GEI Consultants

Geotechnical
Water Resources
Environmental and
Ecological Services

Limited Phase II Vapor Intrusion Investigation

433 Cottage Road, South Portland, ME

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

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Project 10232-1

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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 433 Cottage Road in South Portland, Maine. The 433 Cottage Road Site consists of an approximately 0.53-acre parcel occupied by a single story building that houses two businesses, a Cumberland Farms, Inc. (CFI) convenience store and a restaurant (South Portland House of Pizza). 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 MAI Environmental (July, 2010) identified historic spills of gasoline at the Site and remediation involving excavation of gasoline contaminated soil. MAI concluded that 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 was 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 and groundwater. While Site remediation reports indicate incomplete clean up of soils in 1996, substantial natural attenuation of residual contamination appears to have occurred since the remediation activity. Groundwater does not appear to be a pathway for off-site vapor migration.

The vapor intrusion investigation identified apparent gasoline constituents in soil gas at several locations in the vicinity of the co-located former and existing gasoline USTs. The concentrations of APH at one location between the USTs and CFI store exceeded the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1). However, a sample of soil gas collected from beneath the building slab identified no compounds above the soil gas targets.

A possible source of the APH appears to be the former leaking UST located in the area of the existing USTs. However, impacts from spills during vehicle fueling, or leaks from the former USTs west of the pump island and underground fuel piping cannot be ruled out. The investigation also identified an elevated concentration of the chlorinated solvent tetrachloroethylene that may have been released during past parts cleaning operations at the Site.

The soil gas data indicate no clear pattern of APH attenuation either vertically or laterally from the suspected source area (former leaking USTs). This finding could be linked to the presence of multiple source areas, or contaminated soil removal which resulted in lower concentrations of APH than expected in the source area.

In summary, Site remediation followed by natural attenuation over 14 years appears to have substantially reduced gasoline contamination of Site soils. Impacts to groundwater also appear relatively minor, likely resulting from the substantial depth to groundwater and natural attenuation. Despite sandy soils observed at the Site, relatively low concentrations of residual vapor-phase gasoline contamination persist, likely due to the extensive bituminous pavement cover at the Site. The elevated APH at one vapor sampling location near the CFI store may indicate migration of soil vapor from a source other than the prior leaking USTs. One possible source is the location of four former USTs west of the existing pump island.

Additional Site investigation would be required to evaluate possible impacts from the four former USTs, associated piping and pump island. One of the borings completed for the vapor intrusion study was located in the area of the former service station building. Additional investigation would be required to evaluate potential impacts from past service station operations, including underground storage of fuel oil and waste oil.

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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.

1.0 Objectives

GEI Consultants, Inc. (GEI) presents this report documenting a Limited Vapor Intrusion Investigation for the site at 433 Cottage Road in the City of South Portland, 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 MAI Environmental in July 2010 [2].

The objective of the 433 Cottage Road 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 433 Cottage Road Site consists of an approximately 0.53-acre parcel occupied by a single story building that houses two businesses, a CFI convenience store and a restaurant (South Portland House of Pizza). 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.

The Site is bounded to the north by Cottage Road, beyond which is a theater (Portland Players) and two residences. The Site is abutted to the east by Clinton Street, beyond which is a restaurant (Thai Taste) and two residences. The Site is bounded to the west by Davis Street, beyond which is Dave's Auto Care II, a car detailing business. South of the Site is a residential neighborhood.

The Phase I ESA written by MAI Environmental [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 was identified for assessment under the Maine DEP vapor intrusion study program.

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

- A Filling Station has been located on the property since approximately 1970. Sanborn Fire Insurance Maps (1970) indicate the presence of the filling station on the property and property research indicates a filling station has been in operation on the Site since approximately 1970.

- Current use of the property (gas station) along with the documented removal of approximately 100 tons of soil during a 1996 UST removal. In addition, spill files indicated a problem with the piping/fittings associated with the product piping that went on for an extended period of time (3 years) before the piping was replaced.

- The VES [vapor encroachment study] resulted in a determination that a vapor encroachment concern (VEC) *Cannot Be Ruled Out.* The determination is based on existence of a filling station on the Site since 1970 and the reported water/sewer lines that serve the property cross the current and former tank location resulting in a potential vapor migration pathway."

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

AOC 1- Gasoline USTs, Pump Island and Piping

Three 8,000 gallon gasoline USTs, a dispenser and associated piping are located east-southeast of the Cumberland Farms store. These tanks are also the location of three former USTs reportedly installed in 1975 and removed in 1996. One of the older tanks was found to have two holes upon removal, and gasoline-contaminated soils were identified and removed from the Site.

The remediation goal during the cleanup was 500 parts per million (ppm) based on field screening for volatile organic compounds (VOCs) with a photoionization detector (PID). The UST closure report indicated that soils with PID readings greater than 500 ppm could not be excavated largely due to limited reach of the excavator. The Maine DEP requested a follow-up investigation of the Site to evaluate depth to groundwater, groundwater quality and the possible presence of non-aqueous phase liquid (NAPL) gasoline. GEI identified no evidence that this work had been completed at the Site.

AOC 2 – Former Gasoline UST Area

Based on Site plans provided by CFI, four 4,000 gallon gasoline USTs were located underneath and adjacent to the current site building. The former pump island was located adjacent to and west of the current pump island. GEI identified no closure report for the prior USTs which appear to have been removed around 1975 when the current Site building was constructed. The tanks, piping and pump island appear to have been installed in 1965. Leaks or spills of gasoline could have occurred during the approximate 10-year operational period of this storage and dispensing system.

AOC 3 – Former Service Shop and Waste Oil and Fuel Oil USTs

An historic Site plan provided by CFI shows a former Phillips 66 service station associated with two 560 gallon USTs. The tanks were labeled “waste oil” and “fuel oil.” GEI identified no closure report or documented removal of these two USTs. Leaks or spills of oil may have occurred during operation of the tanks and piping, and during activities at the former service station.

The Site-specific quality assurance project plan (SSQAPP) developed by GEI focused on assessment of the 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). Given former vehicle service operations at the Site, COCs also include chlorinated VOCs that may have been contained in parts cleaning solvents (e.g., trichloroethylene).

3.0 Methodology

3.1 Introduction

Field activities were conducted by GEI and Maine DEP personnel on September 7 and 9, 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 through B4) for installation of Microwell MW-1 and soil vapor points SV-1A (12'), SV-1B (39'), SV-1C (42'), SV-2, SV-3, and SV-4 were completed using GeoProbe® direct-push methodology on September 9, 2010. Soil vapor point H1-SV-1 was installed by hand using a trowel.

Soil samples at the GeoProbe locations were collected continuously utilizing a 5-ft 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 and hand auger 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, B2, B3 and B4 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 Microwell was constructed in boring MW-1 using 1-inch diameter schedule 40 polyvinyl chloride (PVC) casing. The boring was 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).

A groundwater sample was collected from MW-1 on September 9, 2010. Due to poor recharge, we did not collect the sample using low-flow sampling procedures. Alternatively, we purged the monitoring well dry using a clean Teflon bailer, allowed it to substantially recharge, and then

filled the glassware directly using the bailer again. We also used some purge water to take a direct reading of pH, temperature, specific conductivity, turbidity, oxidation-reduction potential, and dissolved oxygen.

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 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 cooler 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 and groundwater were tested for volatile petroleum hydrocarbons (VPH) and the soil vapor samples were tested for air phase petroleum hydrocarbons (APH), oxygen and carbon dioxide. Soil vapor samples from borings SV-1, SV-2, and sub-slab location SS-1 were tested for volatile organic compounds (VOCs) by EPA Method TO-15 given that VOCs (e.g., chlorinated solvents)

may have been released due to automotive maintenance operations. Soil samples from borings B1 through B4 were tested for Total Organic Carbon (TOC) to evaluate potential carbon absorption characteristics and residual contaminant concentrations.

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

Because the water table was approximately 45 ft below ground surface, we were unable to install as many wells as we had initially planned. Additionally, due to the poor recharge in the area, we could not sample the well we did install with low flow techniques.

We did not investigate the former gasoline UST area given the focus of project resources on the known area of historic gasoline release (UST area). The original investigation plan in AOC 2 included a boring, monitoring well, soil vapor point, and sub-slab point. In collaboration with Maine DEP, the project team concluded that the investigation priorities were AOC 1 and 3.

We originally planned to assess vertical attenuation of volatile organic contamination in the area of SV-3, but actually installed the three soil vapor implants in the area of SV-1. The change was made given the identification of apparent gasoline contamination in SV-1, and the availability of the co-located monitoring well to allow comparison of soils vapor and groundwater data.

Soils were not screened for metals using a Niton X-Ray Fluorescence (XRF) instrument as planned in the SSQAPP. The available project resources did not permit investigation in the vicinity of the former waste oil UST and service station bays where metals associated with vehicle maintenance were most likely to have been released.

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

Surficial geologic mapping by the Maine Geological Survey indicates the Site is underlain by glaciomarine fan deposits consisting of interbedded sand and gravel that may be locally draped by silt and clay of the Presumpscot Formation. The soil borings conducted by GEI encountered primarily sand with some 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 50 ft below grade.

Groundwater was encountered at a depth of about 44 ft below grade in the sole monitoring well installed (MW1). Based on area topography and drainage, groundwater is interpreted to flow generally east-northeast toward Danford Cove.

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 or B2, and were not analyzed in B3 or B4. 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 each of the four borings at concentrations ranging from less than 400 mg/kg (B1) to 40,000 mg/kg (B4). With the exception of B4, all TOC concentrations were less than 1,000 mg/kg and may be indicative of naturally occurring organic carbon available for absorption. The relatively high concentration at B4 appears to indicate impact from gasoline contamination given similar soil properties as the other boring locations (sand).

4.3 Groundwater

Because of the substantial depth to groundwater (approximately 45 ft below ground surface in boring B1), only one monitoring well was installed. The monitoring well (MW1) is approximately 7 ft northeast of the existing gasoline USTs.

VPH was not detected in monitoring well MW1. The detection limits for VPH were below the Current Groundwater Maximum Exposure Guideline except for benzene. The guideline is 4 ug/l and the concentration of benzene was not detected above 5 ug/l. The Maine DEP Draft Groundwater Vapor Intrusion Screening Levels for Chronic Residential Scenarios for VPH were below the reporting limits of the groundwater results. Soil vapor at this location was characterized by collecting samples, as discussed in Sections 3.4 and 4.4.

4.4 Soil Vapor

Generally low concentrations of APH and VOCs were detected in each soil gas sample. Concentrations of benzene, tetrachloroethylene, C5-C8 aliphatic hydrocarbons and C9-C12 aliphatic hydrocarbons exceeded the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1) at SV-2 (about 25 ft west of gasoline USTs). 1,3-butadiene was detected above the residential multi-contaminant chronic G-1 target at all but the utility backfill location (H1-SV-1).

We collected soil gas samples at three different depths (12, 39, and 42 ft) at SV-1 to evaluate vertical attenuation of soil gas. The data indicate decreasing concentrations of total APH between the sample at 12 ft (1,110 ug/m^3) and the sample at 39 ft (612 ug/m^3). Total APH concentrations increased at the sample depth of 42 ft (1,151 ug/m^3) which was located about 2 ft above the water table.
Sample SV-3 was collected to evaluate lateral attenuation and was located approximately 30 ft from both SV-1A and SV-4. We did not observe attenuation of concentrations between SV-4 and SV-3. A slight reduction in soil gas concentrations was observed between SV-4 (total hydrocarbons of 1,435 ug/m^3) and SV-3 (total hydrocarbons of 1,196 ug/m^3).

Sample H1-SV-1 was collected to evaluate utility bedding of the water/sewer line as a possible preferential pathway for soil gas migration. Concentrations of APH in this sample were below the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1) and generally consistent with soil gas concentrations in neighboring soil gas sample locations.

The sub-slab sample (SS-1) inside the CFI building was approximately 50 ft west of SV-2 where the highest soil gas concentrations were detected. Relatively low concentrations of total APH (111 ug/m^3) were detected in SS-1. Individual VOCs were non-detect excluding a relatively low concentration of tetrachloroethene (5.68 ug/m^3).

Field measurements for methane at each soil gas sample location were non-detect. Subsurface pressure readings were less than 0.005 inches of water except for H1-SV-1 (utility backfill) which exhibited a pressure of 0.01 inches of water. The higher vacuum pressure in the utility backfill may have resulted from pressure gradients between buildings and interconnected utilities.

4.5 Quality Assurance

GEI collected one duplicate soil gas sample (at H1-SV-1-D). The field duplicate sample had similar concentrations to its associated original sample (H1-SV-1).

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 42 to 85 percent of those detected in the ambient air. The enriched carbon dioxide and depleted oxygen in the soil vapor indicate a good surface seal at each soil vapor sampling location.

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 10% of each other, indicating no obvious breach of the surface seal during sampling.

Laboratory test results for oxygen in soil vapor were within 1 to 2 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 1percent for each sample; the laboratory results ranged from about 2.4 to 10.5 percent.

5.0 Conclusions

The Limited Vapor Intrusion Investigation by GEI identified no significant residual gasoline contamination of Site soils and groundwater. While Site remediation reports indicate incomplete clean up of soils in 1996, substantial natural attenuation of residual contamination appears to have occurred since the remediation activity. Groundwater does not appear to be a pathway for off-site vapor migration.

The vapor intrusion investigation identified apparent gasoline constituents in soil gas at several locations in the vicinity of the co-located former and existing gasoline USTs. The concentrations of APH at one location between the USTs and CFI store exceeded the Maine Residential Multi-Contaminant Chronic Soil Gas Target (G-1). However, a sample of soil gas collected from beneath the building slab identified no compounds above the soil gas targets.

A possible source of the APH appears to be the former leaking UST located in the area of the existing USTs. However, impacts from spills during vehicle fueling, or leaks from the former USTs west of the pump island and underground fuel piping cannot be ruled out. The investigation also identified an elevated concentration of the chlorinated solvent tetrachloroethylene at one location that may have been released during past parts cleaning operations at the Site.

The soil gas data indicate no clear pattern of APH attenuation either vertically or laterally from the suspected source area (former leaking USTs). This finding could be linked to the presence of multiple source areas, or contaminated soil removal which resulted in lower concentrations of APH than expected in the source area.

In summary, Site remediation followed by natural attenuation over 14 years appears to have substantially reduced gasoline contamination of Site soils. Impacts to groundwater also appear relatively minor, likely resulting from the substantial depth to groundwater and natural attenuation. Despite sandy soils observed at the Site, relatively low concentrations of residual vapor-phase gasoline contamination persist, likely due to the extensive bituminous pavement cover at the Site. The elevated APH at one vapor sampling location near the CFI store may indicate migration of soil vapor from a source other than the prior leaking USTs. One possible source is the location of four former USTs west of the existing pump island.

Additional Site investigation would be required to evaluate possible impacts from the four former USTs, associated piping and pump island. One of the borings completed for the vapor intrusion study was located in the area of the former service station building. Additional investigation would be required to evaluate potential impacts from past service station operations, including underground storage of fuel oil and waste oil.

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] MAI Environmental, 2010. "Phase I Environmental Site Assessment, 433 Cottage Road, South Portland, Maine," July.

Table 1. Laboratory Testing and Field Screening Summary
Cumberland Farms
433 Cottage Road
South Portland, Maine

	Media			Laboratory Analyses						Field Screening				
	Soil	**GW**	**SV**	**VPH**	**TOC**	**VOC**	**APH**	**CO_2**	**O_2**	**CO_2**	**O_2**	**CH_4**	**VOC**	**YSI**
H1	X												X	
B1	X			X	X								X	
B2	X			X	X								X	
B3	X				X								X	
B4	X				X								X	
MW-1		X		X										X
H1-SV-1			X				X	X	X	X	X	X	X	
SV-1A(12')			X			X	X	X	X	X	X	X	X	
SV-1B(39')			X				X	X	X	X	X	X	X	
SV-1C(42')			X				X	X	X	X	X	X	X	
SV-2			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	
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. VOC = Volatile Organic Compounds
6. APH = Aromatic Petroleum Hydrocarbons
7. CO_2 = Carbon Dioxide
8. O_2 = Oxygen
9. CH_4 = Methane
10. 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
433 Cottage Road
South Portland, 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	9/9/2010 8:30 AM	11-15		96	%		590	UG/G	<	33,000	UG/KG	<	33,000	UG/KG	<	33,000	UG/KG
B1	9/9/2010 9:00 AM	39		96	%	<	420	UG/G	<	31,000	UG/KG	<	31,000	UG/KG	<	31,000	UG/KG
B1	9/9/2010 9:30 AM	42		96	%	<	420	UG/G	<	30,000	UG/KG	<	30,000	UG/KG	<	30,000	UG/KG
B2	9/9/2010 11:20 AM	12		89	%		500	UG/G	<	34,000	UG/KG	<	34,000	UG/KG	<	34,000	UG/KG
B3	9/9/2010 1:40 PM	5-10		92	%		960	UG/G	NT			NT			NT		
B4	9/9/2010 2:10 PM	5		80	%		40000	UG/G	NT			NT			NT		
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. NT = not tested.
4. NA = not available.
5. < = not detected above reporting limit (under Concentration).
6. 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
433 Cottage Road
South Portland, Maine

Method			MADEP-VPH											
Parameter			C5-C8 ALIPHATIC HYDROCARBONS			C9-C10 AROMATIC HYDROCARBONS			C9-C12 ALIPHATIC HYDROCARBONS			BENZENE		
Sample Point	Sample/Field Test Date/Time	Screened Interval (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
MW-1	9/8/2010	39.5-49.5		NT			NT			NT			NT	
MW-1	9/9/2010	39.5-49.5		NT			NT			NT			NT	
MW-1	9/9/2010 3:15 PM	39.5-49.5	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**	**<**	**100**	**UG/L**	**<**	**5**	**UG/L**
MW-1	9/15/2010	39.5-49.5		NT			NT			NT			NT	
CURRENT MAXIMUM EXPOSURE GUIDELINE				300	UG/L		200	UG/L		700	UG/L		4	UG/L
MAINE'S DRAFT VAPOR INTRUSION SCREENING LEVELS				0.77	UG/L		32	UG/L		0.64	UG/L		1.4	UG/L
MASSACHUSETTS GROUNDWATER STANDARD (GW-2)				3000	UG/L		7000	UG/L		5000	UG/L		2000	UG/L

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 - Groundwa
Cumberland Farms
433 Cottage Road
South Portland, Maine

