL	:	II+
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	need to rpt all dilutions for VPH, merge results for EDD, need rpt and edd on CD, no HC (3) CD's, send 1 CD to todd, send(2)CD to to To Andrea lgo refer to email, rpt all dilutions for VPH, down load on the web, also email pdf and edd to pete eremita and Diane Mckenzie, see coc for emails

Laboratory Sample ID	Client Sample Number	Collect Date/Time	SDG ID / Receive Date / SDG STATUS	PR	Verbal Date	Due Date	Mailed
SD5518-1	102322-B1 (6.5')	08-SEP-10 08:15	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	22-SEP-10	2oz Glass		
Solid	S	MA-VPH	06-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	08-OCT-10	2oz Glass		

SD5518-2	102322-B4 (5')	08-SEP-10 10:43	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	22-SEP-10	2oz Glass		
Solid	S	MA-VPH	06-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	08-OCT-10	2oz Glass		

SD5518-3	102322-B5 (5')	08-SEP-10 11:30	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	22-SEP-10	2oz Glass		
Solid	S	MA-VPH	06-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	08-OCT-10	2oz Glass		

SD5518-4	102322-MW-1	08-SEP-10 11:00	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH	22-SEP-10	40mL Vial+HCl		

SD5518-5	102322-MW-4	08-SEP-10 11:50	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH	22-SEP-10	40mL Vial+HCl		

SD5518-6	102322-MW-5	08-SEP-10 12:40	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH	22-SEP-10	40mL Vial+HCl		

SD5518-7	102322-B3(5')	08-SEP-10 10:03	08-SEP-10			17-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	22-SEP-10	2oz Glass		
Solid	S	MA-VPH	06-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	08-OCT-10	2oz Glass		

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Sep. 09, 2010
08:44 AM

Login Number: SD5518

Quote/Incoming: GEIMAINEVISTUDY

Account: GEICON001 Web

GEI Consultants Inc.

Project:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SD5518-8	102322-MW-3	08-SEP-10 14:40	08-SEP-10			17-SEP-10	

Matrix		*Product*	*Hold Date (shortest)*	*Bottle Type*	*Bottle Count*	*Comments*
Aqueous	S	MA-VPH	22-SEP-10	40mL Vial+HCl		

Total Samples: *8* ***Total Analyses:*** *16*

ANALYTICAL REPORT

Lab Number:	L1013936
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Todd Coffin
Phone:	(781) 721-4000
Project Name:	MAINE V.I. STUDY
Project Number:	10232-2
Report Date:	09/16/10

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: MAINE V.I. STUDY
Project Number: 10232-2

Lab Number: L1013936
Report Date: 09/16/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1013936-01	102322-SV-1	BERWICK, ME	09/08/10 10:57
L1013936-02	102322-HI-SV-1	BERWICK, ME	09/08/10 11:46
L1013936-03	102322-SV-5	BERWICK, ME	09/08/10 12:43
L1013936-04	102322-SV-6	BERWICK, ME	09/08/10 13:32
L1013936-05	102322-SV-4	BERWICK, ME	09/08/10 14:03
L1013936-06	102322-SS-1	BERWICK, ME	09/08/10 14:00
L1013936-07	102322-SV-3	BERWICK, ME	09/08/10 14:55
L1013936-08	CAN 551	BERWICK, ME	
L1013936-09	FLOW 448	BERWICK, ME	
L1013936-10	FLOW 003	BERWICK, ME	

Project Name: MAINE V.I. STUDY **Lab Number:** L1013936

Project Number: 10232-2 **Report Date:** 09/16/10

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: MAINE V.I. STUDY
Project Number: 10232-2

Lab Number: L1013936
Report Date: 09/16/10

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 September 2, 2010.
The canister certification data is provided as an addendum.

The initial and final flowrate RPD for the flow controller associated with L1013936-04 exceeded the QC acceptance criteria (25%).

Per client, analyze all samples for CO2 and O2.

Petroleum Hydrocarbons in Air

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

Case Narrative (continued)

All MCP required questions were answered with affirmative responses; therefore, there are no relevant data issues to discuss.

L1013936-02, -03, and -05 have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Fixed Gases

L1013936-01 thru 07: Prior to sample analysis, the canisters were pressurized with UHP Hydrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Hydrogen 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: Andy Rezendes

Title: Technical Director/Representative Date: 09/16/10

AIR

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-01	D	Date Collected:	09/08/10 10:57
Client ID:	102322-SV-1		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 18:01			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	18.4		%	1.72	--	1.724
Carbon Dioxide	0.417		%	0.172	--	1.724

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-02	D	Date Collected:	09/08/10 11:46
Client ID:	102322-HI-SV-1		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 18:41			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	8.33		%	1.83	--	1.835
Carbon Dioxide	9.95		%	0.183	--	1.835

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-03	D	Date Collected:	09/08/10 12:43
Client ID:	102322-SV-5		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 19:22			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	8.70		%	1.82	--	1.818
Carbon Dioxide	8.58		%	0.182	--	1.818

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-04	D	Date Collected:	09/08/10 13:32
Client ID:	102322-SV-6		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 20:03			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	11.0		%	2.17	--	2.174
Carbon Dioxide	6.93		%	0.217	--	2.174

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-05	D	Date Collected:	09/08/10 14:03
Client ID:	102322-SV-4		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 20:44			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	ND		%	2.13	--	2.128
Carbon Dioxide	18.4		%	0.213	--	2.128

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-06	D	Date Collected:	09/08/10 14:00
Client ID:	102322-SS-1		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 21:26			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	17.6		%	1.83	--	1.835
Carbon Dioxide	1.23		%	0.183	--	1.835

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-07	D	Date Collected:	09/08/10 14:55
Client ID:	102322-SV-3		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/15/10 22:07			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.5		%	2.15	--	2.151
Carbon Dioxide	3.23		%	0.215	--	2.151

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 51,3C
Analytical Date: 09/15/10 17:23
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
Fixed Gases by GC - Mansfield Lab for sample(s): 01-07 Batch: WG432559-2					
Oxygen	ND		%	1.00	--
Carbon Dioxide	ND		%	0.100	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAINE V.I. STUDY

Project Number: 10232-2

Lab Number: L1013936

Report Date: 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 Batch: WG432559-1								
Oxygen	91		-		80-120	-		
Carbon Dioxide	103		-		80-120	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-2

Lab Number: L1013936
Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-3 QC Sample: L1013936-01 Client ID: 102322-SV-1						
Oxygen	18.4	18.8	%	2		5
Carbon Dioxide	0.417	0.417	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-4 QC Sample: L1013936-02 Client ID: 102322-HI-SV-1						
Oxygen	8.33	8.44	%	1		5
Carbon Dioxide	9.95	9.95	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-5 QC Sample: L1013936-03 Client ID: 102322-SV-5						
Oxygen	8.70	8.56	%	2		5
Carbon Dioxide	8.58	8.59	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-6 QC Sample: L1013936-04 Client ID: 102322-SV-6						
Oxygen	11.0	11.0	%	0		5
Carbon Dioxide	6.93	6.93	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-7 QC Sample: L1013936-05 Client ID: 102322-SV-4						
Oxygen	ND	ND	%	NC		5
Carbon Dioxide	18.4	18.4	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-8 QC Sample: L1013936-06 Client ID: 102322-SS-1						
Oxygen	17.6	17.8	%	1		5
Carbon Dioxide	1.23	1.23	%	0		5

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-2

Lab Number: L1013936
Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432559-9 QC Sample: L1013936-07 Client ID: 102322-SV-3					
Oxygen	15.5	15.3	%	1	5
Carbon Dioxide	3.23	3.23	%	0	5

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-01	Date Collected:	09/08/10 10:57
Client ID:	102322-SV-1	Date Received:	09/09/10
Sample Location:	BERWICK, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/14/10 18:14		
Analyst:	AJ		

Quality Control Information

Sample Type:	200 ml/min 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	23		ug/m3	2.0	--	1
Methyl tert butyl ether	30		ug/m3	2.0	--	1
Benzene	30		ug/m3	2.0	--	1
Toluene	170		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	620		ug/m3	12	--	1
Ethylbenzene	24		ug/m3	2.0	--	1
p/m-Xylene	48		ug/m3	4.0	--	1
o-Xylene	18		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	100		ug/m3	14	--	1
C9-C10 Aromatics Total	53		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	122		50-200
Bromochloromethane	121		50-200
Chlorobenzene-d5	115		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-02	D	Date Collected:	09/08/10 11:46
Client ID:	102322-HI-SV-1		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	09/15/10 01:19			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/min 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