Method			FIELD											
Parameter			SUBSURFACE PRESSURE			MEASURING POINT ELEVATION			WATER LEVEL DEPTH			WATER LEVEL ELEVATION		
Sample Point	Sample/Field Test Date/Time	Screened Interval (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
MW-1	9/8/2010	39.5-49.5		NT			NT			43.9	FMP		NT	
MW-1	9/9/2010	39.5-49.5		NT			100	SD FT		43.87	FMP		56.13	SD FT
MW-1	9/9/2010 3:15 PM	39.5-49.5		NT			NT			NT			NT	
MW-1	9/15/2010	39.5-49.5	<	0.005	IN H20		NT			NT			NT	
CURRENT MAXIMUM EXPOSURE GUIDELINE				NA			NA			NA			NA	
MAINE'S DRAFT VAPOR INTRUSION SCREENING LEVELS				NA			NA			NA			NA	
MASSACHUSETTS GROUNDWATER STANDARD (GW-2)				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 Concen
8. Values in bold exceed an applicable guideline.
9. Generally, analytes detected in at least one sample a

Table 4. Chemical Testing Results - Soil Gas
Cumberland Farms
433 Cottage Road
South Portland, Maine

Method			EPA METHOD 3C									FIELD																	
Parameter			CARBON DIOXIDE			METHANE			OXYGEN GAS			CARBON DIOXIDE			METHANE			OXYGEN GAS			PID SOIL GAS SCREEN			SUBSURFACE PRESSURE			WATER LEVEL DEPTH		
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	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
H1-SV-1	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.9	%		NT			NT		>	30	FMP
H1-SV-1	9/9/2010 9:07 AM	3		NT			NT			NT		>	1	%	<	0.000001	%		16.5	%		0.00012	%		NT			NT	
H1-SV-1	9/9/2010 9:21 AM	3	D	3.51	%		NT		D	15.4	%	>	1	%		NT			16.3	%		NT			NT			NT	
H1-SV-1	9/15/2010	3		NT			NT			NT			NT			NT			NT			NT			0.01	IN H20		NT	
SV-1A	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.9	%		NT			NT		<	44	FMP
SV-1A	9/9/2010 3:23 PM	12		NT			NT			NT		>	1	%	<	0.000001	%		14.3	%		0.00003	%		NT			NT	
SV-1A	9/9/2010 3:36 PM	12	D	5.31	%		NT		D	12.9	%	>	1	%		NT			14.5	%		NT			NT			NT	
SV-1A	9/15/2010	12		NT			NT			NT			NT			NT			NT			NT		<	0.005	IN H20		NT	
SV-1B	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.9	%		NT			NT		<	44	FMP
SV-1B	9/9/2010 3:35 PM	39		NT			NT			NT		>	1	%	<	0.000001	%		17.6	%		0.00004	%		NT			NT	
SV-1B	9/9/2010 3:50 PM	39	D	2.44	%		NT		D	16.5	%	>	1	%		NT			17.6	%		NT			NT			NT	
SV-1B	9/15/2010	39		NT			NT			NT			NT			NT			NT			NT		<	0.005	IN H20		NT	
SV-1C	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.9	%		NT			NT		<	44	FMP
SV-1C	9/9/2010 3:01 PM	42		NT			NT			NT		>	1	%	<	0.000001	%		17.8	%		0.00001	%		NT			NT	
SV-1C	9/9/2010 3:16 PM	42	D	2.35	%		NT		D	16.8	%	>	1	%		NT			17.7	%		NT			NT			NT	
SV-2	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.9	%		NT			NT		>	12	FMP
SV-2	9/9/2010 11:50 AM	12		NT			NT			NT			NT			NT			NT		<	0.000001	%		NT			NT	
SV-2	9/9/2010 12:02 PM	12	D	0.973	%	<	0.166	%	D	17.5	%	>	1	%		NT			16.5	%		NT			NT			NT	
SV-2	9/15/2010	12		NT			NT			NT			NT			NT			NT			NT		<	0.005	IN H20		NT	
SV-3	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.7	%		NT			NT		<	44	FMP
SV-3	9/9/2010 3:55 PM	8		NT			NT			NT		>	1	%	<	0.000001	%		15.4	%		0.00001	%		NT			NT	
SV-3	9/9/2010 4:10 PM	8	D	4.53	%		NT		D	14	%	>	1	%		NT			15.2	%		NT			NT			NT	
SV-3	9/15/2010	8		NT			NT			NT			NT			NT			NT			NT		<	0.005	IN H20		NT	
SV-4	9/9/2010	Ambient		NT			NT			NT			0.035	%		NT			20.9	%		NT			NT		<	44	FMP
SV-4	9/9/2010 4:13 PM	5		NT			NT			NT		>	1	%	<	0.000001	%		8.8	%	<	0.000001	%		NT			NT	
SV-4	9/9/2010 4:25 PM	5	D	10.5	%		NT		D	7.28	%	>	1	%		NT			9.7	%		NT			NT			NT	
SS-1	9/9/2010	Ambient		NT			NT			NT			0.06	%		NT			20.9	%		NT			NT			NT	
SS-1	9/9/2010 9:58 AM	0.58		NT			NT			NT		>	1	%		NT			19.9	%	<	0.000001	%		NT			NT	
SS-1	9/9/2010 10:10 AM	0.58	D	0.989	%		NT		D	18.2	%	>	1	%		NT			20	%		NT			NT			NT	
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)				NA			NA			NA			NA			NA			NA			NA			NA			NA	

General Notes:
1. UG/M3 = micrograms per cubic meter.
2. PPBV = parts per billion volume.
3. IN H20 = inches of water.
4. NT = not tested.
5. NA = not available.
6. FMP = feet from measuring point.
7. < = not detected above reporting limit (under Concentration).
8. > = greater than the reporting limit (under Concentration).
9. D = sample result that required dilution.
10. Values in bold exceed the applicable guideline.
11. 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
433 Cottage Road
South Portland, Maine

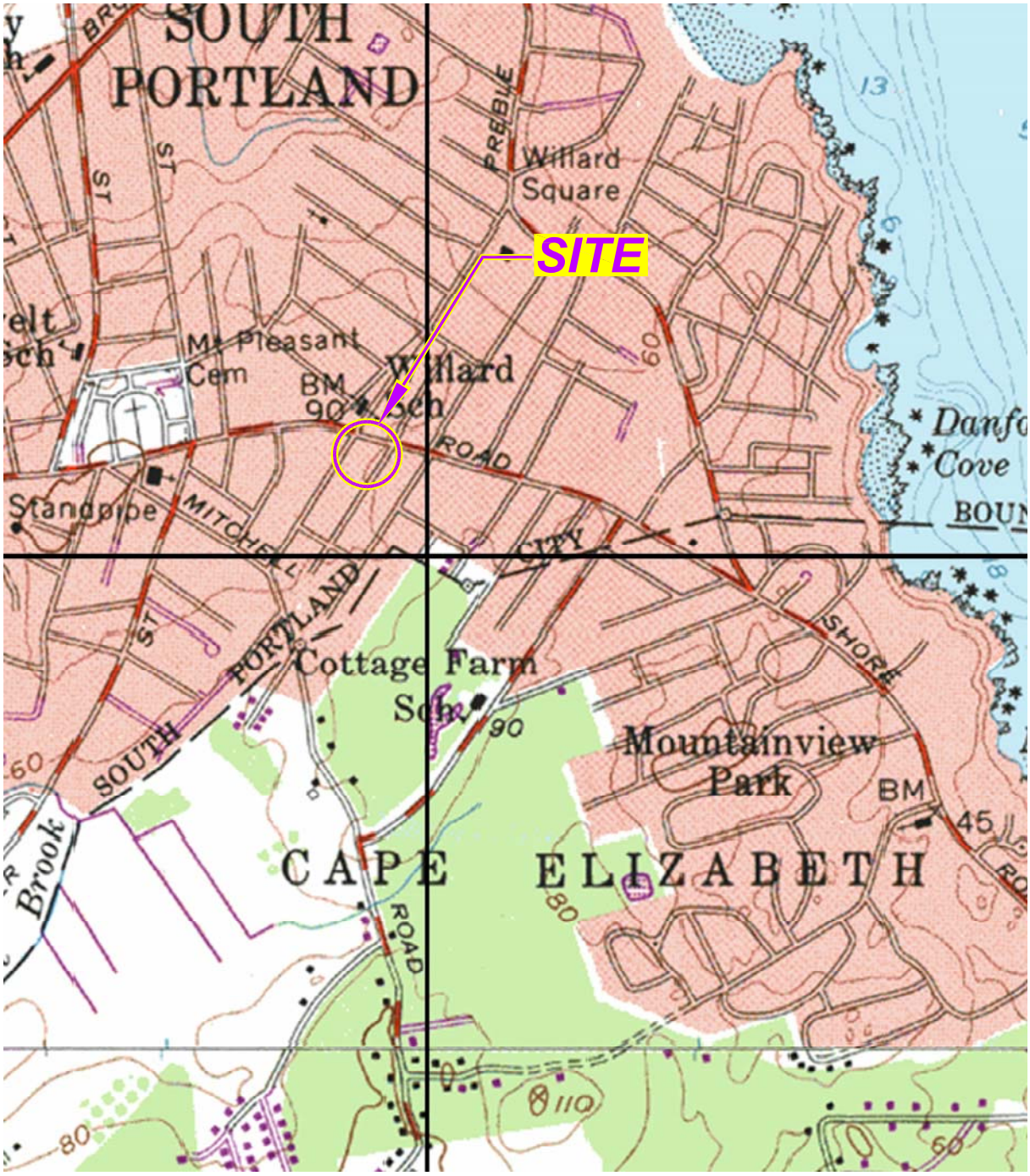
Method			MADEP-APH																													
Parameter			C5-C8 ALIPHATIC HYDROCARBONS			C9-C10 AROMATIC HYDROCARBONS			C9-C12 ALIPHATIC HYDROCARBONS			1,3-BUTADIENE			BENZENE			ETHYLBENZENE			M,P-XYLENE			NAPHTHALENE			METHYL-TERT-BUTYL ETHER (MTBE)		
Sample Point	Sample/Field Test Date/Time	Depth (ft)	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units	Qualifier	Concentration	Units
H1-SV-1	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
H1-SV-1	9/9/2010 9:07 AM	3		NT			NT			NT			NT			NT			NT			NT			NT			NT	
H1-SV-1	9/9/2010 9:21 AM	3		290	UG/M3		130	UG/M3		840	UG/M3	<	2	UG/M3		3.3	UG/M3		4.3	UG/M3		13	UG/M3		3.5	UG/M3	<	2	UG/M3
H1-SV-1	9/15/2010	3		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1A	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1A	9/9/2010 3:23 PM	12		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1A	9/9/2010 3:36 PM	12		610	UG/M3		120	UG/M3		380	UG/M3		**11**	**UG/M3**		6.9	UG/M3		14	UG/M3		36	UG/M3	<	2	UG/M3		8.8	UG/M3
SV-1A	9/15/2010	12		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1B	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1B	9/9/2010 3:35 PM	39		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1B	9/9/2010 3:50 PM	39		530	UG/M3		11	UG/M3		71	UG/M3		**11**	**UG/M3**		3.6	UG/M3		2.6	UG/M3		4.8	UG/M3	<	2	UG/M3		200	UG/M3
SV-1B	9/15/2010	39		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1C	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1C	9/9/2010 3:01 PM	42		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-1C	9/9/2010 3:16 PM	42		1000	UG/M3		21	UG/M3		130	UG/M3		**22**	**UG/M3**		**19**	**UG/M3**		7.1	UG/M3		9.9	UG/M3	<	2	UG/M3		180	UG/M3
SV-2	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-2	9/9/2010 11:50 AM	12		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-2	9/9/2010 12:02 PM	12	**D**	**3500**	**UG/M3**	D	94	UG/M3	**D**	**4500**	**UG/M3**	**D**	**130**	**UG/M3**	**D**	**30**	**UG/M3**	D	15	UG/M3	D	34	UG/M3	**<**	**10**	**UG/M3**	D	12	UG/M3
SV-2	9/15/2010	12		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-3	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-3	9/9/2010 3:55 PM	8		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-3	9/9/2010 4:10 PM	8		1100	UG/M3		14	UG/M3		82	UG/M3		**27**	**UG/M3**		8.1	UG/M3		2.1	UG/M3	<	4	UG/M3	<	2	UG/M3		5.4	UG/M3
SV-3	9/15/2010	8		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-4	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-4	9/9/2010 4:13 PM	5		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SV-4	9/9/2010 4:25 PM	5		1000	UG/M3		85	UG/M3		350	UG/M3		**16**	**UG/M3**		11	UG/M3		9.4	UG/M3		22	UG/M3	<	2	UG/M3		5	UG/M3
SS-1	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SS-1	9/9/2010 9:58 AM	0.58		NT			NT			NT			NT			NT			NT			NT			NT			NT	
SS-1	9/9/2010 10:10 AM	0.58		57	UG/M3	<	10	UG/M3		54	UG/M3	<	2	UG/M3	<	2	UG/M3	<	2	UG/M3	<	4	UG/M3	<	2	UG/M3	<	2	UG/M3
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)				2085.71	UG/M3		521.43	UG/M3		2085.71	UG/M3		4.06	UG/M3		15.6	UG/M3		48.67	UG/M3		NA			3.58	UG/M3		467.95	UG/M3

General Notes:
1. UG/M3 = micrograms per cubic meter.
2. PPBV = parts per billion volume.
3. IN H20 = inches of water.
4. NT = not tested.
5. NA = not available.
6. FMP = feet from measuring point.
7. < = not detected above reporting limit (under Concentration).
8. > = greater than the reporting limit (under Concentration).
9. D = sample result that required dilution.
10. Values in bold exceed the applicable guideline.
11. 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
433 Cottage Road
South Portland, Maine

Method			TO15_SIM																	
Parameter			O-XYLENE			TOLUENE			1,2-DIBROMOETHANE			TETRACHLOROETHENE			TRICHLOROETHENE			VINYL CHLORIDE		
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	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
H1-SV-1	9/9/2010 9:07 AM	3		NT			NT			NT			NT			NT			NT	
H1-SV-1	9/9/2010 9:21 AM	3		7.3	UG/M3		18	UG/M3		NT			NT			NT			NT	
H1-SV-1	9/15/2010	3		NT			NT			NT			NT			NT			NT	
SV-1A	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-1A	9/9/2010 3:23 PM	12		NT			NT			NT			NT			NT			NT	
SV-1A	9/9/2010 3:36 PM	12		15	UG/M3		81	UG/M3	<	0.154	UG/M3		**80.1**	**UG/M3**		0.515	UG/M3	<	0.051	UG/M3
SV-1A	9/15/2010	12		NT			NT			NT			NT			NT			NT	
SV-1B	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-1B	9/9/2010 3:35 PM	39		NT			NT			NT			NT			NT			NT	
SV-1B	9/9/2010 3:50 PM	39		2.1	UG/M3		75	UG/M3		NT			NT			NT			NT	
SV-1B	9/15/2010	39		NT			NT			NT			NT			NT			NT	
SV-1C	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-1C	9/9/2010 3:01 PM	42		NT			NT			NT			NT			NT			NT	
SV-1C	9/9/2010 3:16 PM	42		4.7	UG/M3		120	UG/M3		NT			NT			NT			NT	
SV-2	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-2	9/9/2010 11:50 AM	12		NT			NT			NT			NT			NT			NT	
SV-2	9/9/2010 12:02 PM	12	D	15	UG/M3	D	470	UG/M3	**<**	**0.768**	**UG/M3**	D	7.12	UG/M3	D	4.89	UG/M3	D	1.54	UG/M3
SV-2	9/15/2010	12		NT			NT			NT			NT			NT			NT	
SV-3	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-3	9/9/2010 3:55 PM	8		NT			NT			NT			NT			NT			NT	
SV-3	9/9/2010 4:10 PM	8	<	2	UG/M3		110	UG/M3		NT			NT			NT			NT	
SV-3	9/15/2010	8		NT			NT			NT			NT			NT			NT	
SV-4	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SV-4	9/9/2010 4:13 PM	5		NT			NT			NT			NT			NT			NT	
SV-4	9/9/2010 4:25 PM	5		8.2	UG/M3		70	UG/M3		NT			NT			NT			NT	
SS-1	9/9/2010	Ambient		NT			NT			NT			NT			NT			NT	
SS-1	9/9/2010 9:58 AM	0.58		NT			NT			NT			NT			NT			NT	
SS-1	9/9/2010 10:10 AM	0.58	<	2	UG/M3	<	2	UG/M3	<	0.154	UG/M3		5.68	UG/M3	<	0.107	UG/M3	<	0.051	UG/M3
MAINE RESIDENTIAL MULTI-CONTAMINANT CHRONIC SOIL GAS TARGET (G-1)				NA			52142.86	UG/M3		0.2	UG/M3		20.62	UG/M3		60.83	UG/M3		27.65	UG/M3

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



0 500 1000 2000 3000

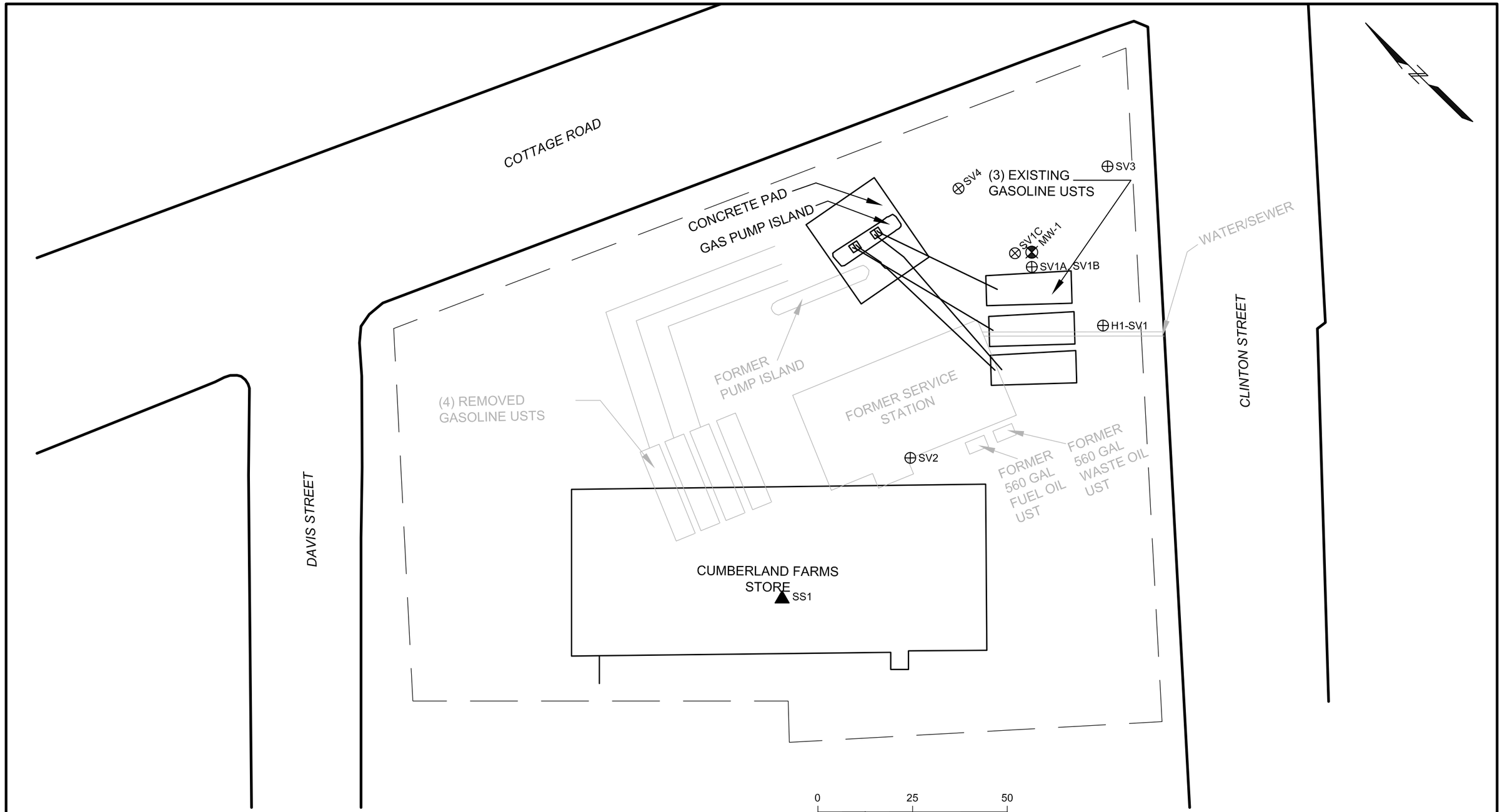
SCALE, FEET

This Image provided by MapTech is from USGS
Topographic 7.5 Minute Series.
Portland East, ME Quadrangle, 1956.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 20 Feet.

MAINE
QUADRANGLE LOCATION

Cumberland Farms 427 Cottage Road South Portland, Maine	GEI Consultants	SITE LOCATION MAP
Maine Department of Environmental Protection Augusta, Maine	Project 10232-1	December 2010 Fig. 1

Y:\DRAFTING\102321 MDOT VI So Port\Site Location Map Fig 1



LEGEND:

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

NOTES:

1. PLAN BASED ON TOPOGRAPHIC SITE PLAN STANDARD BOUNDARY SURVEY PREPARED BY MAINE SURVEY CONSULTANTS, INC. NOVEMBER 1995.

Cumberland Farms 433 Cottage Road South Portland, Maine	GEI Consultants	SITE EXPLORATION PLAN
Maine Department of Environmental Protection Augusta, Maine	Project 10232-1	December 2010 Fig. 2

Y:\DRAFTING\102321 MDOT VI So Port\Site Exploration Plan Fig 2

Appendix A

Site Orthophoto

Vapor Instrusion CFI Study Sites

CUMBERLAND FARMS 1806
127 COTTAGE ROAD
SOUTH PORTLAND

Prepared By: Christian Halsted
Maine DEP GIS Unit
Date: 10/12/2010 8:09 PM

Appendix B

Soil Boring Logs

GEI Consultants

Gei Consultants

CLIENT: Maine Dept. of Environmental Protection
PROJECT NAME: CFI - South Portland
CITY/STATE: South Portland, Maine
GEI PROJECT NUMBER: 10232-1

BORING LOG

PAGE 1 of 2

B1

GROUND SURFACE ELEVATION (FT): NM
LOCATION: Cumberland Farms, South Portland
NORTHING: NM **EASTING:** NM
TOTAL DEPTH (FT): 50.0
DRILLED BY: MAI / Seth Brown
DATUM VERT. / HORZ.:
LOGGED BY: K. Wolfe
DATE START / END: 9/9/2010 - 9/9/2010
DRILLING DETAILS: Geoprobe / Track-mounted
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		S1: (0-4 in.) ASPHALT S1: (4-13 in.) ~50% Gravel up to 1/2 in., ~50% fine to coarse SAND, light brown/light gray, dry S1: (13-27 in.) ~80% Fine to coarse SAND, ~20% gravel up to 1/4 in., brown, dry
5	S2	5.0	8	0.0		S2: Similar to S1 (13-27 in.) except gravel up to 1/2 in.
10	S3	5.0	25	0.0 0.0		S3: (0-2 in.) Similar to S1 (13-27 in.) except gravel up to 1/2 in. S3: (2-25 in.) 100% Medium to coarse SAND, light brown, dry
15	S4	5.0	44	0.0		S4: Similar to S3 (2-25 in.)
20	S5	5.0	52	0.0		S5: Similar to S3 (2-25 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 02 SOUTH PORTLAND.GPJ GEI CONSULTANTS.GDT 12/10/10

GEI Consultants

Gei Consultants

CLIENT: Maine Dept. of Environmental Protection
PROJECT NAME: CFI - South Portland
CITY/STATE: South Portland, Maine
GEI PROJECT NUMBER: 10232-1

BORING LOG

B1

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	SOIL / BEDROCK DESCRIPTION
25	S6	5.0	50	0.0		S6: Similar to S3 (2-25 in.)
30	S7	5.0	58	0.0		S7: Similar to S3 (2-25 in.)
35	S8	5.0	43	0.0		S8: Similar to S3 (2-25 in.)
40	S9	5.0	48	0.0 Dry 0.0 Wet		S9: Similar to S3 (2-25 in.) except wet at 36 in.
45	S10	5.0	49	0.0		S10: Similar to S3 (2-25 in.) except wet
50						Bottom of borehole at 50.0 feet. Installed well MW-1 (see log for details). Installed implants SV-1A at 12 ft., SV-1B at 39 ft., and SV-1C at 42 ft; all offset from well.

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 - South Portland
CITY/STATE: South Portland, Maine
GEI PROJECT NUMBER: 10232-1

BORING LOG
PAGE 1 of 1
B2

GROUND SURFACE ELEVATION (FT): NM
LOCATION: Cumberland Farms, South Portland
NORTHING: NM **EASTING:** NM
TOTAL DEPTH (FT): 12.0
DRILLED BY: MAI / Seth Brown
DATUM VERT. / HORZ.:
LOGGED BY: K. Wolfe
DATE START / END: 9/9/2010 - 9/9/2010
DRILLING DETAILS: Geoprobe / Track-mounted
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	36	0.0		S1: (0-5 in.) ASPHALT S1: (5-36 in.) 100% Fine SAND, light brown, dry
5	S2	5.0	53	0.0 0.0 0.0		S2: (0-2 in.) Similar to S1 (5-36 in.) S2: (2-7 in.) ~90% Fine to coarse SAND, ~10% fines, black, dry, slight organic odor S2: (7-48 in.) ~90% Fines, ~10% fine sand, light brown with seams of gray and brown, dry
				0.0		S2: (48-53 in.) Similar to S1 (5-36 in.)
10	S3	2.0	24	0.0		S3: Similar to S1 (5-36 in.)
						Bottom of borehole at 12.0 feet. Installed implant SV-2 at 12 ft.

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 02 SOUTH PORTLAND.GPJ GEI CONSULTANTS.GDT 12/10/10

Gei Consultants

CLIENT: Maine Dept. of Environmental Protection
PROJECT NAME: CFI - South Portland
CITY/STATE: South Portland, Maine
GEI PROJECT NUMBER: 10232-1

BORING LOG
PAGE 1 of 1
B3

GROUND SURFACE ELEVATION (FT): NM
LOCATION: Cumberland Farms, South Portland
NORTHING: NM **EASTING:** NM
TOTAL DEPTH (FT): 20.0
DRILLED BY: MAI / Seth Brown
DATUM VERT. / HORZ.:
LOGGED BY: K. Wolfe
DATE START / END: 9/9/2010 - 9/9/2010
DRILLING DETAILS: Geoprobe / Track-mounted
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: (0-5 in.) ASPHALT S1: (5-28 in.) ~80% Medium to coarse SAND, ~20% gravel up to 1/4 in, brown, dry
				0.0		S1: (28-39 in.) 100% Fine SAND, light brown, dry
5	S2	5.0	58	0.0		S2: 100% Fine to coarse SAND, light brown, dry
10	S3	2.0	24	0.0 Dry 0.0 Wet		S3: Similar to S2 except wet at 17 in. Water not likely groundwater, perhaps perched leak.
	S4	3.0	0			S4: No recovery.
15	S5	5.0	37	0.0		S5: (0-8 in.) Similar to S1 (28-39 in.) except wet
				0.0		S5: (8-37 in.) Similar to S2 but very compact
20						Bottom of borehole at 20.0 feet. Backfilled to 8 ft. and installed implant SV-3.

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 02 SOUTH PORTLAND.GPJ GEI CONSULTANTS.GDT 12/10/10

GEI Consultants

Gei Consultants

CLIENT: Maine Dept. of Environmental Protection
PROJECT NAME: CFI - South Portland
CITY/STATE: South Portland, Maine
GEI PROJECT NUMBER: 10232-1

BORING LOG

PAGE 1 of 1

B4

GROUND SURFACE ELEVATION (FT): NM
LOCATION: Cumberland Farms, South Portland
NORTHING: NM **EASTING:** NM
TOTAL DEPTH (FT): 5.0
DRILLED BY: MAI / Seth Brown
DATUM VERT. / HORZ.:
LOGGED BY: K. Wolfe
DATE START / END: 9/9/2010 - 9/9/2010
DRILLING DETAILS: Geoprobe / Track-mounted
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	26	0.0		S1: (0-3 in.) ASPHALT S1: (3-18 in.) ~70% Fine to coarse SAND, ~30% gravel up to 1/2 in., light brown, dry
				0.0		S1: (18-21 in.) ~70% Fine to medium SAND, ~20% fines, ~10% gravel up to 1/4 in., gray, dry
				0.0		S1: (21-23 in.) ~55% Fine to coarse SAND, ~35% fines, ~10% gravel up to 1/4 in., brown, dry
				0.0		S1: (23-26 in.) Similar to S1 (3-18 in.)
5						Bottom of borehole at 5.0 feet. Installed implant SV-4 at 5 ft.

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 - South Portland
CITY/STATE: South Portland, Maine
GEI PROJECT NUMBER: 10232-1

BORING LOG

PAGE 1 of 1

H1

GROUND SURFACE ELEVATION (FT): NM
LOCATION: Cumberland Farms, South Portland
NORTHING: NM **EASTING:** NM
TOTAL DEPTH (FT): 3.0
DRILLED BY: MAI / Seth Brown
DATUM VERT. / HORZ.:
LOGGED BY: K. Wolfe
DATE START / END: 9/9/2010 - 9/9/2010
DRILLING DETAILS: Hand-cleared
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	3.0		0.0		0-2 in. ASPHALT 2-30 in. ~80% Fine to coarse SAND, ~20% gravel up to 1 in., brown, dry
						30-36 in. ~70% Fine to coarse SAND, ~15% gravel up to 1 in., ~15% fines, brown, dry
				0.0		Bottom of borehole at 3.0 feet. Installed H1-SV-1 at 3 ft.

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 02 SOUTH PORTLAND.GPJ GEI CONSULTANTS.GDT 12/10/10

Appendix C

Monitoring Well Construction Logs

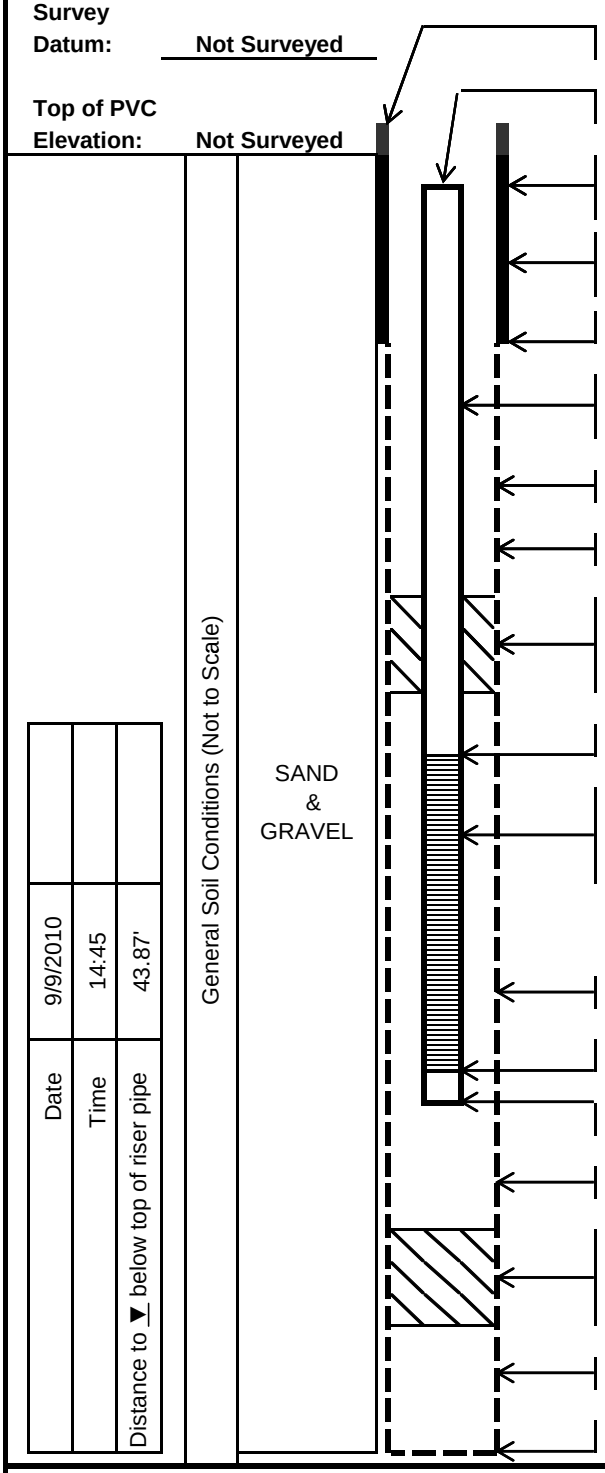
Groundwater Well Installation Log

MW-1

Project	CFI - South Portland	**GEI Proj. No.**	10232-1
City / Town	South Portland, Maine	**Location**	East of Tanks
Client	Maine Department of Environmental Protection		
Contractor	MAI		
Driller	Seth Brown **GEI Rep.** Krista Wolfe	**Install Date**	9/9/2010

Survey Datum: **Not Surveyed**

Top of PVC Elevation: **Not Surveyed**



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	38'
Depth Top of Screened Section	39.5'
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	49.5'
Depth Bottom of Silt Trap	50'
Depth Bottom of Filter Material	50'
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	50'

Notes:

GEI Consultants

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

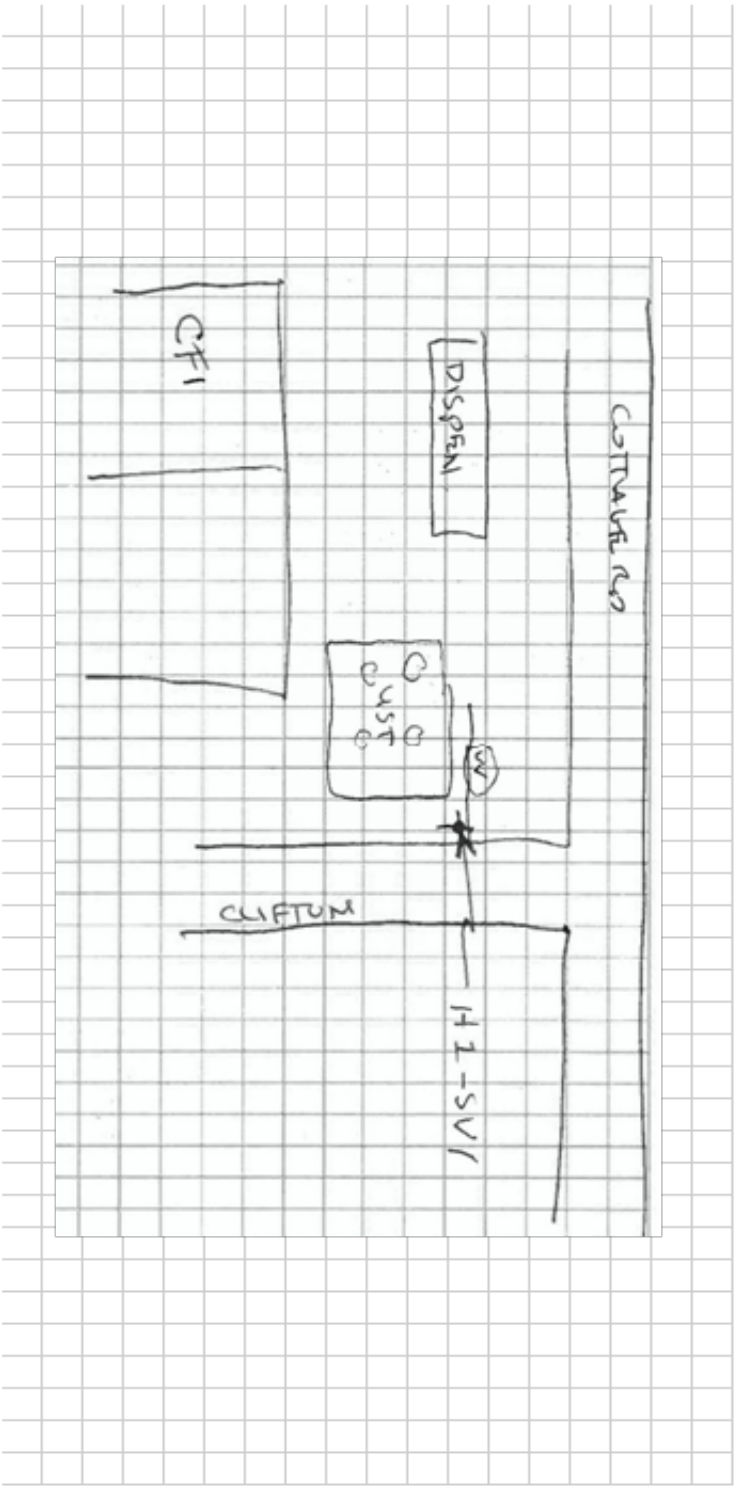
Appendix D

Field Data Sheets

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	H1-SV-1 (H1-SV1-D)
Sampling Personnel:	Hank Andolsek
Project Manager:	Peter Eremita
Collection Device:	(Summa Canister) (Tedlar Bag) (Niosh Tube)
PID:	1.2 ppm
O_2:	20.9%
CO_2:	350 ppm
Flow rate:	200/200 ml/min
Cannister I.D.:	361/334
Controller I.D.:	414/443
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	3 ft.
Depth to Water:	>30 ft.
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	0907
Initial Vacuum:	<-30
Sampling End Time:	0921
Final Vaccum:	H1-SV-1 (-4) H1-SV1-D (0)