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	20	--	10
Methyl tert butyl ether	ND		ug/m3	20	--	10
Benzene	ND		ug/m3	20	--	10
Toluene	ND		ug/m3	20	--	10
C5-C8 Aliphatics, Adjusted	670		ug/m3	120	--	10
Ethylbenzene	ND		ug/m3	20	--	10
p/m-Xylene	ND		ug/m3	40	--	10
o-Xylene	ND		ug/m3	20	--	10
Naphthalene	ND		ug/m3	20	--	10
C9-C12 Aliphatics, Adjusted	ND		ug/m3	140	--	10
C9-C10 Aromatics Total	ND		ug/m3	100	--	10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		50-200
Bromochloromethane	92		50-200
Chlorobenzene-d5	88		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-03	D	Date Collected:	09/08/10 12:43
Client ID:	102322-SV-5		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	09/15/10 01:53			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/min 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	20	--	10
Methyl tert butyl ether	ND		ug/m3	20	--	10
Benzene	34		ug/m3	20	--	10
Toluene	ND		ug/m3	20	--	10
C5-C8 Aliphatics, Adjusted	990		ug/m3	120	--	10
Ethylbenzene	ND		ug/m3	20	--	10
p/m-Xylene	ND		ug/m3	40	--	10
o-Xylene	ND		ug/m3	20	--	10
Naphthalene	ND		ug/m3	20	--	10
C9-C12 Aliphatics, Adjusted	ND		ug/m3	140	--	10
C9-C10 Aromatics Total	ND		ug/m3	100	--	10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		50-200
Bromochloromethane	95		50-200
Chlorobenzene-d5	88		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-04	Date Collected:	09/08/10 13:32
Client ID:	102322-SV-6	Date Received:	09/09/10
Sample Location:	BERWICK, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/14/10 20:02		
Analyst:	AJ		

Quality Control Information

Sample Type:	200 ml/min 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	22		ug/m3	2.0	--	1
Methyl tert butyl ether	9.9		ug/m3	2.0	--	1
Benzene	25		ug/m3	2.0	--	1
Toluene	340		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	1200		ug/m3	12	--	1
Ethylbenzene	11		ug/m3	2.0	--	1
p/m-Xylene	18		ug/m3	4.0	--	1
o-Xylene	7.4		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	82		ug/m3	14	--	1
C9-C10 Aromatics Total	23		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	104		50-200
Bromochloromethane	111		50-200
Chlorobenzene-d5	102		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-05	D	Date Collected:	09/08/10 14:03
Client ID:	102322-SV-4		Date Received:	09/09/10
Sample Location:	BERWICK, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	09/15/10 03:01			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/min 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

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	41		ug/m3	20	--	10
Methyl tert butyl ether	28		ug/m3	20	--	10
Benzene	55		ug/m3	20	--	10
Toluene	310		ug/m3	20	--	10
C5-C8 Aliphatics, Adjusted	3300		ug/m3	120	--	10
Ethylbenzene	ND		ug/m3	20	--	10
p/m-Xylene	ND		ug/m3	40	--	10
o-Xylene	ND		ug/m3	20	--	10
Naphthalene	ND		ug/m3	20	--	10
C9-C12 Aliphatics, Adjusted	240		ug/m3	140	--	10
C9-C10 Aromatics Total	ND		ug/m3	100	--	10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		50-200
Bromochloromethane	97		50-200
Chlorobenzene-d5	89		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-06	Date Collected:	09/08/10 14:00
Client ID:	102322-SS-1	Date Received:	09/09/10
Sample Location:	BERWICK, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/14/10 21:17		
Analyst:	AJ		

Quality Control Information

Sample Type:	200 ml/min 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	ND		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	160		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	390		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	81		50-200
Bromochloromethane	86		50-200
Chlorobenzene-d5	81		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013936-07	Date Collected:	09/08/10 14:55
Client ID:	102322-SV-3	Date Received:	09/09/10
Sample Location:	BERWICK, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/14/10 21:53		
Analyst:	AJ		

Quality Control Information

Sample Type:	200 ml/min 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	41		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	14		ug/m3	2.0	--	1
Toluene	200		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	1300		ug/m3	12	--	1
Ethylbenzene	5.5		ug/m3	2.0	--	1
p/m-Xylene	11		ug/m3	4.0	--	1
o-Xylene	4.6		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	180		ug/m3	14	--	1
C9-C10 Aromatics Total	28		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	105		50-200
Bromochloromethane	111		50-200
Chlorobenzene-d5	100		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-2
Lab Number: L1013936
Report Date: 09/16/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 96,APH
Analytical Date: 09/14/10 13:58
Analyst: AJ

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbons in Air - Mansfield Lab for sample(s): 01-07 Batch: WG432299-4					
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: MAINE V.I. STUDY

Project Number: 10232-2

Lab Number: L1013936

Report Date: 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG432299-3								
1,3-Butadiene	89		-		70-130	-		
Methyl tert butyl ether	106		-		70-130	-		
Benzene	94		-		70-130	-		
Toluene	108		-		70-130	-		
C5-C8 Aliphatics, Adjusted	101		-		70-130	-		
Ethylbenzene	111		-		70-130	-		
p/m-Xylene	110		-		70-130	-		
o-Xylene	113		-		70-130	-		
Naphthalene	129		-		50-150	-		
C9-C12 Aliphatics, Adjusted	81		-		70-130	-		
C9-C10 Aromatics Total	98		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-2

Lab Number: L1013936
Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG432299-5 QC Sample: L1014122-01 Client ID: DUP Sample						
1,3-Butadiene	ND	ND	ug/m3	NC		30
Methyl tert butyl ether	ND	ND	ug/m3	NC		30
Benzene	17	16	ug/m3	6		30
Toluene	260	230	ug/m3	12		30
C5-C8 Aliphatics, Adjusted	360	310	ug/m3	15		30
Ethylbenzene	ND	ND	ug/m3	NC		30
p/m-Xylene	ND	ND	ug/m3	NC		30
o-Xylene	ND	ND	ug/m3	NC		30
Naphthalene	ND	ND	ug/m3	NC		30
C9-C12 Aliphatics, Adjusted	50	39	ug/m3	25		30
C9-C10 Aromatics Total	ND	ND	ug/m3	NC		30

Project Name: MAINE V.I. STUDY **Lab Number:** L1013936

Project Number: 10232-2 **Report Date:** 09/16/10

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
L1013936-01	102322-SV-1	0331	#90 SV		-	-	200	221	10
L1013936-01	102322-SV-1	340	2.7L Can	I1013126	-28.8	-2.9	-	-	-
L1013936-02	102322-HI-SV-1	0067	#90 SV		-	-	200	200	0
L1013936-02	102322-HI-SV-1	368	2.7L Can	I1013126	-29.4	-2.9	-	-	-
L1013936-03	102322-SV-5	0018	#30 SV		-	-	200	206	3
L1013936-03	102322-SV-5	215	2.7L Can	I1013126	-29.4	-2.6	-	-	-
L1013936-04	102322-SV-6	0068	#30 SV		-	-	200	155	25
L1013936-04	102322-SV-6	257	2.7L Can	I1013126	-28.8	-6.0	-	-	-
L1013936-05	102322-SV-4	0445	#90 SV		-	-	200	200	0
L1013936-05	102322-SV-4	1727	2.7L Can	I1013126	-29.4	-5.6	-	-	-
L1013936-06	102322-SS-1	0229	#90 SV		-	-	200	204	2
L1013936-06	102322-SS-1	160	2.7L Can	I1013126	-28.8	-3.1	-	-	-
L1013936-07	102322-SV-3	0023	#90 SV		-	-	200	200	0
L1013936-07	102322-SV-3	536	2.7L Can	I1013126	-29.4	-6.3	-	-	-
L1013936-08	CAN 551	0448	#90 SV		-	-	200	204	2
L1013936-08	CAN 551	551	2.7L Can	I1013126	-29.4	-28.7	-	-	-
L1013936-10	FLOW 003	0003	#90 SV		-	-	200	199	1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1013126
Report Date: 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01
Client ID: CAN 239 SHELF 1
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 08/26/10 11:29
Analyst: AJ

Date Collected: 08/24/10 00:00
Date Received: 08/24/10
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
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	1.42	1.00	--	3.37	2.37	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	1.35	0.500	--	3.30	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:*** L1013126

Project Number: CANISTER QC BAT ***Report Date:*** 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01 Date Collected: 08/24/10 00:00

Client ID: CAN 239 SHELF 1 Date Received: 08/24/10

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
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:*** L1013126

Project Number: CANISTER QC BAT ***Report Date:*** 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01 Date Collected: 08/24/10 00:00

Client ID: CAN 239 SHELF 1 Date Received: 08/24/10

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
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:*** L1013126

Project Number: CANISTER QC BAT ***Report Date:*** 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01 Date Collected: 08/24/10 00:00

Client ID: CAN 239 SHELF 1 Date Received: 08/24/10

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
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-Trimethybenzene	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:*** L1013126

Project Number: CANISTER QC BAT ***Report Date:*** 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01
Client ID: CAN 239 SHELF 1
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 08/26/10 11:29
Analyst: AJ

Date Collected: 08/24/10 00:00
Date Received: 08/24/10
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
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	0.060	0.050	--	0.337	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	0.147	0.050	--	1.12	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:*** L1013126

Project Number: CANISTER QC BAT ***Report Date:*** 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01 Date Collected: 08/24/10 00:00

Client ID: CAN 239 SHELF 1 Date Received: 08/24/10

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
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-Trimethybenzene	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:*** L1013126

Project Number: CANISTER QC BAT ***Report Date:*** 09/16/10

Air Canister Certification Results

Lab ID: L1013126-01 Date Collected: 08/24/10 00:00

Client ID: CAN 239 SHELF 1 Date Received: 08/24/10

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	0.055	0.050	--	0.288	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:** L1013126

Project Number: CANISTER QC BAT **Report Date:** 09/16/10

AIR CAN CERTIFICATION RESULTS

Lab ID:	L1013126-01	Date Collected:	08/24/10 00:00
Client ID:	CAN 239 SHELF 1	Date Received:	08/24/10
Sample Location:	Not Specified	Field Prep:	Not Specified
Matrix:	Air		
Analytical Method:	96,APH		
Analytical Date:	08/27/10 17:59		
Analyst:	AR		

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: MAINE V.I. STUDY
Project Number: 10232-2

Lab Number: L1013936
Report Date: 09/16/10

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(*)
L1013936-01A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-02A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-03A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-04A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-05A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-06A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-07A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1013936-08A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	MAINE V.I. STUDY	**Lab Number:**	L1013936
Project Number:	10232-2	**Report Date:**	09/16/10

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:	MAINE V.I. STUDY	**Lab Number:**	L1013936
Project Number:	10232-2	**Report Date:**	09/16/10

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.

Report Format: Data Usability Report

REFERENCES

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.

AIR ANALYSIS

PAGE 1 OF 2

CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

Date Rec'd in Lab:

ALPHA Job #: L1013936

Client Information

Client: Pete Eremita, Maine DEP
Address: 312 Canco Road
Portland, ME 04103
Phone: 207-822-6463
Fax:
Email: pete.m.eremita@main.gov

Project Information

Project Name: Maine V.I. Study
Project Location: Berwick, Maine
Project #: 10232-2
Project Manager: Todd Coffin- GEI
ALPHA Quote #:

Turn-Around-Time

☒ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Report/Data Deliverables Information

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:
Also include diana.m.mckenzie@maine.gov in data deliverables. EDD- "MEDEP EDD"

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
1	102322-SV-1	9/8/10	1046	1057	30	5	SV	MW	2.7	340	0337	☐	☐	☐	☒	☐	☐	☐	
2	102322-MI-SV-1		1133	1146	30	7	SV	MW	2.7	368	0067	☐	☐	☐	☒	☐	☐	☐	
3	102322-SV-5		1230	1243	30	6	SV	MW	2.7	215	0018	☐	☐	☐	☒	☐	☐	☐	
4	102322-SV-6		1312	1332	28.5	6	SV	MW	2.7	257	0068	☐	☐	☐	☒	☐	☐	☐	
5	102322-SV-4		1350	1403	30	7	SV	MW	2.7	1727	0445	☐	☐	☐	☒	☐	☐	☐	
6	102322-SS-1	↓	1345	1400	29	3	SV	KW	2.7	100	0229	☐	☐	☐	☒	☐	☐	☐	
										Container Type		-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
M. Woods/UPS	9/8/10 1645	UPS	
	9/9/10	[signature]	9/9/10

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

*2 defective regs & 1 defective can sent back

AIR ANALYSIS

PAGE 2 OF 2

CHAIN OF CUSTODY

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

Date Rec'd in Lab:

ALPHA Job #: L1013936

Client Information

Client: Pete Eremita, Maine DEP
Address: 312 Canco Road
Portland, ME 04103
Phone: 207-822-6463
Fax:
Email: pete.m.eremita@main.gov

Project Information

Project Name: Maine V.I. Study
Project Location: Berwick, Maine
Project #: 10232-2
Project Manager: Todd Coffin- GEI
ALPHA Quote #:

Turn-Around-Time

☒ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Report/Data Deliverables Information

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:
Also include diana.m.mckenzie@maine.gov in data deliverables. EDD- "MEDEP EDD"

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
-7	102332-SV-3	9/8/10	1435	1455	30	3	SV	MW	2.7	536	0023	☐	☐	☐	☒	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
K. Wagner	9/8/10 1445	VPS	
K. Wagner VPS	9/9/10		9/9/10

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

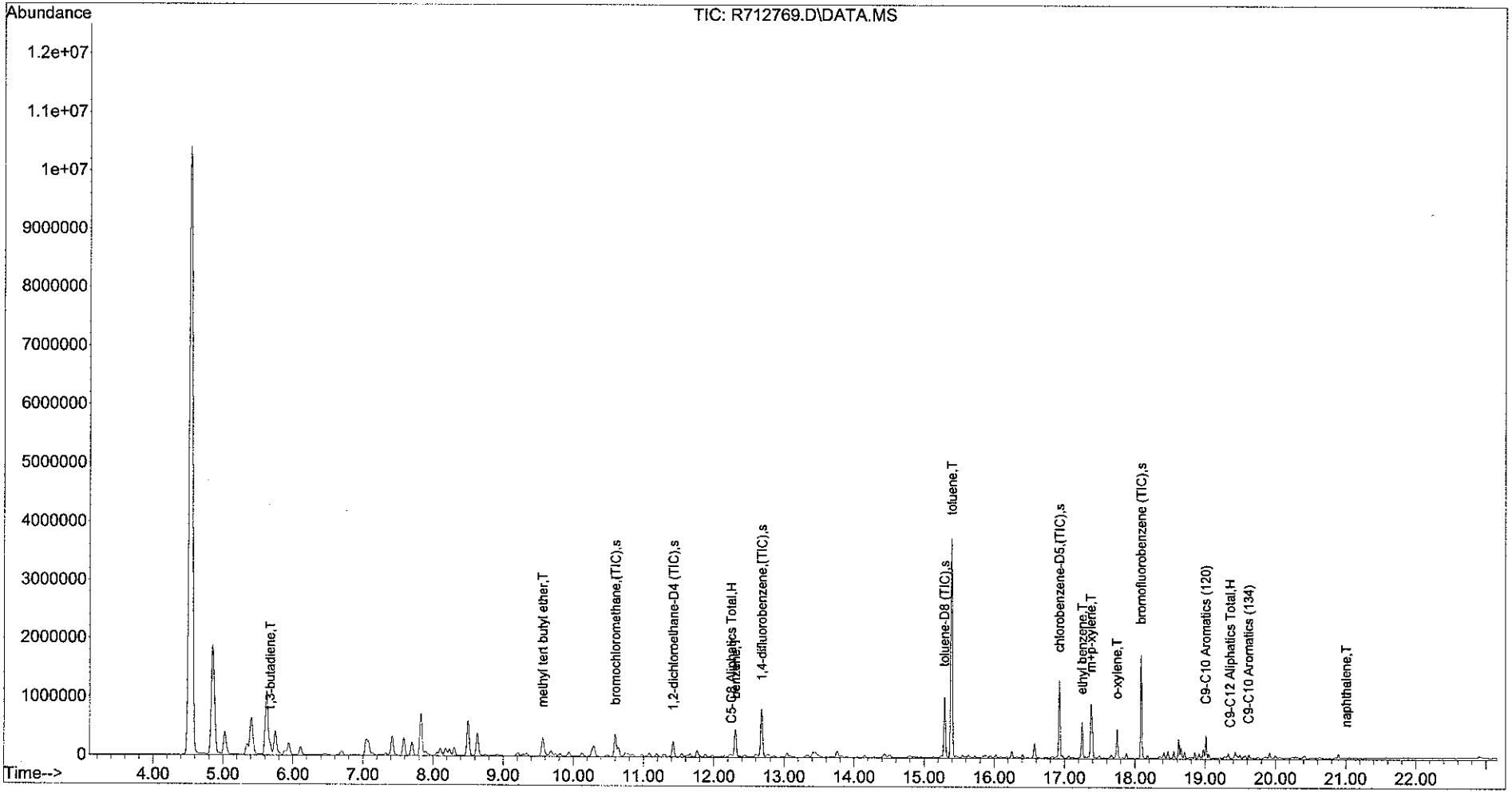
Form 101-02 (I)
Revised 29-Dec-09

APH

Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712769.D
Acq On : 14 Sep 2010 6:14 pm
Operator : AIRLAB7:aj
Sample : 11013936-01,3,250,250
Misc : wg432299
ALS Vial : 9 Sample Multiplier: 1