Sample Location Sketch

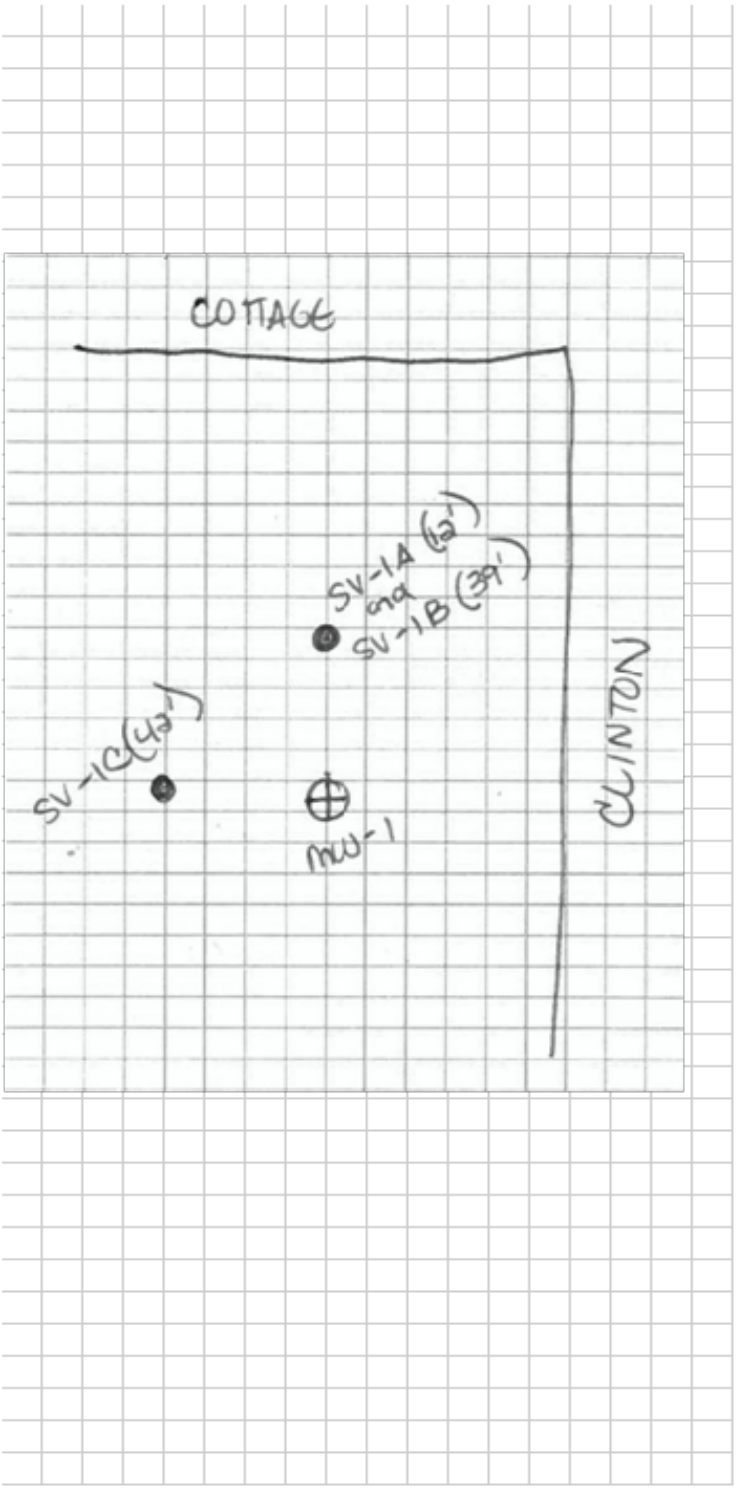


Notes: Sample located 2 ft. offset from water line.

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	SV1A
Sampling Personnel:	Hank Andolsek
Project Manager:	Peter Eremita
Collection Device:	(Summa Canniste) (Tedlar Bag) (Niosh Tube)
PID:	0.3 ppm
O_2:	20.9%
CO_2:	350 ppm
Flow rate:	200 mL/min
Cannister I.D.:	453
Controller I.D.:	358
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	12 ft.
Depth to Water:	44 ft.
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	1523
Initial Vacuum:	-29
Sampling End Time:	1536
Final Vaccum:	-2
Notes:	

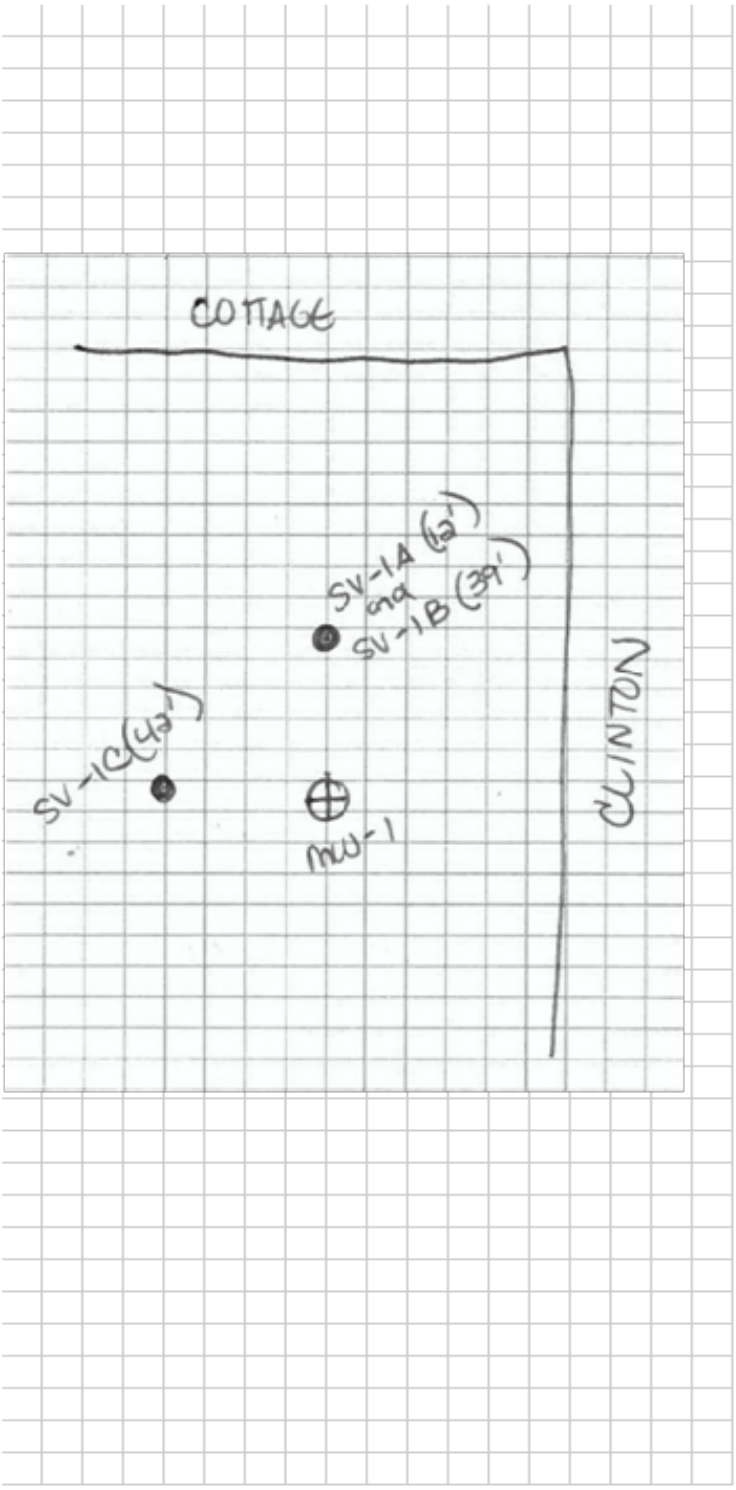
Sample Location Sketch



Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	SV1B
Sampling Personnel:	Hank Andolsek
Project Manager:	Peter Eremita
Collection Device:	(Summa Canister) (Tedlar Bag) (Niosh Tube)
PID:	0.4 ppm
O_2:	20.9%
CO_2:	350 ppm
Flow rate:	200 mL/min
Cannister I.D.:	388
Controller I.D.:	180
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	39 ft.
Depth to Water:	44 ft.
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	1535
Initial Vacuum:	-30
Sampling End Time:	1550
Final Vaccum:	-3
Notes:	

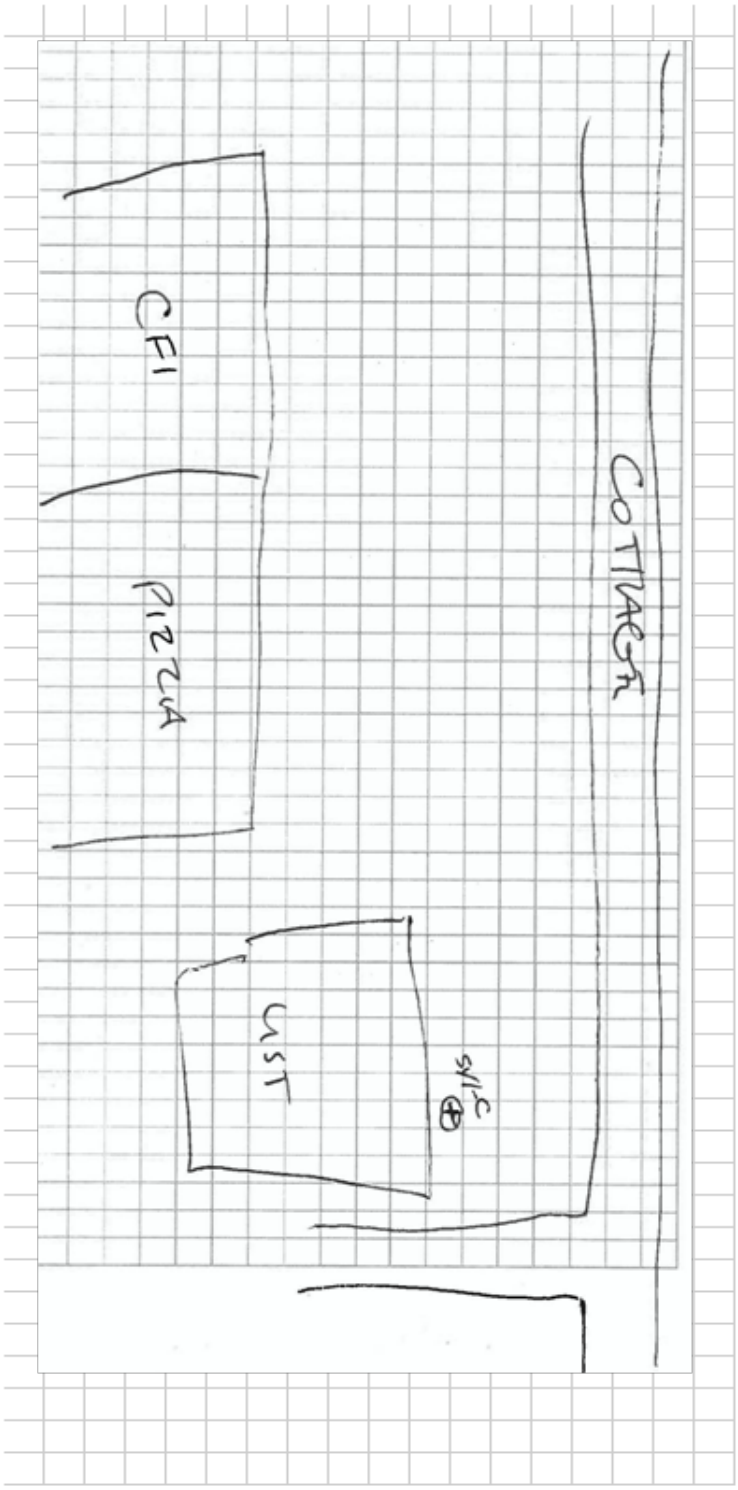
Sample Location Sketch



Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	SV1C
Sampling Personnel:	Hank Andolsek
Project Manager:	Peter Eremita
Collection Device:	(Summa Canister) (Tedlar Bag) (Niosh Tube)
PID:	0.1 ppm
O_2:	20.9%
CO_2:	350 ppm
Flow rate:	200 mL/min
Cannister I.D.:	1726
Controller I.D.:	0088
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	42 ft.
Depth to Water:	44 ft.
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	1501
Initial Vacuum:	>-30
Sampling End Time:	1516
Final Vaccum:	0
Notes:	

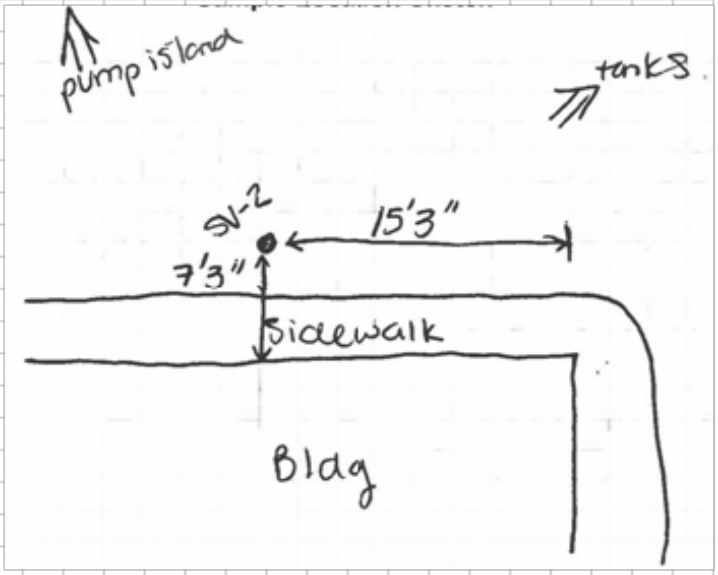
Sample Location Sketch



Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	SV-2
Sampling Personnel:	Krista Wolfe - GEI
Project Manager:	Todd Coffin - GEI
Collection Device:	(Summa Cannister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.9%
CO_2:	350 ppm
Flow rate:	200 mL/min
Cannister I.D.:	570
Controller I.D.:	429
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	12 ft.
Depth to Water:	Unknown ~45 in nearby well
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	1150
Initial Vacuum:	28.5
Sampling End Time:	1202
Final Vaccum:	3

Sample Location Sketch

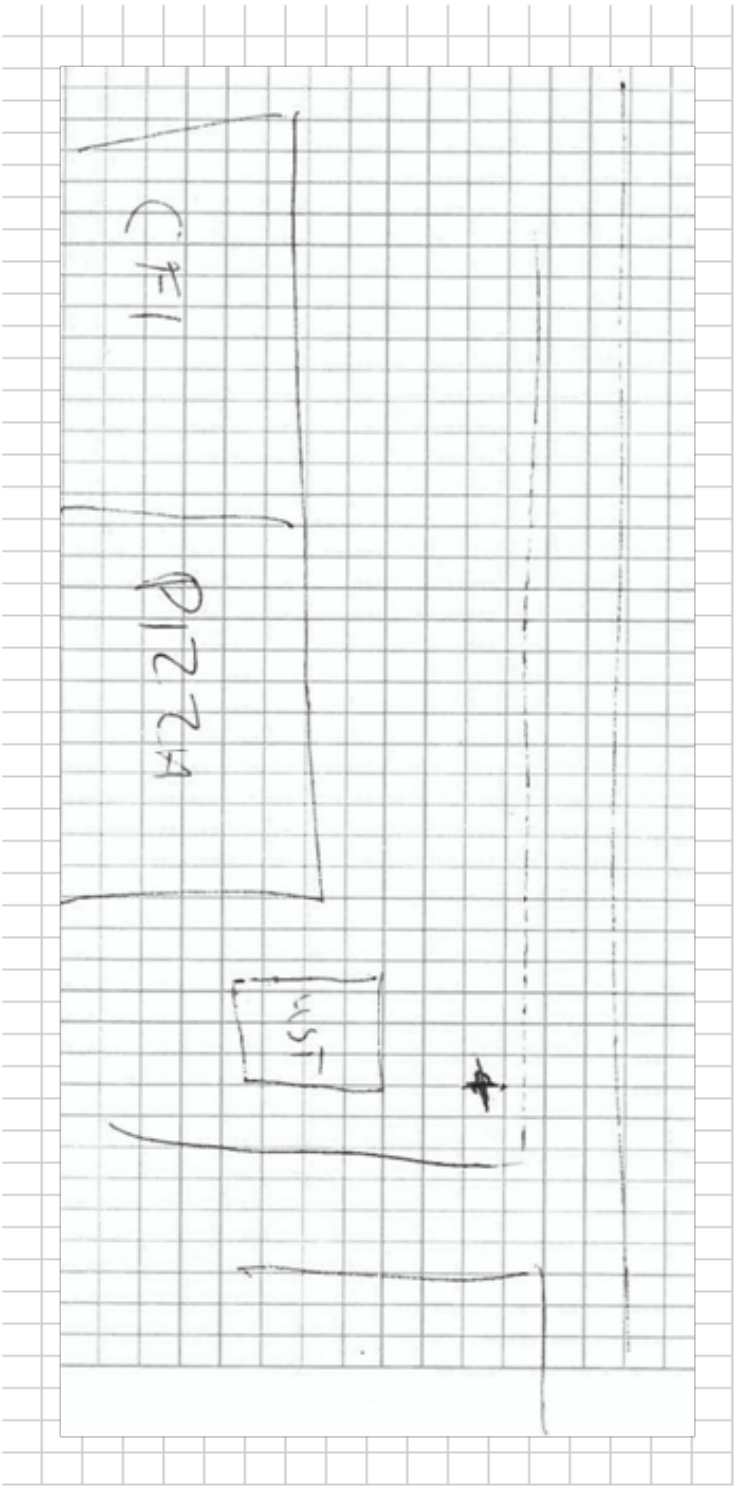


Notes: 5 minute purge with peristaltic prior to readings/sampling

Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	SV-3
Sampling Personnel:	Hank Andolsek
Project Manager:	Peter Eremita
Collection Device:	(Summa Canister) (Tedlar Bag) (Niosh Tube)
PID:	0.1 ppm
O_2:	20.7%
CO_2:	350 ppm
Flow rate:	200 mL/min
Cannister I.D.:	112
Controller I.D.:	155
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	8 ft
Depth to Water:	44 ft
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	1555
Initial Vacuum:	>-30
Sampling End Time:	1610
Final Vaccum:	-4
Notes:	