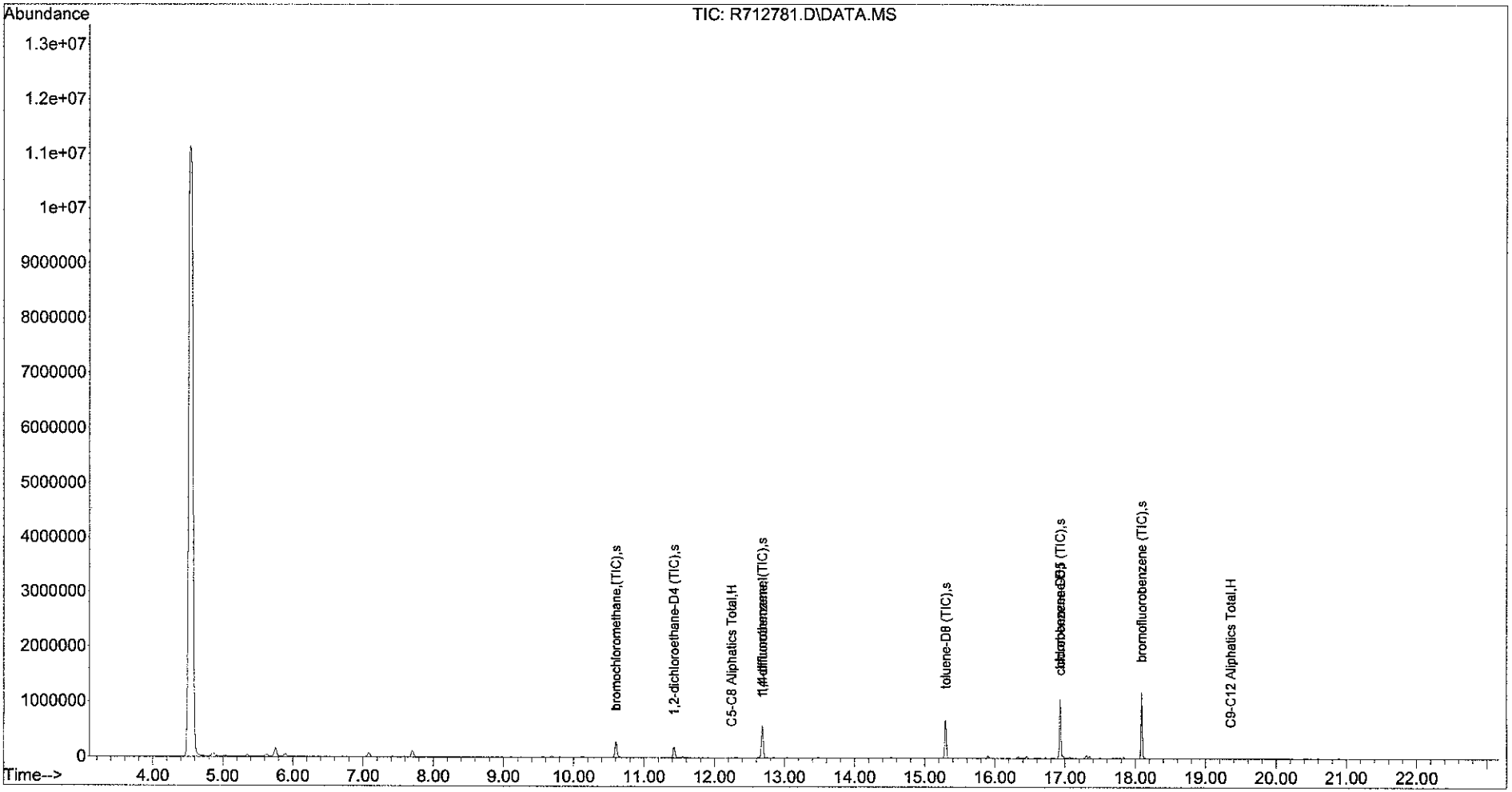
Quant Time: Sep 15 16:02:56 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712781.D
Acq On : 15 Sep 2010 1:19 am
Operator : AIRLAB7:aj
Sample : 11013936-02d,3,25,250
Misc : wg432299
ALS Vial : 10 Sample Multiplier: 1

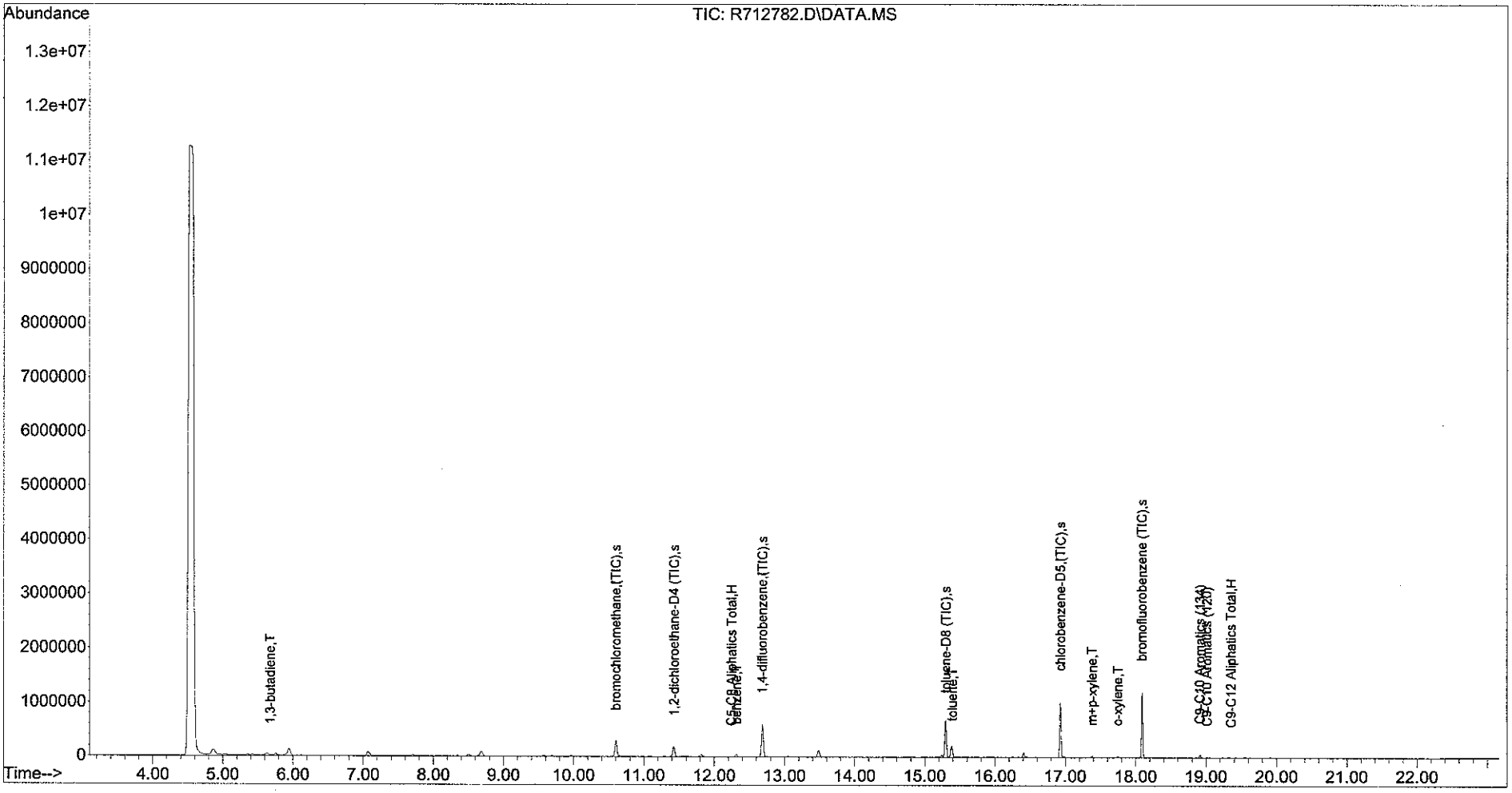
Quant Time: Sep 15 16:17:32 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712782.D
Acq On : 15 Sep 2010 1:53 am
Operator : AIRLAB7:aj
Sample : 11013936-03d,3,25,250
Misc : wg432299
ALS Vial : 11 Sample Multiplier: 1