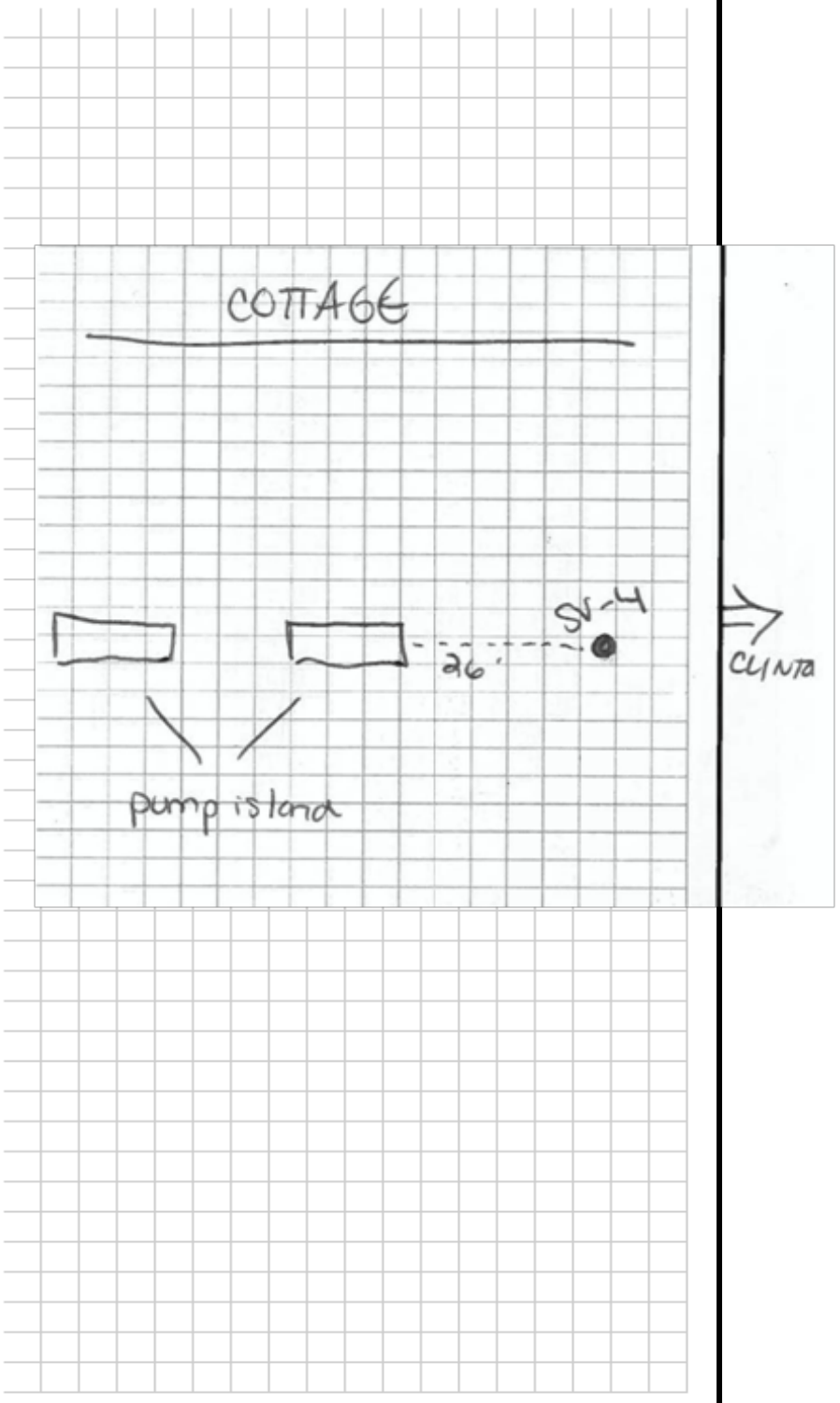
Sample Location Sketch



Soil Gas Sampling Field Sheet
Maine DEP

Site Name:	Cumberland Farms
Location:	South Portland, ME
Date:	9/9/2010
Sample I.D.:	SV-4
Sampling Personnel:	Hank Andolsek
Project Manager:	Peter Eremita
Collection Device:	(Summa Canister) (Tedlar Bag) (Niosh Tube)
PID:	0.0 ppm
O_2:	20.9%
CO_2:	350 ppm
Flow rate:	200 mL/min
Cannister I.D.:	344
Controller I.D.:	0048
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	12 ft
Depth to Water:	44 ft
Suspected COCs:	(Petroleum) (Solvents)
Sampling Start Time:	1613
Initial Vacuum:	28.5
Sampling End Time:	1625
Final Vaccum:	-1
Notes:	

Sample Location Sketch



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: SD5566
Project ID: Maine VI Study (10232-1)
Project Manager: Ms. Shelly Brown
Sample Receipt Date(s): September 10, 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:**	SD5566
Client Sample ID:	102321-B1 (11-15')	**Date Collected:**	09-SEP-10
KAS Sample ID:	SD5566-1	**Date Received:**	10-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:**	96.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	33	33	mg/Kgdrywt	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	33	33	mg/Kgdrywt	1	15-SEP-10	U
C5-C8 Aliphatics	33	33	mg/Kgdrywt	1	15-SEP-10	U
C9-C12 Aliphatics	33	33	mg/Kgdrywt	1	15-SEP-10	U
C9-C10 Aromatics	33	33	mg/Kgdrywt	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Ethylbenzene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Methyl tert-butylether	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Naphthalene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Toluene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
m+p-Xylene	3.3	3.3	mg/Kgdrywt	1	15-SEP-10	U
o-Xylene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	100	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	99	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: SD5566-1
Report Date: 17-SEP-10
Client PO:
Project: Maine VI Study (10232-1)
SDG: SD5566

Sample Description	Matrix	Date Sampled	Date Received
102321-B1 (11-15')	SL	09-SEP-10	10-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	590 ug/gdrywt	420	LLOYDKAHN	WG82137	14-SEP-10 14:14:11	N/A	N/A	BDS	
Total Solids	96. %	1	SM2540G	WG82116	14-SEP-10 09:31:00	ASTM D2216	13-SEP-10	JF	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5566
Client Sample ID:	102321-B1 (39')	**Date Collected:**	09-SEP-10
KAS Sample ID:	SD5566-2	**Date Received:**	10-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:**	96.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	31	31	mg/Kgdrywt	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	31	31	mg/Kgdrywt	1	15-SEP-10	U
C5-C8 Aliphatics	31	31	mg/Kgdrywt	1	15-SEP-10	U
C9-C12 Aliphatics	31	31	mg/Kgdrywt	1	15-SEP-10	U
C9-C10 Aromatics	31	31	mg/Kgdrywt	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Ethylbenzene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Methyl tert-butylether	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Naphthalene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
Toluene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U
m+p-Xylene	3.1	3.1	mg/Kgdrywt	1	15-SEP-10	U
o-Xylene	1.6	1.6	mg/Kgdrywt	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	101	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	103	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: SD5566-2
Report Date: 17-SEP-10
Client PO:
Project: Maine VI Study (10232-1)
SDG: SD5566

Sample Description	Matrix	Date Sampled	Date Received
102321-B1 (39')	SL	09-SEP-10	10-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	U420 ug/gdrywt	420	LLOYDKAHN	WG82137	14-SEP-10 15:28:34	N/A	N/A	BDS	
Total Solids	96. %	1	SM2540G	WG82116	14-SEP-10 09:32:00	ASTM D2216	13-SEP-10	JF	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5566
Client Sample ID:	102321-B1 (42')	**Date Collected:**	09-SEP-10
KAS Sample ID:	SD5566-3	**Date Received:**	10-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:**	96.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	30	30	mg/Kgdrywt	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	30	30	mg/Kgdrywt	1	15-SEP-10	U
C5-C8 Aliphatics	30	30	mg/Kgdrywt	1	15-SEP-10	U
C9-C12 Aliphatics	30	30	mg/Kgdrywt	1	15-SEP-10	U
C9-C10 Aromatics	30	30	mg/Kgdrywt	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.5	1.5	mg/Kgdrywt	1	15-SEP-10	U
Ethylbenzene	1.5	1.5	mg/Kgdrywt	1	15-SEP-10	U
Methyl tert-butylether	1.5	1.5	mg/Kgdrywt	1	15-SEP-10	U
Naphthalene	1.5	1.5	mg/Kgdrywt	1	15-SEP-10	U
Toluene	1.5	1.5	mg/Kgdrywt	1	15-SEP-10	U
m+p-Xylene	3.0	3	mg/Kgdrywt	1	15-SEP-10	U
o-Xylene	1.5	1.5	mg/Kgdrywt	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	92	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	94	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: SD5566-3
Report Date: 17-SEP-10
Client PO:
Project: Maine VI Study (10232-1)
SDG: SD5566

Sample Description	Matrix	Date Sampled	Date Received
102321-B1 (42')	SL	09-SEP-10	10-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	U420 ug/gdrywt	420	LLOYDKAHN	WG82137	14-SEP-10 16:06:29	N/A	N/A	BDS	
Total Solids	96. %	1	SM2540G	WG82116	14-SEP-10 09:33:00	ASTM D2216	13-SEP-10	JF	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5566
Client Sample ID:	102321-B2 (12')	**Date Collected:**	09-SEP-10
KAS Sample ID:	SD5566-4	**Date Received:**	10-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:**	89.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	34	34	mg/Kgdrywt	1	15-SEP-10	U
Unadjusted C9-C12 Aliphatics	34	34	mg/Kgdrywt	1	15-SEP-10	U
C5-C8 Aliphatics	34	34	mg/Kgdrywt	1	15-SEP-10	U
C9-C12 Aliphatics	34	34	mg/Kgdrywt	1	15-SEP-10	U
C9-C10 Aromatics	34	34	mg/Kgdrywt	1	15-SEP-10	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.7	1.7	mg/Kgdrywt	1	15-SEP-10	U
Ethylbenzene	1.7	1.7	mg/Kgdrywt	1	15-SEP-10	U
Methyl tert-butylether	1.7	1.7	mg/Kgdrywt	1	15-SEP-10	U
Naphthalene	1.7	1.7	mg/Kgdrywt	1	15-SEP-10	U
Toluene	1.7	1.7	mg/Kgdrywt	1	15-SEP-10	U
m+p-Xylene	3.4	3.4	mg/Kgdrywt	1	15-SEP-10	U
o-Xylene	1.7	1.7	mg/Kgdrywt	1	15-SEP-10	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	100	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.

Report of Analytical Results

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

Lab Sample ID: SD5566-4
Report Date: 17-SEP-10
Client PO:
Project: Maine VI Study (10232-1)
SDG: SD5566

Sample Description	Matrix	Date Sampled	Date Received
102321-B2 (12')	SL	09-SEP-10	10-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	500 ug/gdrywt	450	LLOYDKAHN	WG82137	14-SEP-10 16:13:40	N/A	N/A	BDS	
Total Solids	89. %	1	SM2540G	WG82116	14-SEP-10 09:34:00	ASTM D2216	13-SEP-10	JF	

Report of Analytical Results

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

Lab Sample ID: SD5566-5
Report Date: 17-SEP-10
Client PO:
Project: Maine VI Study (10232-1)
SDG: SD5566

Sample Description	Matrix	Date Sampled	Date Received
102321-B3 (5-10)	SL	09-SEP-10	10-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	960 ug/gdrywt	430	LLOYDKAHN	WG82137	14-SEP-10 16:21:09	N/A	N/A	BDS	
Total Solids	92. %	1	SM2540G	WG82116	14-SEP-10 09:35:00	ASTM D2216	13-SEP-10	JF	

Report of Analytical Results

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

Lab Sample ID: SD5566-6
Report Date: 17-SEP-10
Client PO:
Project: Maine VI Study (10232-1)
SDG: SD5566

Sample Description	Matrix	Date Sampled	Date Received
102321-B4 (5')	SL	09-SEP-10	10-SEP-10

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
TOC In Soil	40000 ug/gdrywt	500	LLOYDKAHN	WG82137	14-SEP-10 16:32:11	N/A	N/A	BDS	
Total Solids	80. %	1	SM2540G	WG82116	14-SEP-10 09:36:00	ASTM D2216	13-SEP-10	JF	

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	GEI Consultants Inc.	**SDG:**	SD5566
Client Sample ID:	102321-MW-1	**Date Collected:**	09-SEP-10
KAS Sample ID:	SD5566-7	**Date Received:**	10-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)	96	70-130	15-SEP-10	
2,5-Dibromotoluene (PID)	93	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 (2033-1) SDG No.: SD5566

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	102321-B1 (11-15')	SD5566-1	9DI1067	09/15/10	0111
04	102321-B1 (39')	SD5566-2	9DI1068	09/15/10	0209
05	102321-B1 (42')	SD5566-3	9DI1069	09/15/10	0307
06	102321-B2 (12')	SD5566-4	9DI1070	09/15/10	0405
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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 (2033-1) SDG No.: SD5566

Lab File ID: 9DI2057 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	9DI2058	09/14/10	1631
02	WG82101-LCSD	WG82101-3	9DI2059	09/14/10	1728
03	102321-B1 (11-15')	SD5566-1	9DI2067	09/15/10	0111
04	102321-B1 (39')	SD5566-2	9DI2068	09/15/10	0209
05	102321-B1 (42')	SD5566-3	9DI2069	09/15/10	0307
06	102321-B2 (12')	SD5566-4	9DI2070	09/15/10	0405
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COMMENTS:

FORM IVVPH

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SD5566
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.

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 (%)
C5-C8 Aliphatics	mg/Kgdrywt	167	150	148	90	89	70-130	1	25
m+p-Xylene	mg/Kgdrywt	67	56	55	84	82	70-130	2	25
Naphthalene	mg/Kgdrywt	33	29	27	88	82	70-130	7	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
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
Benzene	mg/Kgdrywt	17	14	14	87	86	70-130	0	25
o-Xylene	mg/Kgdrywt	33	27	26	81	80	70-130	4	25

FORM 4

VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG82152-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: MAINE VI STUDY (2033-1) SDG No.: SD5566

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	102321-MW-1	SD5566-7	9DI1080	09/15/10	1712
04					
05					
06					
07					
08					
09					
10					
11					
12					
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28					
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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 (2033-1) SDG No.: SD5566

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	102321-MW-1	SD5566-7	9DI2080	09/15/10	1712
04					
05					
06					
07					
08					
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11					
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30					

COMMENTS:

FORM IVVPH

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SD5566
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.

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

Quality Control Report

Blank Sample Summary Report

TOC in Soil

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG82137	Lloyd Kahn	14-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	WG82116	ASTM D2216	14-SEP-10	13-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
WG82137-2	LCS	WG82137	14-SEP-10	N/A	ug/gdrywt	400000.000	420000	105	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG82116-2	LCS	WG82116	14-SEP-10	13-SEP-10	%	90	90.	100	80-120	

Quality Control Report

Duplicate Sample Summary Report

TOC In Soil

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG82137-3	SD5566-1	WG82137	14-SEP-10	ug/gdrywt	590	690	15	30

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG82116-4	SD5566-6	WG82116	14-SEP-10	%	80.	80.	0	20

Quality Control Report

Matrix Spike Sample Summary Report

TOC In Soil

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG82137-4	MS	SD5566-1	WG82137	14-SEP-10	ug/gdrywt	8613.43	590	11000	120	75 - 125

Client: GEI	KAS PM: SMB	Sampled By: GEI
Project:	KIMS Entry By: GN	Delivered By: GEI
KAS Work Order#: SD5566	KIMS Review By:	Received By: GN
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 9-10-10 / 10:55

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): 2.6
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?	✓				
Methanol covering soil?	✓				
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	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 #: SD5566
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	TO-14A Fractionated 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
	102321-B1(11-15')	9/9/10 0830	SO	3	X	X	←	low sample volume, do your best!						
	" -B1(39')	0900	SO	4	X	X								
	" -B1(42')	0930	SO	4	X	X								
	" -B2(12')	1120	SO	4	X	X								
	" -B3(5-16')	1340	SO	1		X								
	" -B4(5')	1410	SO	1		X								
	" -MW-1	1515	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	9/10/10 1100				
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
"					

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Sep. 10, 2010
03:40 PM

Login Number: SD5566

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	:	2.6
DELIVERY SERVICES	:	Client
EDD FORMAT	:	KAS064-XLS
LOGIN INITIALS	:	GN
PM	:	SMB
PROJECT NAME	:	Maine VI Study (10232-1)
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 Igo refer to email, rpt all dilutions for VPH, down load on the web, edd to pete eremita and Diane Mckenzie, see coc for emails
SDG ID	:	
SDG STATUS	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SD5566-1	102321-B1 (11-15')	09-SEP-10 08:30	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	23-SEP-10	2oz Glass		
Solid	S	MA-VPH	07-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	09-OCT-10	2oz Glass		

SD5566-2	102321-B1 (39')	09-SEP-10 09:00	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	23-SEP-10	2oz Glass		
Solid	S	MA-VPH	07-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	09-OCT-10	2oz Glass		

SD5566-3	102321-B1 (42')	09-SEP-10 09:30	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	23-SEP-10	2oz Glass		
Solid	S	MA-VPH	07-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	09-OCT-10	2oz Glass		

SD5566-4	102321-B2 (12')	09-SEP-10 11:20	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	23-SEP-10	2oz Glass		
Solid	S	MA-VPH	07-OCT-10	40 mL Vial+MEOH		
Solid	S	TS	09-OCT-10	2oz Glass		

SD5566-5	102321-B3 (5-10)	09-SEP-10 13:40	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	23-SEP-10	2oz Glass		
Solid	S	TS	09-OCT-10	2oz Glass		

SD5566-6	102321-B4 (5')	09-SEP-10 14:10	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYDKAHN-TOCSOIL	23-SEP-10	2oz Glass		
Solid	S	TS	09-OCT-10	2oz Glass		

SD5566-7	102321-MW-1	09-SEP-10 15:15	10-SEP-10			20-SEP-10	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH	23-SEP-10	40mL Vial+HCl		

Login Number: SD5566

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

Total Samples: *7* ***Total Analyses:*** *17*

ANALYTICAL REPORT

Lab Number:	L1014291
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:	10232-1
Report Date:	09/22/10

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: 10232-1

Lab Number: L1014291
Report Date: 09/22/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1014291-01	102321-SS-1	SOUTH PORTLAND, ME	09/09/10 10:10
L1014291-02	102321-H1-SV-1	SOUTH PORTLAND, ME	09/09/10 09:21
L1014291-03	102321-H1-SV-1-D	SOUTH PORTLAND, ME	09/09/10 09:21
L1014291-04	102321-SV-1A (12')	SOUTH PORTLAND, ME	09/09/10 15:36
L1014291-05	102321-SV-1B (39')	SOUTH PORTLAND, ME	09/09/10 15:50
L1014291-06	102321-SV-1C (42')	SOUTH PORTLAND, ME	09/09/10 15:16
L1014291-07	102321-SV-2	SOUTH PORTLAND, ME	09/09/10 12:02
L1014291-08	102321-SV-3	SOUTH PORTLAND, ME	09/09/10 16:10
L1014291-09	102321-SV-4	SOUTH PORTLAND, ME	09/09/10 16:25

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

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 3, 2010.

The canister certification data is provided as an addendum.

The internal standards were within method criteria.

Volatile Organics in Air (SIM)

L1014291-07 has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Petroleum Hydrocarbons in Air

L1014291-04 and WG433112-5 Duplicate: All significant concentrations of non-petroleum VOCs detected in the TO-15 analysis were subtracted from the corresponding hydrocarbon ranges.

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

Case Narrative (continued)

L1014291-07 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Fixed Gas

L1014291-01 through -09: 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: Kathleen M. O'Brien Kathleen O'Brien

Title: Technical Director/Representative Date: 09/22/10

AIR

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID: L1014291-01
Client ID: 102321-SS-1
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/18/10 17:41
Analyst: AR

Date Collected: 09/09/10 10:10
Date Received: 09/13/10
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								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.839	0.020	--	5.68	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	97		60-140
bromochloromethane	105		60-140
chlorobenzene-d5	101		60-140

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID: L1014291-04
Client ID: 102321-SV-1A (12')
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/18/10 19:54
Analyst: AR

Date Collected: 09/09/10 15:36
Date Received: 09/13/10
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								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.096	0.020	--	0.515	0.107	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	11.8	0.020	--	80.1	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	135		60-140
bromochloromethane	132		60-140
chlorobenzene-d5	125		60-140

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID: L1014291-07 D
Client ID: 102321-SV-2
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/18/10 22:16
Analyst: AR

Date Collected: 09/09/10 12:02
Date Received: 09/13/10
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								
Vinyl chloride	0.605	0.100	--	1.54	0.255	--		5
1,1-Dichloroethene	ND	0.100	--	ND	0.396	--		5
trans-1,2-Dichloroethene	ND	0.100	--	ND	0.396	--		5
1,1-Dichloroethane	ND	0.100	--	ND	0.404	--		5
cis-1,2-Dichloroethene	ND	0.100	--	ND	0.396	--		5
1,2-Dichloroethane	ND	0.100	--	ND	0.404	--		5
1,1,1-Trichloroethane	ND	0.100	--	ND	0.545	--		5
Trichloroethene	0.910	0.100	--	4.89	0.537	--		5
1,2-Dibromoethane	ND	0.100	--	ND	0.768	--		5
Tetrachloroethene	1.05	0.100	--	7.12	0.678	--		5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	126		60-140
bromochloromethane	128		60-140
chlorobenzene-d5	121		60-140

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 09/18/10 14:44

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 for sample(s): 01,04,07 Batch: WG433113-4								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.08	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.403	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
XYLENE (TOTAL)	ND	0.060	--	ND	0.260	--		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

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 09/18/10 14:44

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 for sample(s): 01,04,07 Batch: WG433113-4								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.020	--	ND	0.075	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.206	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 09/18/10 14:44

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 for sample(s): 01,04,07 Batch: WG433113-4								
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
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAINE V.I. STUDY

Project Number: 10232-1

Lab Number: L1014291

Report Date: 09/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01,04,07 Batch: WG433113-3								
Dichlorodifluoromethane	102		-		70-130	-		25
Chloromethane	88		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	99		-		70-130	-		25
Vinyl chloride	99		-		70-130	-		25
1,3-Butadiene	98		-		70-130	-		25
Bromomethane	95		-		70-130	-		25
Chloroethane	94		-		70-130	-		25
Acetone	79		-		70-130	-		25
Trichlorofluoromethane	102		-		70-130	-		25
Acrylonitrile	73		-		70-130	-		25
1,1-Dichloroethene	100		-		70-130	-		25
Methylene chloride	85		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	97		-		70-130	-		25
Halothane	81		-		70-130	-		25
trans-1,2-Dichloroethene	90		-		70-130	-		25
1,1-Dichloroethane	90		-		70-130	-		25
Methyl tert butyl ether	71		-		70-130	-		25
2-Butanone	70		-		70-130	-		25
cis-1,2-Dichloroethene	92		-		70-130	-		25
Chloroform	93		-		70-130	-		25
1,2-Dichloroethane	93		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAINE V.I. STUDY

Project Number: 10232-1

Lab Number: L1014291

Report Date: 09/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01,04,07 Batch: WG433113-3								
1,1,1-Trichloroethane	99		-		70-130	-		25
Benzene	83		-		70-130	-		25
Carbon tetrachloride	105		-		70-130	-		25
1,2-Dichloropropane	83		-		70-130	-		25
Bromodichloromethane	96		-		70-130	-		25
Trichloroethene	96		-		70-130	-		25
1,4-Dioxane	79		-		70-130	-		25
cis-1,3-Dichloropropene	101		-		70-130	-		25
4-Methyl-2-pentanone	77		-		70-130	-		25
trans-1,3-Dichloropropene	85		-		70-130	-		25
1,1,2-Trichloroethane	87		-		70-130	-		25
Toluene	73		-		70-130	-		25
Dibromochloromethane	93		-		70-130	-		25
1,2-Dibromoethane	87		-		70-130	-		25
Tetrachloroethene	89		-		70-130	-		25
1,1,1,2-Tetrachloroethane	82		-		70-130	-		25
Chlorobenzene	83		-		70-130	-		25
Ethylbenzene	75		-		70-130	-		25
p/m-Xylene	74		-		70-130	-		25
Bromoform	94		-		70-130	-		25
Styrene	79		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAINE V.I. STUDY

Project Number: 10232-1

Lab Number: L1014291

Report Date: 09/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01,04,07 Batch: WG433113-3								
1,1,2,2-Tetrachloroethane	76		-		70-130	-		25
o-Xylene	74		-		70-130	-		25
Isopropylbenzene	70		-		70-130	-		25
1,3,5-Trimethylbenzene	73		-		70-130	-		25
1,2,4-Trimethylbenzene	74		-		70-130	-		25
1,3-Dichlorobenzene	84		-		70-130	-		25
1,4-Dichlorobenzene	84		-		70-130	-		25
sec-Butylbenzene	71		-		70-130	-		25
p-Isopropyltoluene	**68**	Q	-		70-130	-		25
1,2-Dichlorobenzene	82		-		70-130	-		25
n-Butylbenzene	77		-		70-130	-		25
1,2,4-Trichlorobenzene	87		-		70-130	-		25
Naphthalene	85		-		70-130	-		25
1,2,3-Trichlorobenzene	84		-		70-130	-		25
Hexachlorobutadiene	79		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-1

Lab Number: L1014291
Report Date: 09/22/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01,04,07 QC Batch ID: WG433113-5 QC Sample: L1014291-04 Client ID: 102321-SV-1A (12')						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Trichloroethene	0.096	0.097	ppbV	1		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	11.8	12.0	ppbV	2		25

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-01	D	Date Collected:	09/09/10 10:10
Client ID:	102321-SS-1		Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/20/10 17:26			
Analyst:	BS			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	18.2		%	1.75	--	1.748
Carbon Dioxide	0.989		%	0.175	--	1.748

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-02	D	Date Collected:	09/09/10 09:21
Client ID:	102321-H1-SV-1		Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/20/10 18:07			
Analyst:	BS			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.4		%	1.96	--	1.962
Carbon Dioxide	3.51		%	0.196	--	1.962

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID: L1014291-03 D
Client ID: 102321-H1-SV-1-D
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/20/10 18:48
Analyst: BS

Date Collected: 09/09/10 09:21
Date Received: 09/13/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.2		%	1.69	--	1.694
Carbon Dioxide	3.54		%	0.169	--	1.694

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-04 D	Date Collected:	09/09/10 15:36
Client ID:	102321-SV-1A (12')	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor	Extraction Method:	
Analytical Method:	51,3C		
Analytical Date:	09/20/10 19:29		
Analyst:	BS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	12.9		%	2.08	--	2.081
Carbon Dioxide	5.31		%	0.208	--	2.081

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID: L1014291-05 D
Client ID: 102321-SV-1B (39')
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/20/10 20:10
Analyst: BS

Date Collected: 09/09/10 15:50
Date Received: 09/13/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	16.5		%	1.67	--	1.669
Carbon Dioxide	2.44		%	0.167	--	1.669

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID: L1014291-06 D
Client ID: 102321-SV-1C (42')
Sample Location: SOUTH PORTLAND, ME
Matrix: Soil_Vapor
Analytical Method: 51,3C
Analytical Date: 09/20/10 20:52
Analyst: BS

Date Collected: 09/09/10 15:16
Date Received: 09/13/10
Field Prep: Not Specified
Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	16.8		%	1.67	--	1.669
Carbon Dioxide	2.35		%	0.167	--	1.669

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-07 D	Date Collected:	09/09/10 12:02
Client ID:	102321-SV-2	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor	Extraction Method:	
Analytical Method:	51,3C		
Analytical Date:	09/20/10 21:33		
Analyst:	BS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	17.5		%	1.66	--	1.664
Methane	ND		%	0.166	--	1.664
Carbon Dioxide	0.973		%	0.166	--	1.664

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-08	D	Date Collected:	09/09/10 16:10
Client ID:	102321-SV-3		Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/20/10 22:14			
Analyst:	BS			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	14.0		%	1.76	--	1.759
Carbon Dioxide	4.53		%	0.176	--	1.759

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-09	D	Date Collected:	09/09/10 16:25
Client ID:	102321-SV-4		Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	09/20/10 22:55			
Analyst:	BS			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	7.28		%	1.84	--	1.839
Carbon Dioxide	10.5		%	0.184	--	1.839

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 51,3C
Analytical Date: 09/20/10 17:06
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Fixed Gases by GC - Mansfield Lab for sample(s): 01-09 Batch: WG433267-2					
Oxygen	ND		%	1.00	--
Methane	ND		%	0.100	--
Carbon Dioxide	ND		%	0.100	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAINE V.I. STUDY

Project Number: 10232-1

Lab Number: L1014291

Report Date: 09/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 Batch: WG433267-1								
Oxygen	93		-		80-120	-		
Methane	101		-		80-120	-		
Carbon Dioxide	108		-		80-120	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-1

Lab Number: L1014291
Report Date: 09/22/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-10 QC Sample: L1014291-08 Client ID: 102321-SV-3						
Oxygen	14.0	14.0	%	0		5
Carbon Dioxide	4.53	4.52	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-11 QC Sample: L1014291-09 Client ID: 102321-SV-4						
Oxygen	7.28	7.29	%	0		5
Carbon Dioxide	10.5	10.5	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-3 QC Sample: L1014291-01 Client ID: 102321-SS-1						
Oxygen	18.2	18.5	%	2		5
Carbon Dioxide	0.989	0.989	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-4 QC Sample: L1014291-02 Client ID: 102321-H1-SV-1						
Oxygen	15.4	15.0	%	3		5
Carbon Dioxide	3.51	3.52	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-5 QC Sample: L1014291-03 Client ID: 102321-H1-SV-1-D						
Oxygen	15.2	15.1	%	1		5
Carbon Dioxide	3.54	3.55	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-6 QC Sample: L1014291-04 Client ID: 102321-SV-1A (12')						
Oxygen	12.9	12.8	%	1		5
Carbon Dioxide	5.31	5.30	%	0		5

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-1

Lab Number: L1014291
Report Date: 09/22/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-7 QC Sample: L1014291-05 Client ID: 102321-SV-1B (39')					
Oxygen	16.5	16.6	%	1	5
Carbon Dioxide	2.44	2.44	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-8 QC Sample: L1014291-06 Client ID: 102321-SV-1C (42')					
Oxygen	16.8	16.8	%	0	5
Carbon Dioxide	2.35	2.36	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433267-9 QC Sample: L1014291-07 Client ID: 102321-SV-2					
Oxygen	17.5	17.4	%	1	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	0.973	0.973	%	0	5

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-01	Date Collected:	09/09/10 10:10
Client ID:	102321-SS-1	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 17:41		
Analyst:	AR		

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	57		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	54		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	101		50-200
Bromochloromethane	109		50-200
Chlorobenzene-d5	100		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-02	Date Collected:	09/09/10 09:21
Client ID:	102321-H1-SV-1	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 18:41		
Analyst:	AR		

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	3.3		ug/m3	2.0	--	1
Toluene	18		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	290		ug/m3	12	--	1
Ethylbenzene	4.3		ug/m3	2.0	--	1
p/m-Xylene	13		ug/m3	4.0	--	1
o-Xylene	7.3		ug/m3	2.0	--	1
Naphthalene	3.5		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	750		ug/m3	14	--	1
C9-C10 Aromatics Total	190		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	76		50-200
Bromochloromethane	91		50-200
Chlorobenzene-d5	79		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-03	Date Collected:	09/09/10 09:21
Client ID:	102321-H1-SV-1-D	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 19:17		
Analyst:	AR		

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	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	2.8		ug/m3	2.0	--	1
Toluene	16		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	300		ug/m3	12	--	1
Ethylbenzene	4.1		ug/m3	2.0	--	1
p/m-Xylene	12		ug/m3	4.0	--	1
o-Xylene	6.6		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	840		ug/m3	14	--	1
C9-C10 Aromatics Total	130		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	109		50-200
Bromochloromethane	113		50-200
Chlorobenzene-d5	106		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-04	Date Collected:	09/09/10 15:36
Client ID:	102321-SV-1A (12')	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 19:54		
Analyst:	AR		

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	11		ug/m3	2.0	--	1
Methyl tert butyl ether	8.8		ug/m3	2.0	--	1
Benzene	6.9		ug/m3	2.0	--	1
Toluene	81		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	610		ug/m3	12	--	1
Ethylbenzene	14		ug/m3	2.0	--	1
p/m-Xylene	36		ug/m3	4.0	--	1
o-Xylene	15		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	380		ug/m3	14	--	1
C9-C10 Aromatics Total	120		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	140		50-200
Bromochloromethane	139		50-200
Chlorobenzene-d5	122		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-05	Date Collected:	09/09/10 15:50
Client ID:	102321-SV-1B (39')	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 21:06		
Analyst:	AR		

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	11		ug/m3	2.0	--	1
Methyl tert butyl ether	200		ug/m3	2.0	--	1
Benzene	3.6		ug/m3	2.0	--	1
Toluene	75		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	530		ug/m3	12	--	1
Ethylbenzene	2.6		ug/m3	2.0	--	1
p/m-Xylene	4.8		ug/m3	4.0	--	1
o-Xylene	2.1		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	71		ug/m3	14	--	1
C9-C10 Aromatics Total	11		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	144		50-200
Bromochloromethane	145		50-200
Chlorobenzene-d5	127		50-200

Project Name: MAINE V.I. STUDY **Lab Number:** L1014291

Project Number: 10232-1 **Report Date:** 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-06	Date Collected:	09/09/10 15:16
Client ID:	102321-SV-1C (42')	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 21:42		
Analyst:	AR		

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	180		ug/m3	2.0	--	1
Benzene	19		ug/m3	2.0	--	1
Toluene	120		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	1000		ug/m3	12	--	1
Ethylbenzene	7.1		ug/m3	2.0	--	1
p/m-Xylene	9.9		ug/m3	4.0	--	1
o-Xylene	4.7		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	130		ug/m3	14	--	1
C9-C10 Aromatics Total	21		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	118		50-200
Bromochloromethane	120		50-200
Chlorobenzene-d5	111		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-07 D	Date Collected:	09/09/10 12:02
Client ID:	102321-SV-2	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 22:16		
Analyst:	AR		

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	130		ug/m3	10	--	5
Methyl tert butyl ether	12		ug/m3	10	--	5
Benzene	30		ug/m3	10	--	5
Toluene	470		ug/m3	10	--	5
C5-C8 Aliphatics, Adjusted	3500		ug/m3	60	--	5
Ethylbenzene	15		ug/m3	10	--	5
p/m-Xylene	34		ug/m3	20	--	5
o-Xylene	15		ug/m3	10	--	5
Naphthalene	ND		ug/m3	10	--	5
C9-C12 Aliphatics, Adjusted	4500		ug/m3	70	--	5
C9-C10 Aromatics Total	94		ug/m3	50	--	5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	131		50-200
Bromochloromethane	132		50-200
Chlorobenzene-d5	120		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-08	Date Collected:	09/09/10 16:10
Client ID:	102321-SV-3	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 22:52		
Analyst:	AR		

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	27		ug/m3	2.0	--	1
Methyl tert butyl ether	5.4		ug/m3	2.0	--	1
Benzene	8.1		ug/m3	2.0	--	1
Toluene	110		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	1100		ug/m3	12	--	1
Ethylbenzene	2.1		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	82		ug/m3	14	--	1
C9-C10 Aromatics Total	14		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	122		50-200
Bromochloromethane	122		50-200
Chlorobenzene-d5	112		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

SAMPLE RESULTS

Lab ID:	L1014291-09	Date Collected:	09/09/10 16:25
Client ID:	102321-SV-4	Date Received:	09/13/10
Sample Location:	SOUTH PORTLAND, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	09/18/10 23:28		
Analyst:	AR		

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	16		ug/m3	2.0	--	1
Methyl tert butyl ether	5.0		ug/m3	2.0	--	1
Benzene	11		ug/m3	2.0	--	1
Toluene	70		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	1000		ug/m3	12	--	1
Ethylbenzene	9.4		ug/m3	2.0	--	1
p/m-Xylene	22		ug/m3	4.0	--	1
o-Xylene	8.2		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	350		ug/m3	14	--	1
C9-C10 Aromatics Total	85		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	150		50-200
Bromochloromethane	148		50-200
Chlorobenzene-d5	131		50-200

Project Name: MAINE V.I. STUDY
Project Number: 10232-1
Lab Number: L1014291
Report Date: 09/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 96,APH
Analytical Date: 09/18/10 14:44
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbons in Air - Mansfield Lab for sample(s): 01-09 Batch: WG433112-4					
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: 10232-1

Lab Number: L1014291

Report Date: 09/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-09 Batch: WG433112-3								
1,3-Butadiene	90		-		70-130	-		
Methyl tert butyl ether	94		-		70-130	-		
Benzene	106		-		70-130	-		
Toluene	105		-		70-130	-		
C5-C8 Aliphatics, Adjusted	107		-		70-130	-		
Ethylbenzene	103		-		70-130	-		
p/m-Xylene	101		-		70-130	-		
o-Xylene	103		-		70-130	-		
Naphthalene	130		-		50-150	-		
C9-C12 Aliphatics, Adjusted	130		-		70-130	-		
C9-C10 Aromatics Total	91		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: MAINE V.I. STUDY
Project Number: 10232-1

Lab Number: L1014291
Report Date: 09/22/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG433112-5 QC Sample: L1014291-04 Client ID: 102321-SV-1A (12')						
1,3-Butadiene	11	11	ug/m3	0		30
Methyl tert butyl ether	8.8	8.7	ug/m3	1		30
Benzene	6.9	6.7	ug/m3	3		30
Toluene	81	81	ug/m3	0		30
C5-C8 Aliphatics, Adjusted	610	610	ug/m3	0		30
Ethylbenzene	14	14	ug/m3	0		30
p/m-Xylene	36	37	ug/m3	3		30
o-Xylene	15	16	ug/m3	6		30
Naphthalene	ND	ND	ug/m3	NC		30
C9-C12 Aliphatics, Adjusted	380	380	ug/m3	0		30
C9-C10 Aromatics Total	120	120	ug/m3	0		30