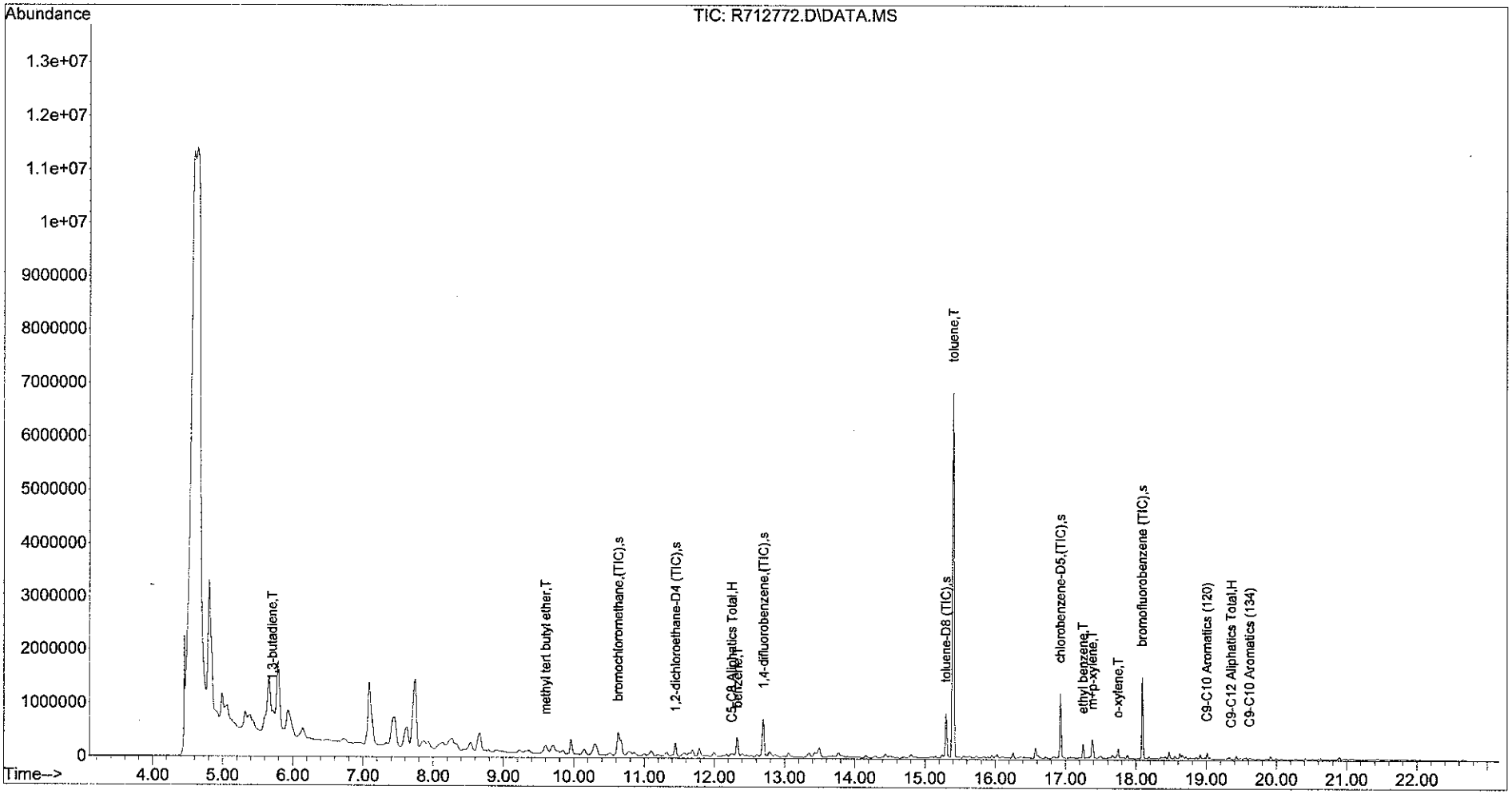
Quant Time: Sep 15 16:18:05 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712772.D
Acq On : 14 Sep 2010 8:02 pm
Operator : AIRLAB7:aj
Sample : 11013936-04,3,250,250
Misc : wg432299
ALS Vial : 12 Sample Multiplier: 1

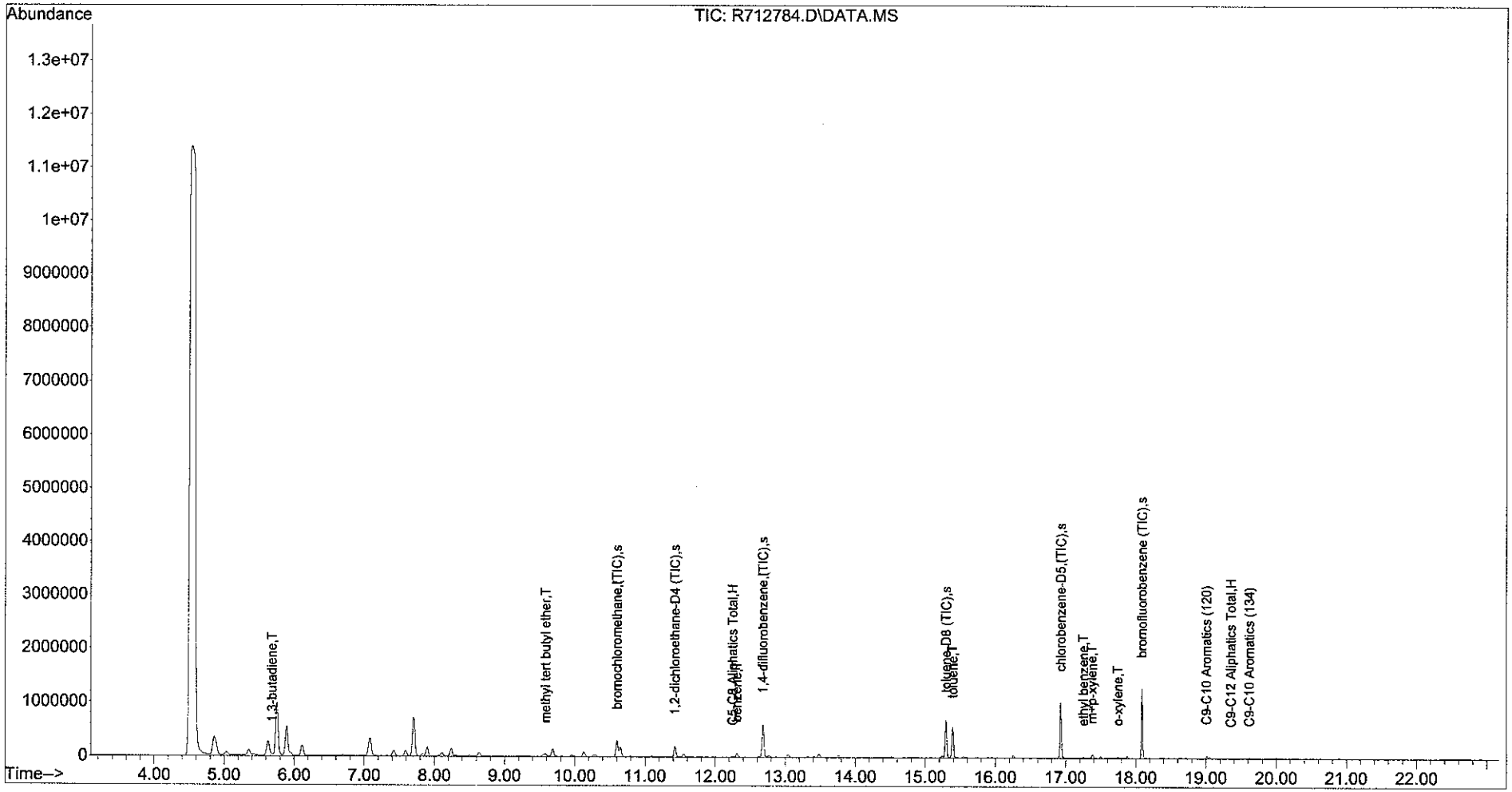
Quant Time: Sep 15 16:04:06 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712784.D
Acq On : 15 Sep 2010 3:01 am
Operator : AIRLAB7:aj
Sample : 11013936-05d,3,25,250
Misc : wg432299
ALS Vial : 13 Sample Multiplier: 1

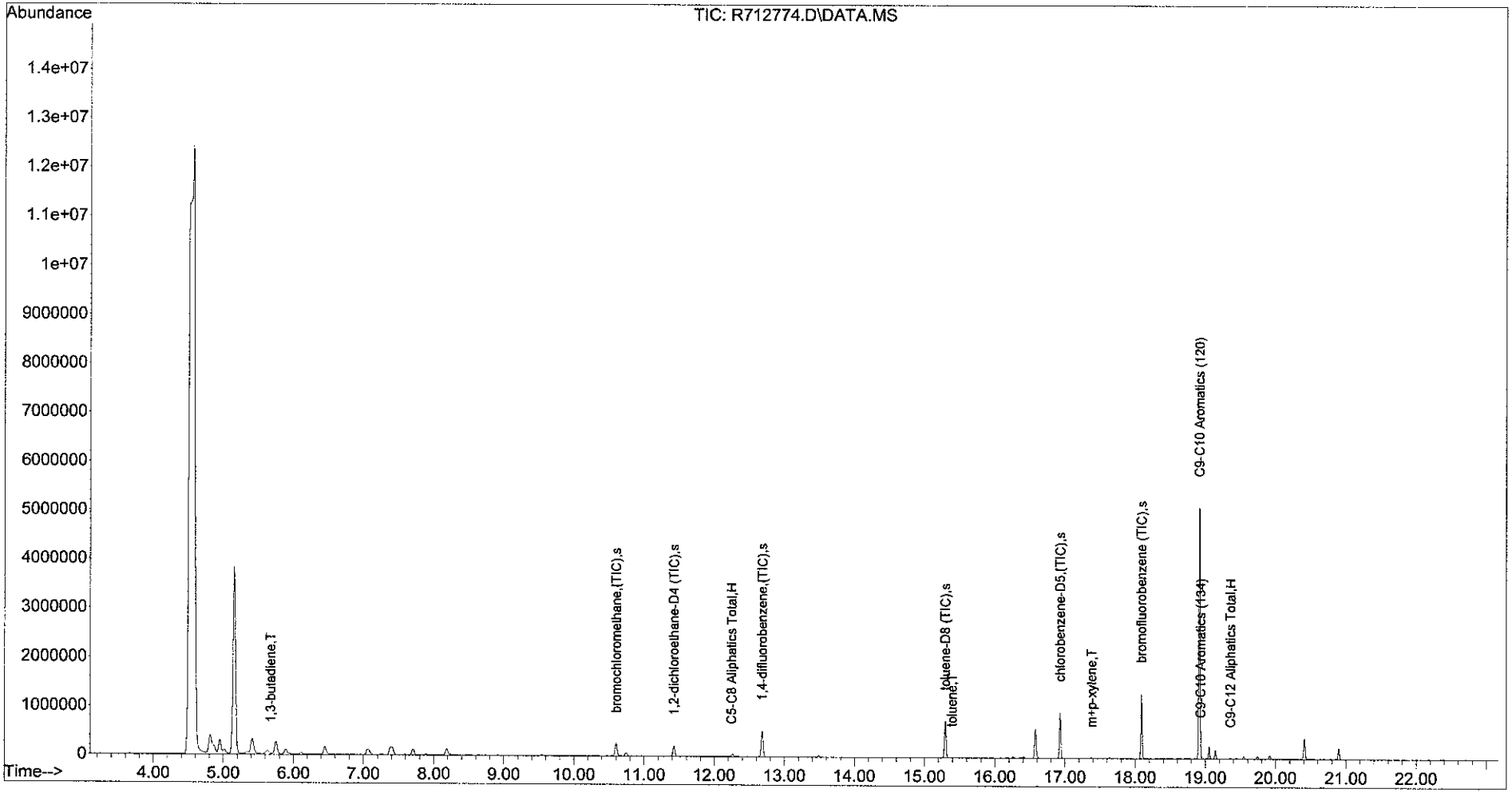
Quant Time: Sep 15 16:18:51 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712774.D
Acq On : 14 Sep 2010 9:17 pm
Operator : AIRLAB7:aj
Sample : 11013936-06,3,250,250
Misc : wg432299
ALS Vial : 14 Sample Multiplier: 1