Project Name: MAINE V.I. STUDY **Lab Number:** L1014291

Project Number: 10232-1 **Report Date:** 09/22/10

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
L1014291-01	102321-SS-1	0368	#90 SV		-	-	200	200	0
L1014291-01	102321-SS-1	492	2.7L Can	I1013194	-29.4	-1.6	-	-	-
L1014291-02	102321-H1-SV-1	0414	#30 AMB		-	-	200	200	0
L1014291-02	102321-H1-SV-1	361	2.7L Can	I1013126	-29.4	-0.5	-	-	-
L1014291-03	102321-H1-SV-1-D	0443	#16 AMB		-	-	200	203	1
L1014291-03	102321-H1-SV-1-D	334	2.7L Can	I1013126	-29.4	-1.0	-	-	-
L1014291-04	102321-SV-1A (12')	0358	#16 AMB		-	-	200	194	3
L1014291-04	102321-SV-1A (12')	453	2.7L Can	I1013194	-29.4	-2.3	-	-	-
L1014291-05	102321-SV-1B (39')	0180	#90 SV		-	-	200	205	2
L1014291-05	102321-SV-1B (39')	388	2.7L Can	I1013126	-28.8	-0.6	-	-	-
L1014291-06	102321-SV-1C (42')	0088	#90 SV		-	-	200	205	2
L1014291-06	102321-SV-1C (42')	1726	2.7L Can	I1013126	-29.4	-0.4	-	-	-
L1014291-07	102321-SV-2	0429	#90 SV		-	-	200	200	0
L1014291-07	102321-SV-2	570	2.7L Can	I1013194	-29.4	-2.8	-	-	-
L1014291-08	102321-SV-3	0155	#90 SV		-	-	200	199	1
L1014291-08	102321-SV-3	112	2.7L Can	I1013126	-29.4	-2.3	-	-	-
L1014291-09	102321-SV-4	0048	#90 SV		-	-	200	206	3

Project Name: MAINE V.I. STUDY **Lab Number:** L1014291

Project Number: 10232-1 **Report Date:** 09/22/10

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
L1014291-09	102321-SV-4	344	2.7L Can	I1013126	-29.4	-2.7	-	-	-

Air Volatiles Can Certification

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1013126
Report Date: 09/22/10

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:*** 09/22/10

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:*** 09/22/10

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:*** 09/22/10

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
Project Number: CANISTER QC BAT
Lab Number: L1013126
Report Date: 09/22/10

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:*** 09/22/10

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
Project Number: CANISTER QC BAT
Lab Number: L1013126
Report Date: 09/22/10

Air Canister Certification Results

Lab ID: L1013126-01
Client ID: CAN 239 SHELF 1
Sample Location:
Date Collected: 08/24/10 00:00
Date Received: 08/24/10
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
Project Number: CANISTER QC BAT
Lab Number: L1013194
Report Date: 09/22/10

Air Canister Certification Results

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

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

Parameter	ppbV 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	ND	1.00	--	ND	2.37	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: BATCH CANISTER CERTIFICATION ***Lab Number:*** L1013194

Project Number: CANISTER QC BAT ***Report Date:*** 09/22/10

Air Canister Certification Results

Lab ID: L1013194-01 Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8 Date Received: 08/25/10

Sample Location: Field Prep: Not Specified

	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:*** L1013194

Project Number: CANISTER QC BAT ***Report Date:*** 09/22/10

Air Canister Certification Results

Lab ID: L1013194-01 Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8 Date Received: 08/25/10

Sample Location: Field Prep: Not Specified

	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:*** L1013194

Project Number: CANISTER QC BAT ***Report Date:*** 09/22/10

Air Canister Certification Results

Lab ID: L1013194-01 Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8 Date Received: 08/25/10

Sample Location: Field Prep: Not Specified

	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:*** L1013194

Project Number: CANISTER QC BAT ***Report Date:*** 09/22/10

Air Canister Certification Results

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

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

Parameter	ppbV 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	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.08	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.403	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION ***Lab Number:*** L1013194

Project Number: CANISTER QC BAT ***Report Date:*** 09/22/10

Air Canister Certification Results

Lab ID: L1013194-01 Date Collected: 08/25/10 00:00

Client ID: CAN 514 SHELF 8 Date Received: 08/25/10

Sample Location: Field Prep: Not Specified

	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
Project Number: CANISTER QC BAT
Lab Number: L1013194
Report Date: 09/22/10

Air Canister Certification Results

Lab ID: L1013194-01
Client ID: CAN 514 SHELF 8
Sample Location:
Date Collected: 08/25/10 00:00
Date Received: 08/25/10
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	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

AIR Petro Can Certification

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1013126

Project Number: CANISTER QC BAT **Report Date:** 09/22/10

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: BATCH CANISTER CERTIFICATION **Lab Number:** L1013194

Project Number: CANISTER QC BAT **Report Date:** 09/22/10

AIR CAN CERTIFICATION RESULTS

Lab ID:	L1013194-01	Date Collected:	08/25/10 00:00
Client ID:	CAN 514 SHELF 8	Date Received:	08/25/10
Sample Location:	Not Specified	Field Prep:	Not Specified
Matrix:	Air		
Analytical Method:	96,APH		
Analytical Date:	08/27/10 18:36		
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: 10232-1

Lab Number: L1014291
Report Date: 09/22/10

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(*)
L1014291-01A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-SIM(30)
L1014291-02A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1014291-03A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1014291-04A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-SIM(30)
L1014291-05A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1014291-06A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1014291-07A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-SIM(30)
L1014291-08A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)
L1014291-09A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30)

*Values in parentheses indicate holding time in days

Project Name:	MAINE V.I. STUDY	**Lab Number:**	L1014291
Project Number:	10232-1	**Report Date:**	09/22/10

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:**	L1014291
Project Number:	10232-1	**Report Date:**	09/22/10

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

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

51 Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources. Method 3C. Appendix A, Part 60, 40 CFR (Code of Federal Regulations). June 20, 1996.

96 Method for the Determination of Air-Phase Petroleum Hydrocarbons (APH), MassDEP, December 2009, Revision 1 with QC Requirements & Performance Standards for the Analysis of APH by GC/MS under the Massachusetts Contingency Plan, WSC-CAM-IXA, July 2010.

LIMITATION OF LIABILITIES

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

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

Certificate/Approval Program Summary

Last revised July 19, 2010 – Mansfield Facility

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

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

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

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

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

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

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

Air & Emissions (EPA TO-15.)

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

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

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

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

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

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

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

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

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

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

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

Atmospheric Organic Parameters (EPA TO-15)

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

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

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

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

Air & Emissions (EPA TO-15.)

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

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

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

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

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

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

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

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

Air & Emissions (EPA TO-15.)

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

AIR ANALYSIS
CHAIN OF CUSTODY

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

Date Rec'd in Lab: 9/13/10

ALPHA Job #: L1014291

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: South Portland, Maine
Project #: 10232-1
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)
14291.1	102321-SS-1	9/9/10	0958	1010	30	1	SV	HA	2.7	492	368	☐	☐	☒	☒	☐	☐	☐	Chlorinated VOCs by SIM
2	" -H1-SV-1		0907	0921	30	4				361	414	☐	☐	☐	☒	☐	☐	☐	
3	" -H1-SV-1-D		0907	0921	30	0				334	443	☐	☐	☐	☒	☐	☐	☐	
4	" -SV-1A(12')		1523	1536	29	2				453	200	☐	☐	☒	☒	☐	☐	☐	Chlorinated VOCs by SIM
5	" -SV-1B(39')		1535	1550	30	3				388	180	☐	☐	☐	☒	☐	☐	☐	
6	" -SV-1C(42')		1501	1516	30	0				1726	0088	☐	☐	☐	☒	☐	☐	☐	
											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. Wolfe	9/13/10 0830	GEI Field Room	9/13/10 0630
GEI Field Room	9/13/10 1130		9/13/10 1130
	9/13/10 1130		9/13/10 1150
	9/13/10 1630		9/13/10 16:20
	9/14/10 1105	UPS: 032160	9/14/10 0940
			9/14/10 1105

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

AIR ANALYSIS

CHAIN OF CUSTODY

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

Date Rec'd in Lab: 9/13/10

ALPHA Job #: L1014291

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: South Portland, Maine
Project #: 10232-1
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)
14291.7	102321-SV-2	9/9/10	1150	1202	28.5	3	SV	KW	2.7	570	429	☐	☐	☒	☒	☐	☐	☐	Chlorinated VOCs by SIM
8	" -SV-3	↓	1555	1610	30	4	↓	HA	↓	112	155	☐	☐	☐	☒	☐	☐	☐	
9	" -SV-4	↓	1613	1625	28.5	1	↓	↓	↓	344	0048	☐	☐	☐	☒	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
											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
[signature]	9/13/10 0630	GEI Field Room	9/13/10 0630
GEI Field Room	9/13/10 1130	[signature]	9/13/10 1130
[signature]	9/13/10 1130	[signature]	9/13/10 1130
[signature]	9/13/10 1620	[signature]	9/13/10 1620
[signature]	9/14/10 1105	[signature]	9/14/10 0940
		[signature]	9/14/10 1105

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.

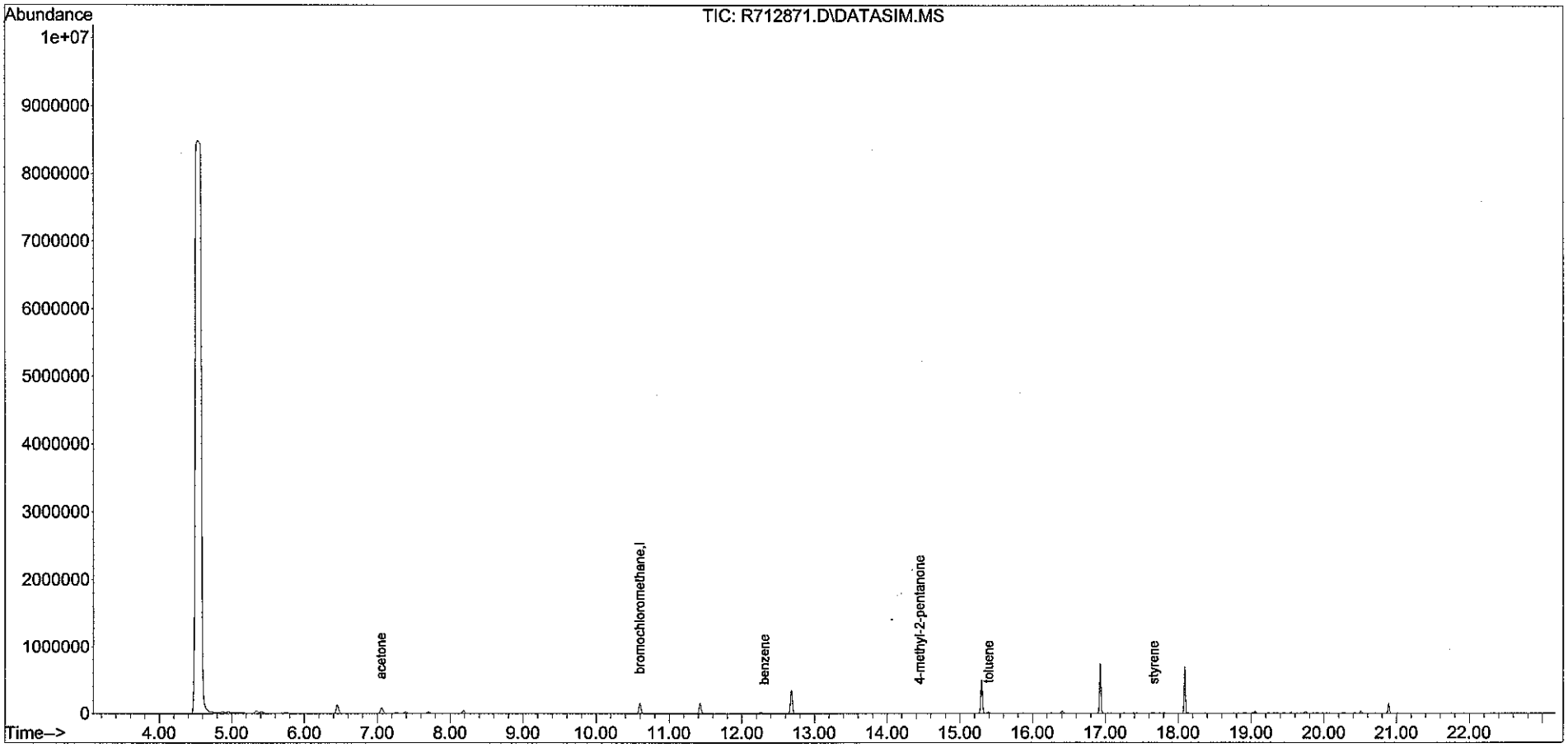
Form 101-02 (I)
Revised 29-Dec-09

TO-15

Sub List : 9_Chlorinateds+EDB - .[redacted] (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100918sim\
Data File : R712871.D
Acq On : 18 Sep 2010 5:41 pm
Operator : AIRLAB7:ar
Sample : l1014291-01,3,250,250
Misc : wg433113,ical5323
ALS Vial : 8 Sample Multiplier: 1

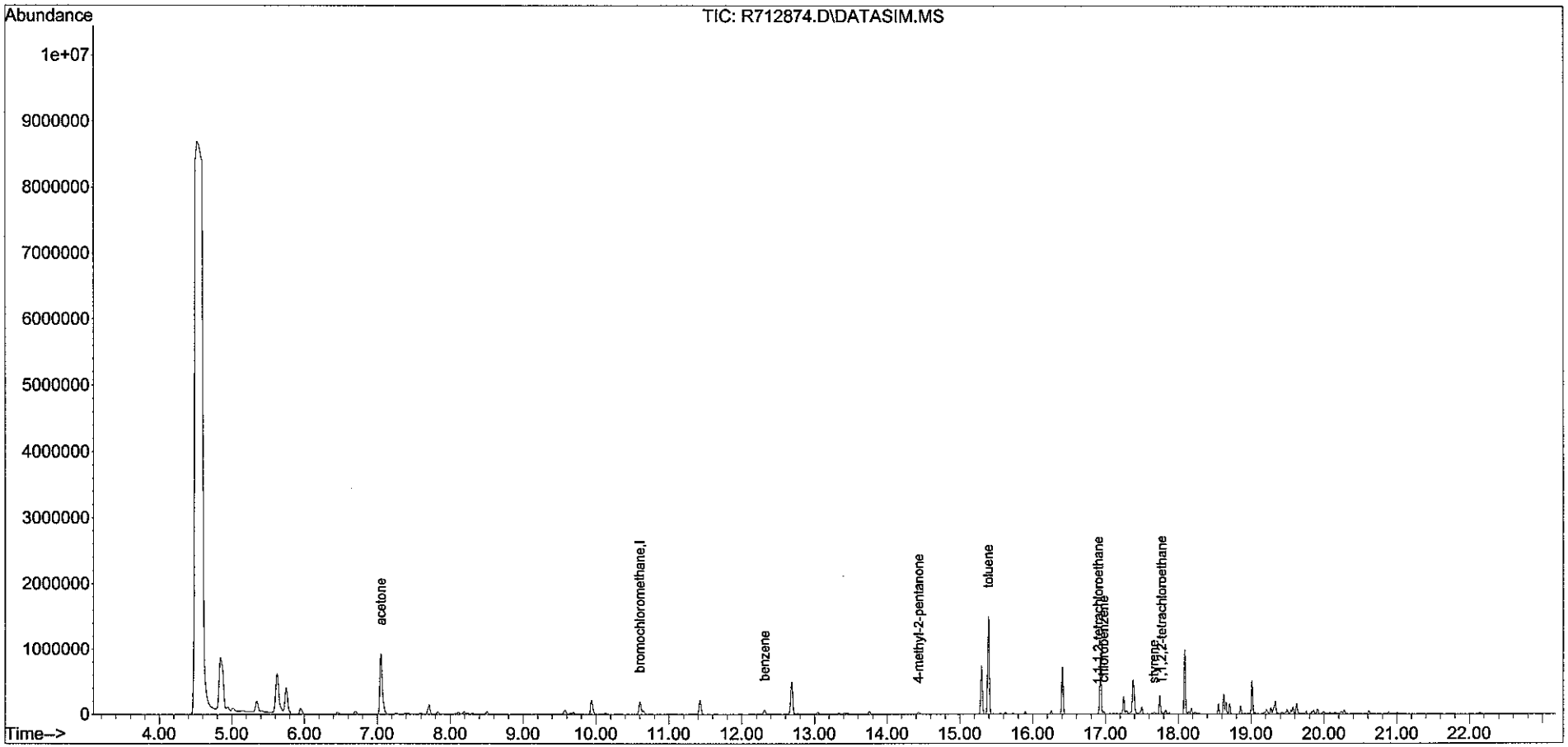
Quant Time: Sep 19 07:20:16 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918sim\TSIM100825.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Sep 03 15:29:50 2010
Response via : Initial Calibration



Sub List : 9_Chlorinateds+EDB - .▒▒▒ (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100918sim\
Data File : R712874.D
Acq On : 18 Sep 2010 7:54 pm
Operator : AIRLAB7:ar
Sample : l1014291-04,3,250,250
Misc : wg433113,ical5323
ALS Vial : 11 Sample Multiplier: 1

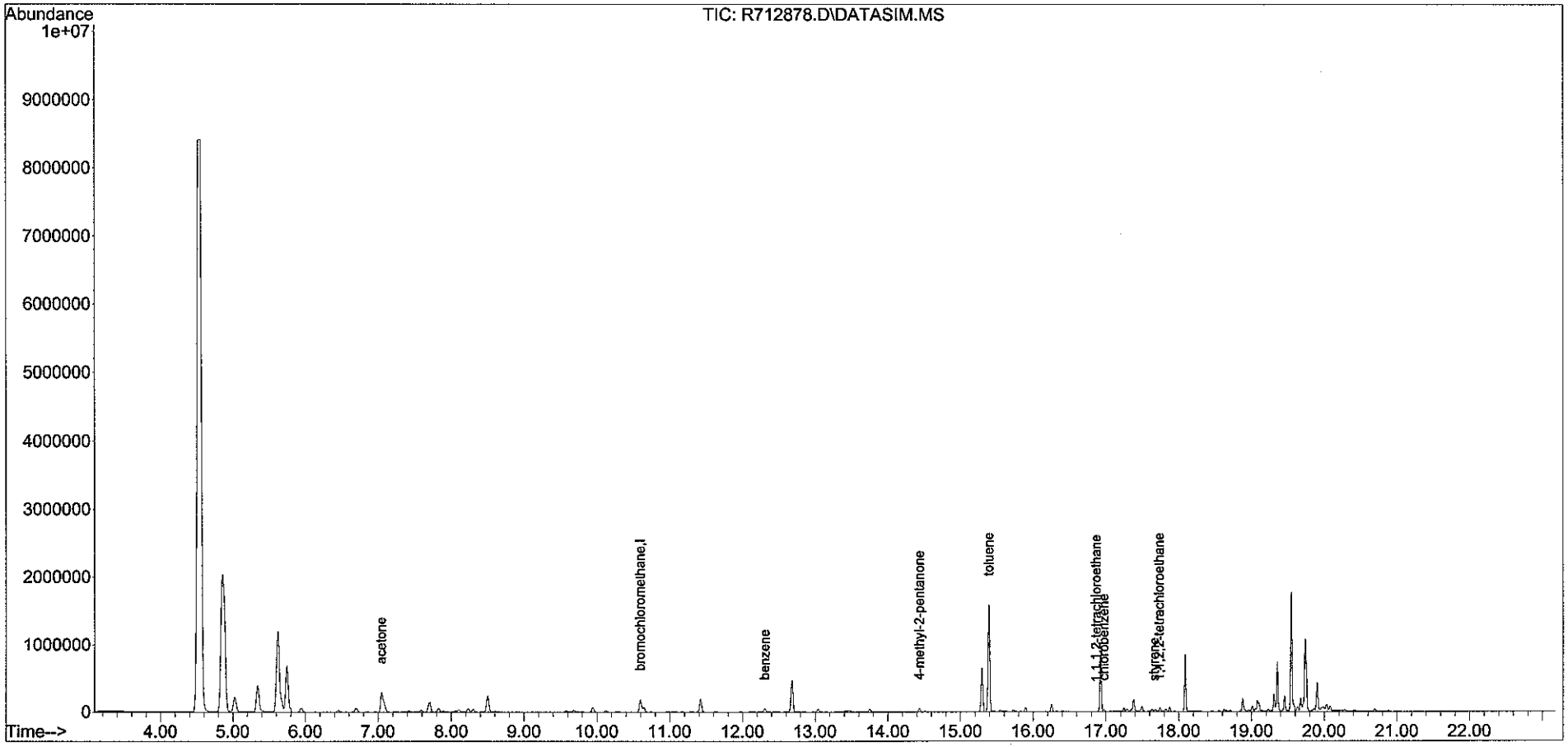
Quant Time: Sep 20 13:52:22 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918sim\TSIM100825.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Sep 03 15:29:50 2010
Response via : Initial Calibration