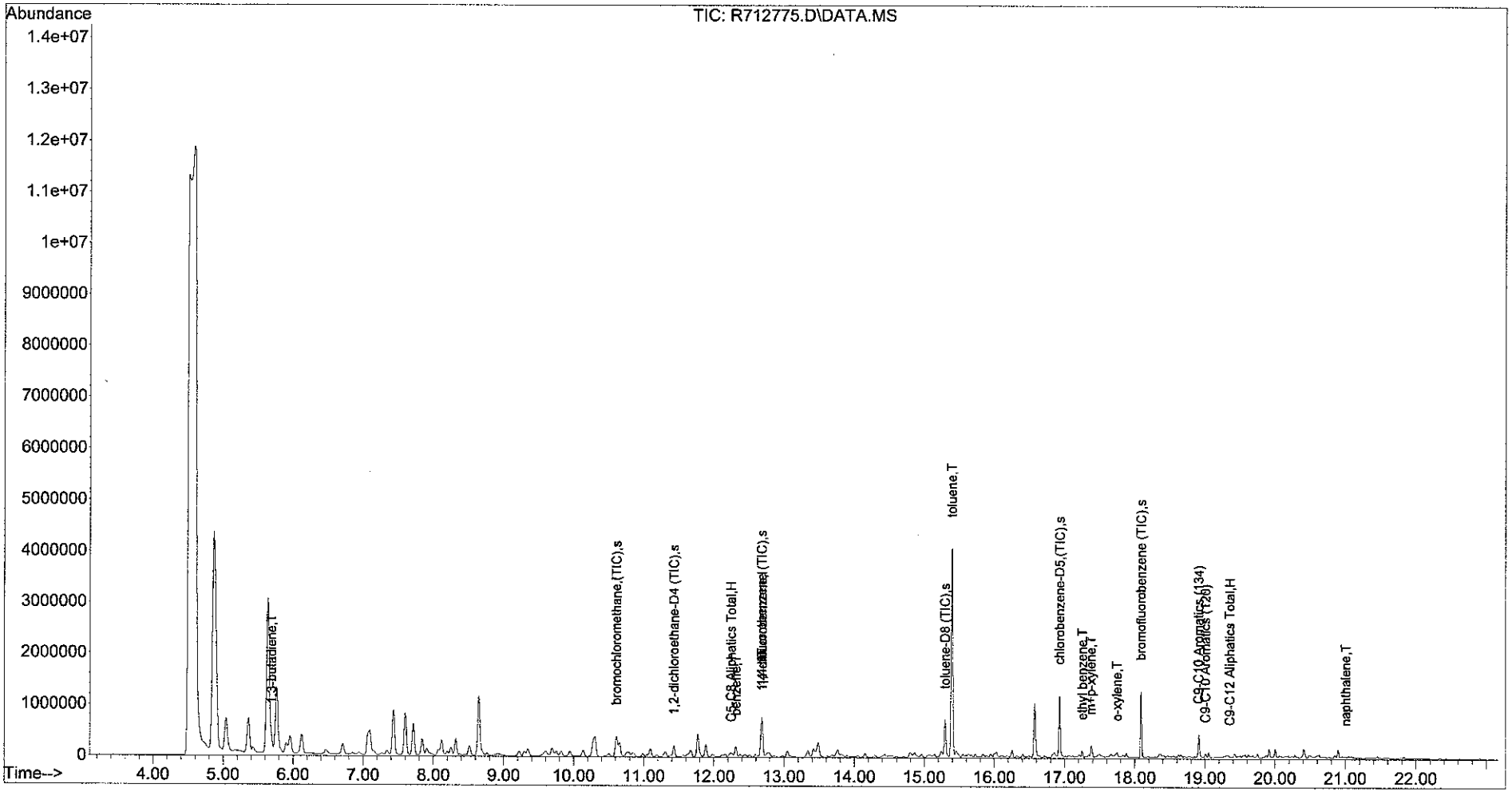
Quant Time: Sep 15 16:05:04 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .□□□□ Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100914A\
Data File : R712775.D
Acq On : 14 Sep 2010 9:53 pm
Operator : AIRLAB7:aj
Sample : 11013936-07,3,250,250
Misc : wg432299
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 15 16:05:58 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100914A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



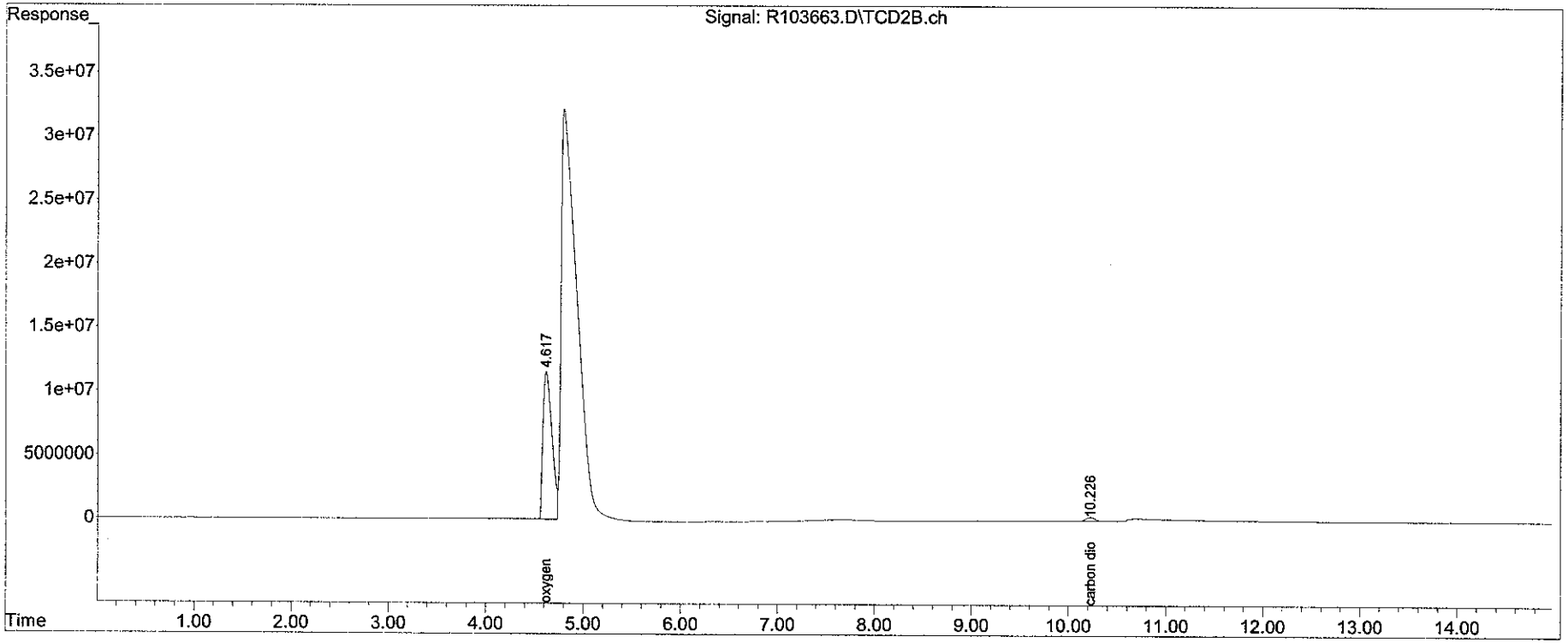
Fixed Gases

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103663.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 6:01 pm
Operator : airlab10:RY
Sample : L1013936-01D,4,0.5800,1.0
Misc : WG432559,ICAL5222
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:49:00 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

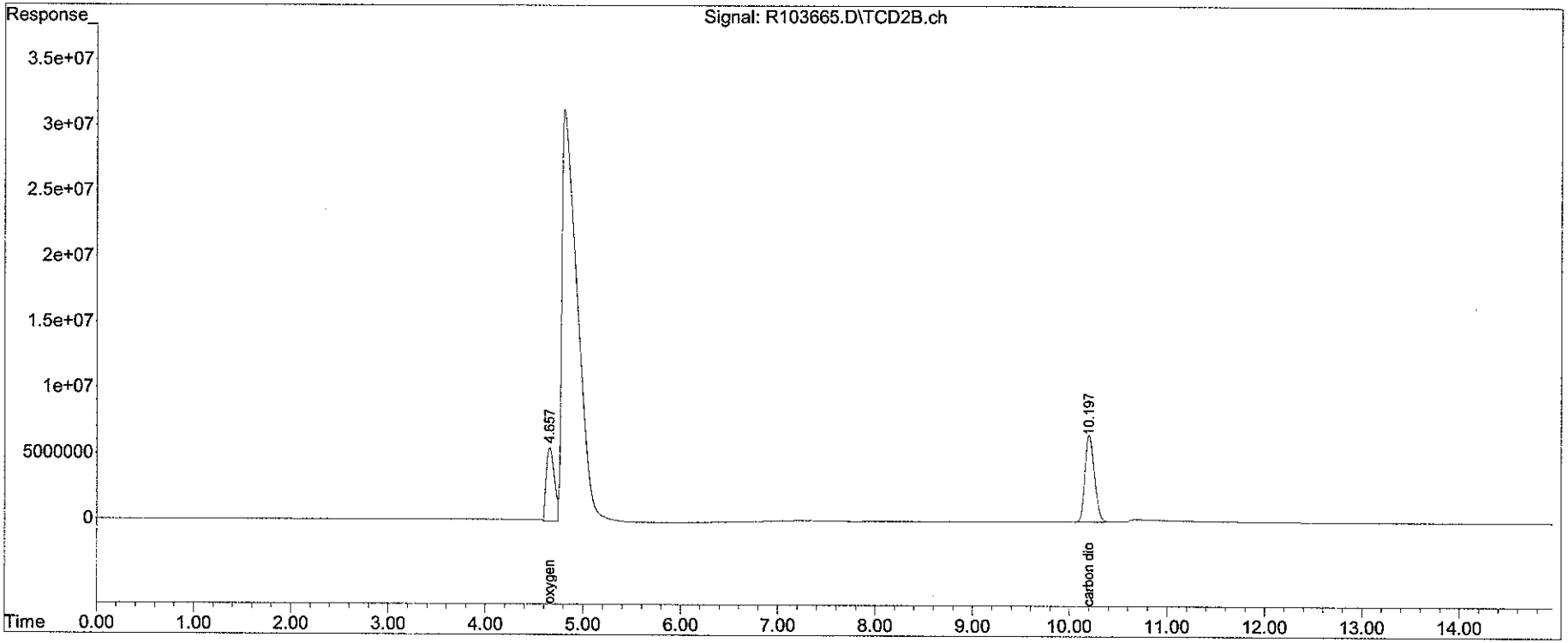


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103665.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 6:41 pm
Operator : airlab10:RY
Sample : L1013936-02D,4,0.5450,1.0
Misc : WG432559,ICAL5222
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:50:05 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

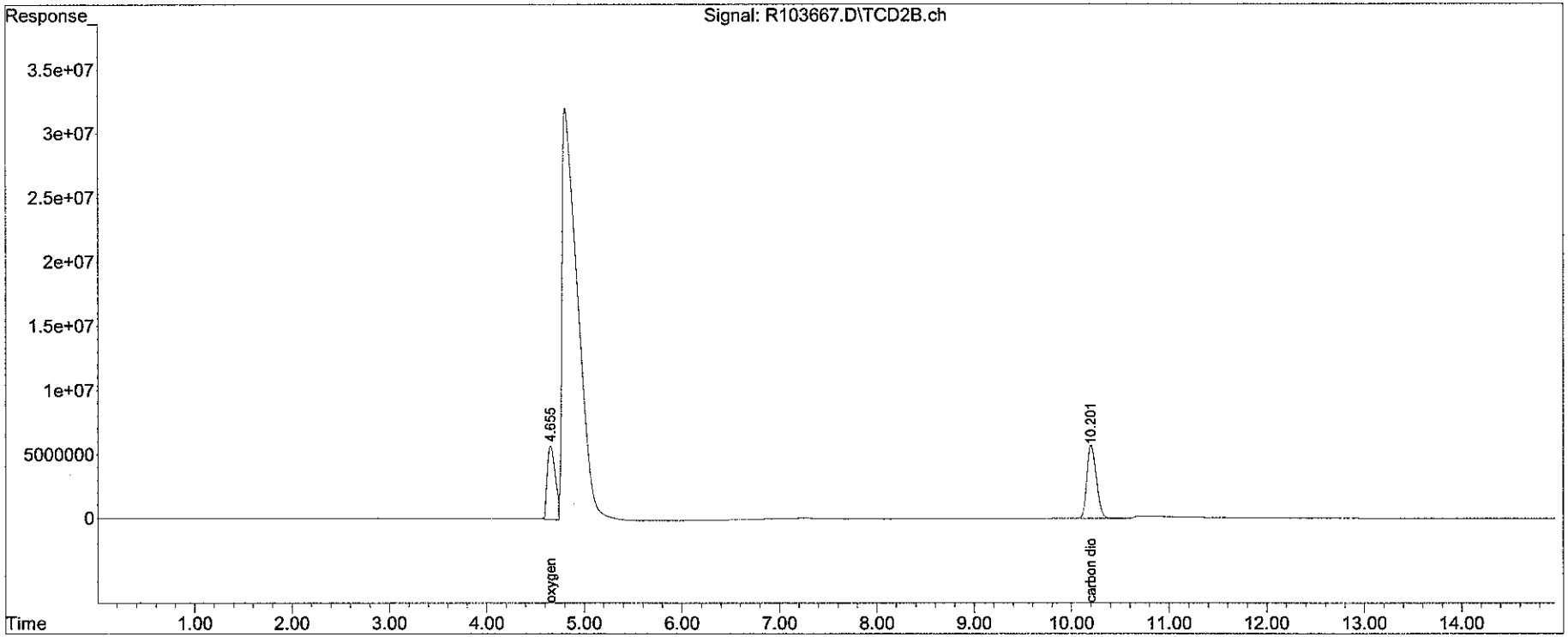


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103667.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 7:22 pm
Operator : airlab10:RY
Sample : L1013936-03D,4,0.5500,1.0
Misc : WG432559,ICAL5222
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:51:10 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