Sub List : 9_Chlorinateds+EDB - .▒▒▒ (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100918sim\
Data File : R712878.D
Acq On : 18 Sep 2010 10:16 pm
Operator : AIRLAB7:ar
Sample : l1014291-07d,3,50,250
Misc : wg433113,ical5323
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 20 13:53:38 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918sim\TSIM100825.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Sep 03 15:29:50 2010
Response via : Initial Calibration



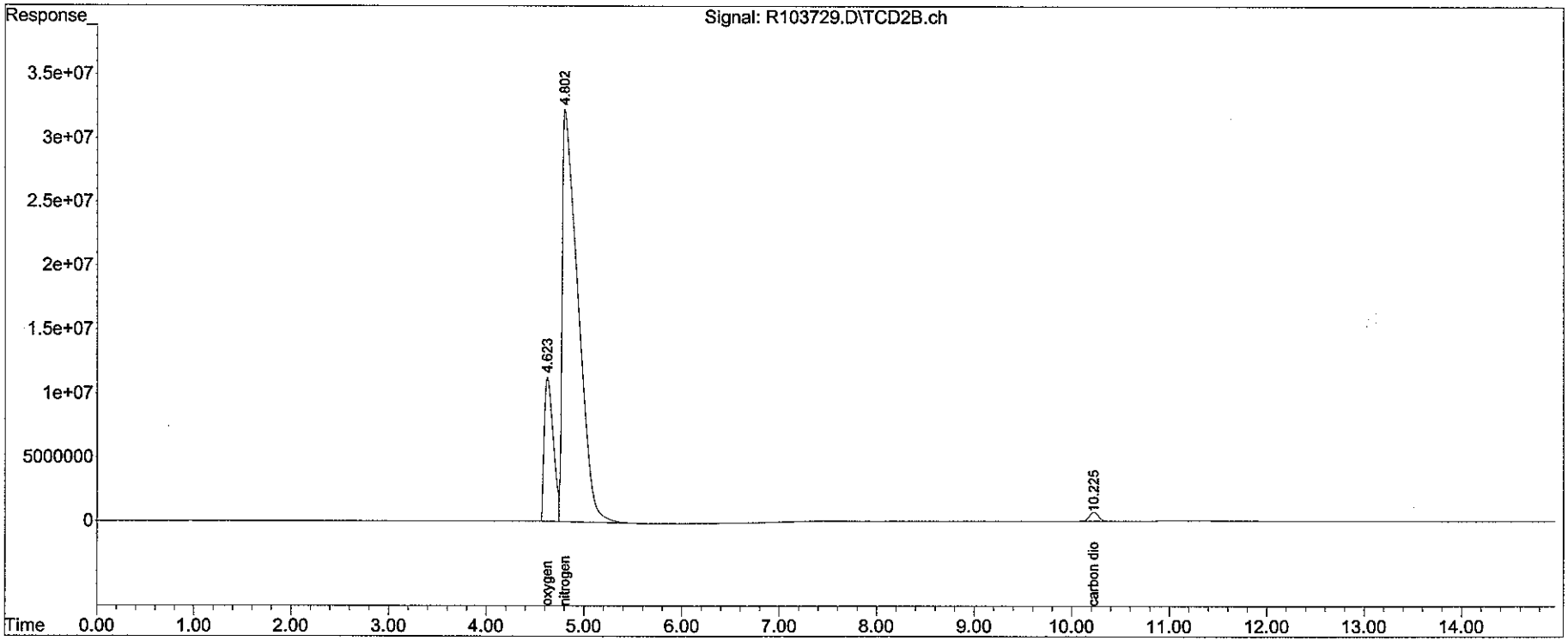
Fixed Gases

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103729.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 5:26 pm
Operator : airlab10:BS
Sample : L1014291-01D,4,0.5721,1
Misc : WG433267,ICAL5222
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:48:41 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

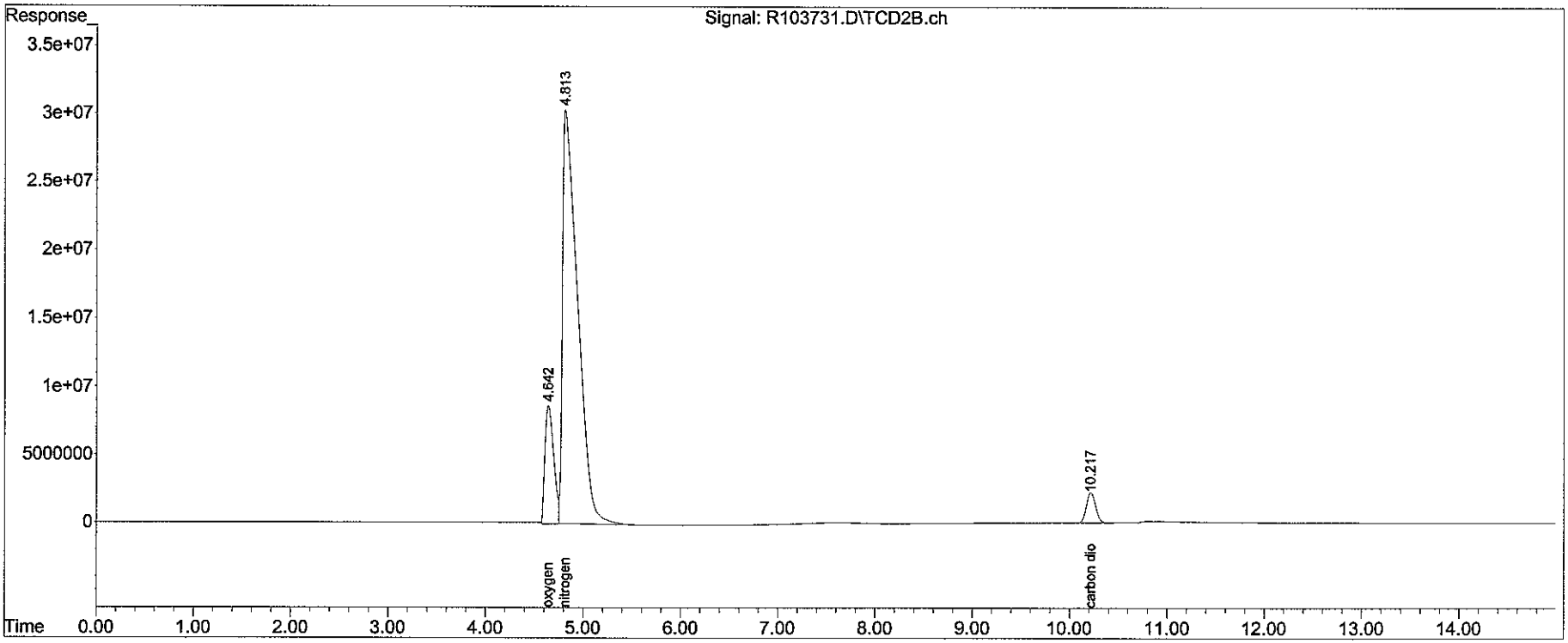


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103731.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 6:07 pm
Operator : airlab10:BS
Sample : L1014291-02D,4,0.5096,1
Misc : WG433267,ICAL5222
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:50:13 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

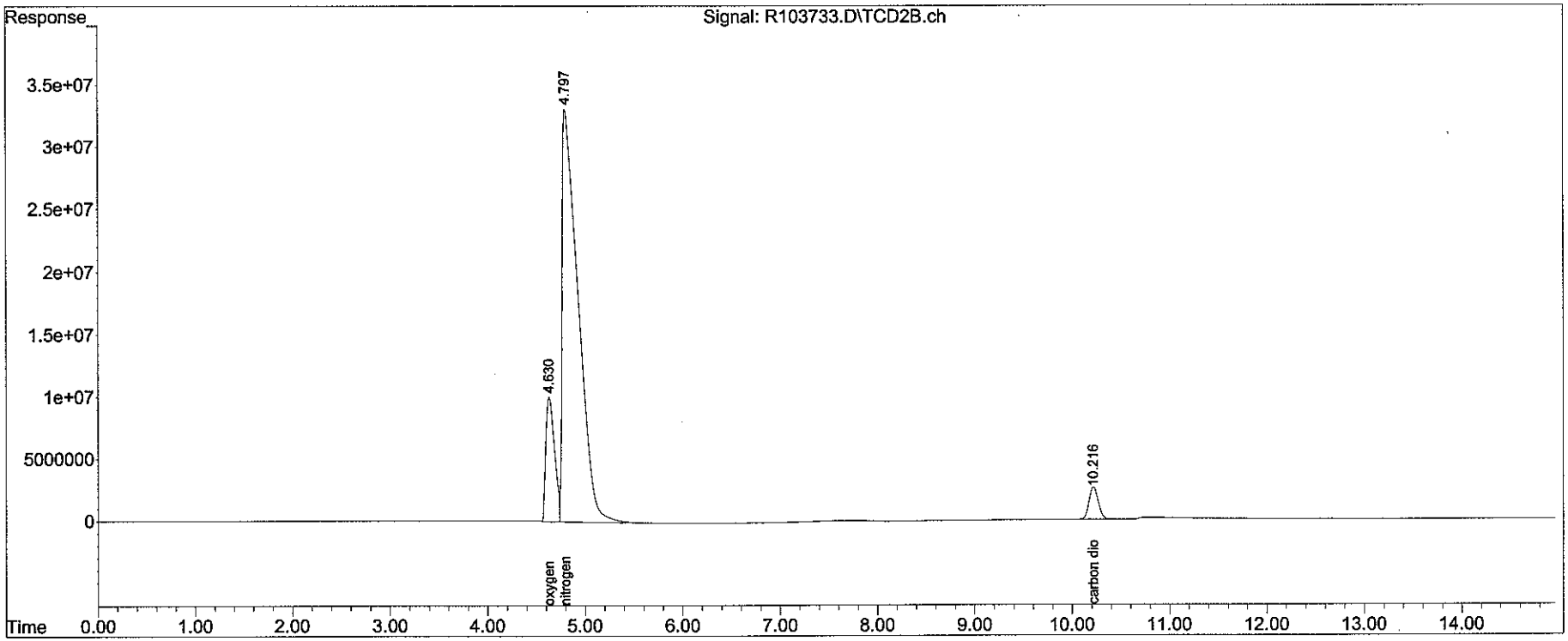


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103733.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 6:48 pm
Operator : airlab10:BS
Sample : L1014291-03D,4,0.59021,1
Misc : WG433267,ICAL5222
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:51:09 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

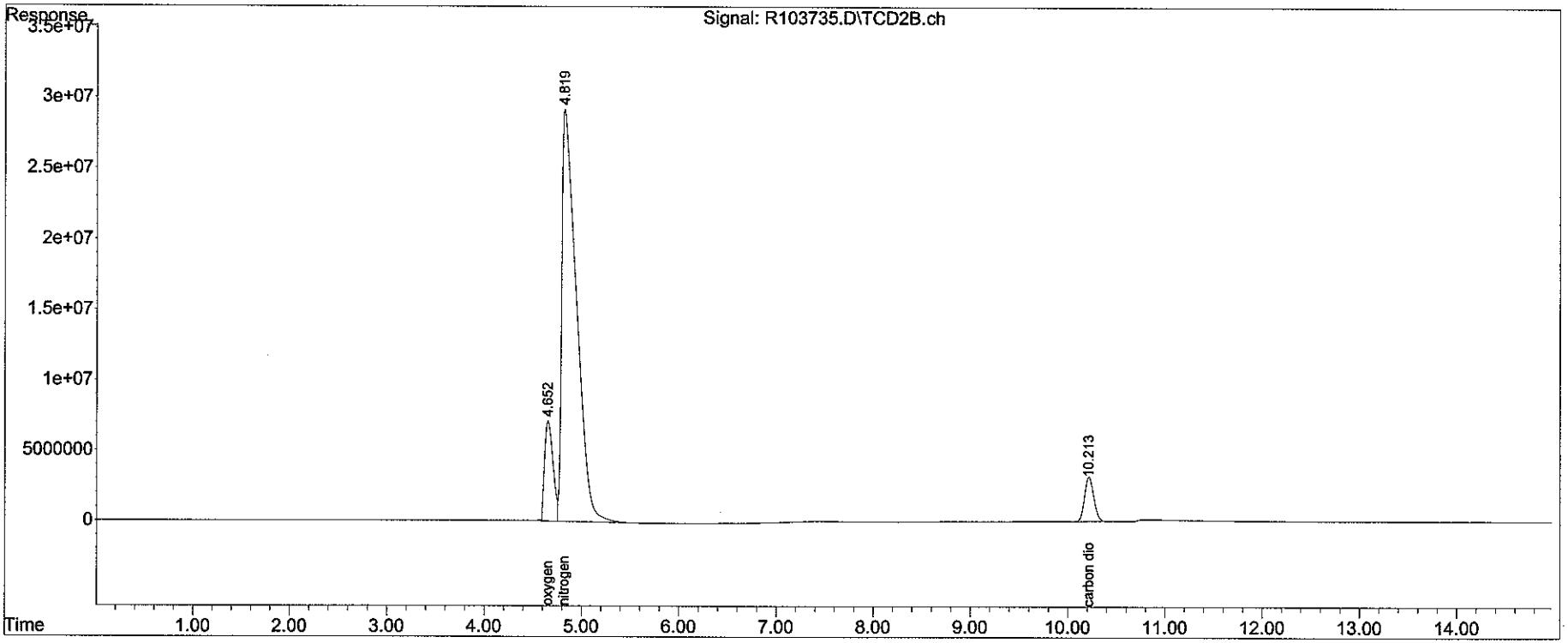


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103735.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 7:29 pm
Operator : airlab10:BS
Sample : L1014291-04D,4,0.4806,1
Misc : WG433267,ICAL5222
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:51:55 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

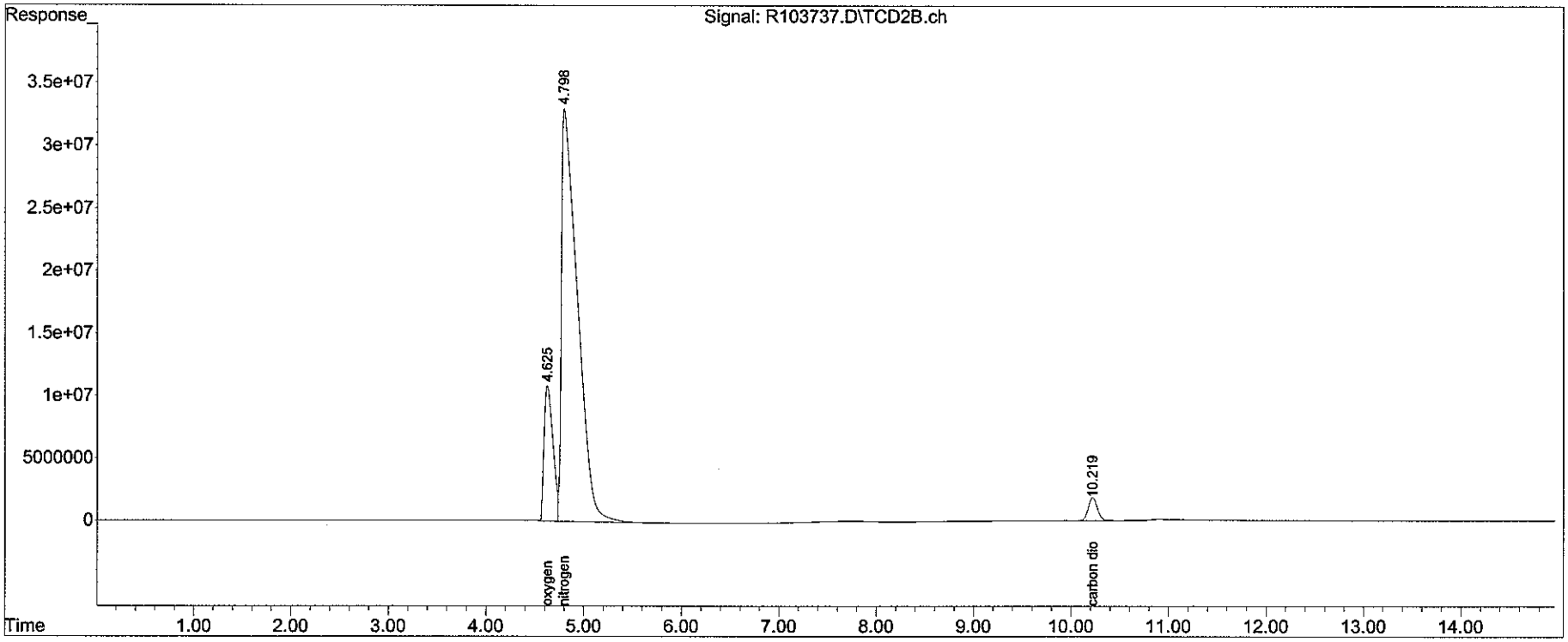


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103737.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 8:10 pm
Operator : airlab10:BS
Sample : L1014291-05D,4,0.5990,1
Misc : WG433267,ICAL5222
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:52:42 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