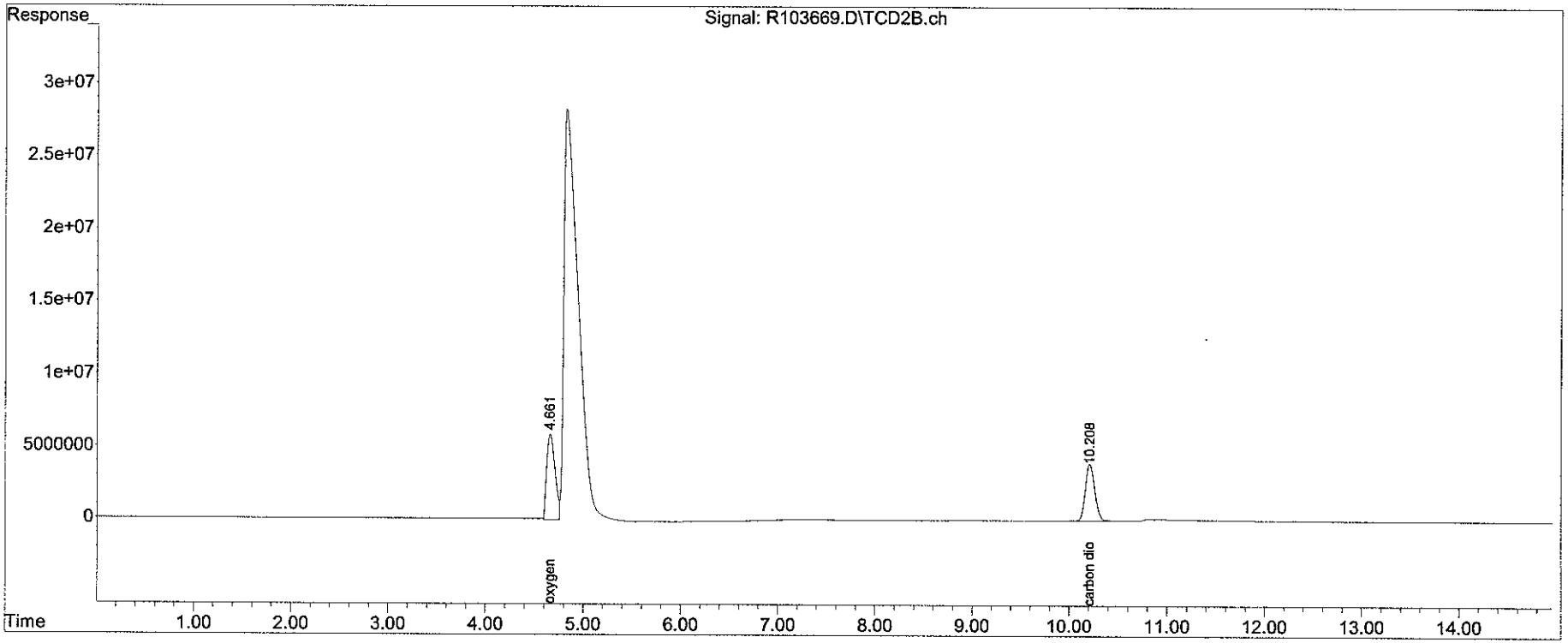


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103669.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 8:03 pm
Operator : airlab10:RY
Sample : L1013936-04D,4,0.4600,1.0
Misc : WG432559,ICAL5222
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:52:22 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

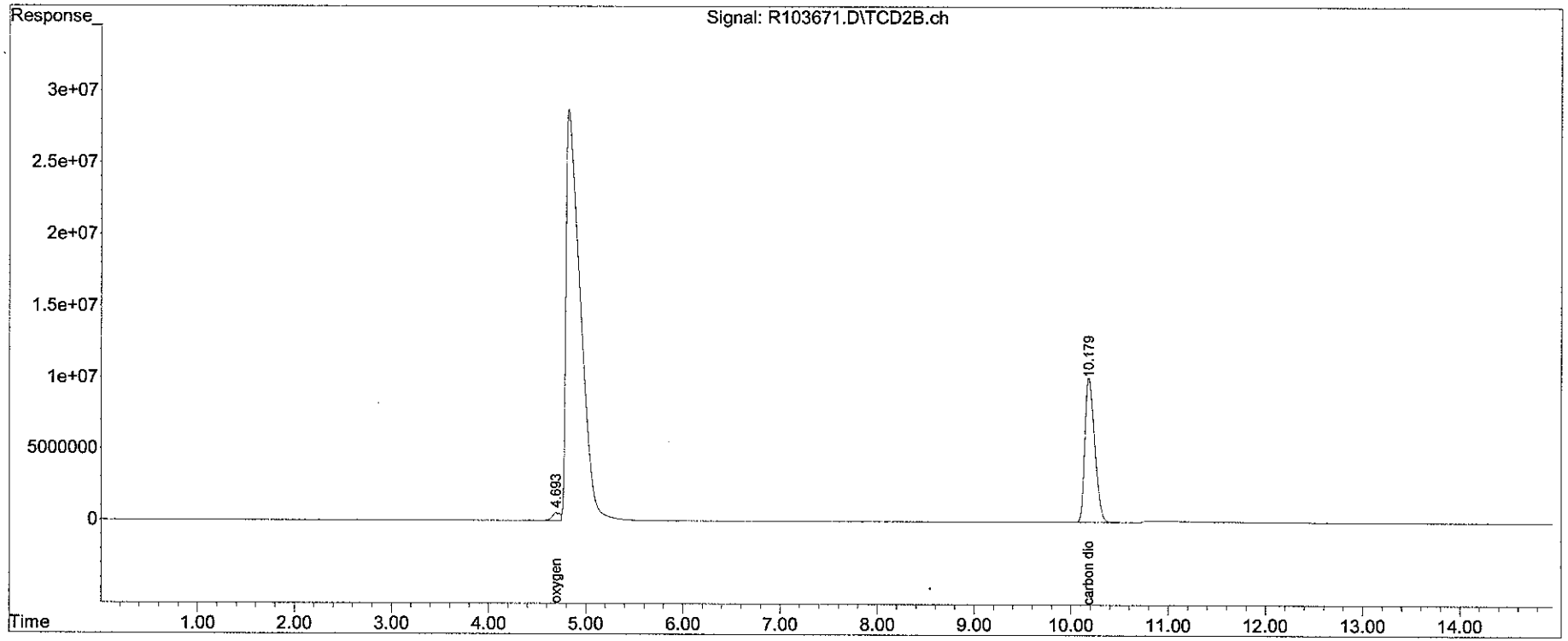


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103671.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 8:44 pm
Operator : airlab10:RY
Sample : L1013936-05D,4,0.4700,1.0
Misc : WG432559,ICAL5222
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:53:49 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

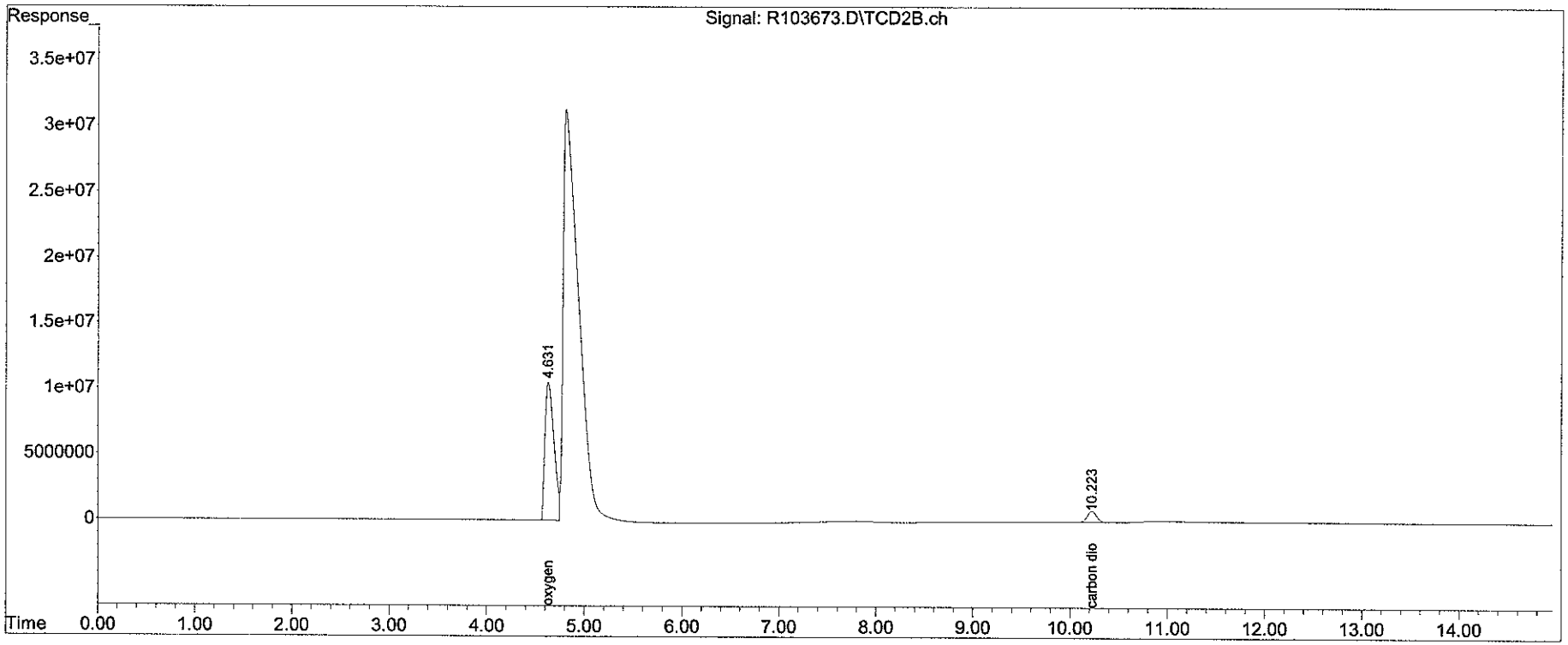


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103673.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 9:26 pm
Operator : airlab10:RY
Sample : L1013936-06D,4,0.5450,1.0
Misc : WG432559,ICAL5222
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:54:48 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100915FG\
Data File : R103675.D
Signal(s) : TCD2B.ch
Acq On : 15 Sep 2010 10:07 pm
Operator : airlab10:RY
Sample : L1013936-07D,4,0.4650,1.0
Misc : WG432559,ICAL5222
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 16 09:55:41 2010
Quant Method : O:\Forensics\Data\airlab10\100914nFG\FG100730.M
Quant Title : Fixed Gas Analysis via Method 3C
QLast Update : Tue Aug 03 13:42:03 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :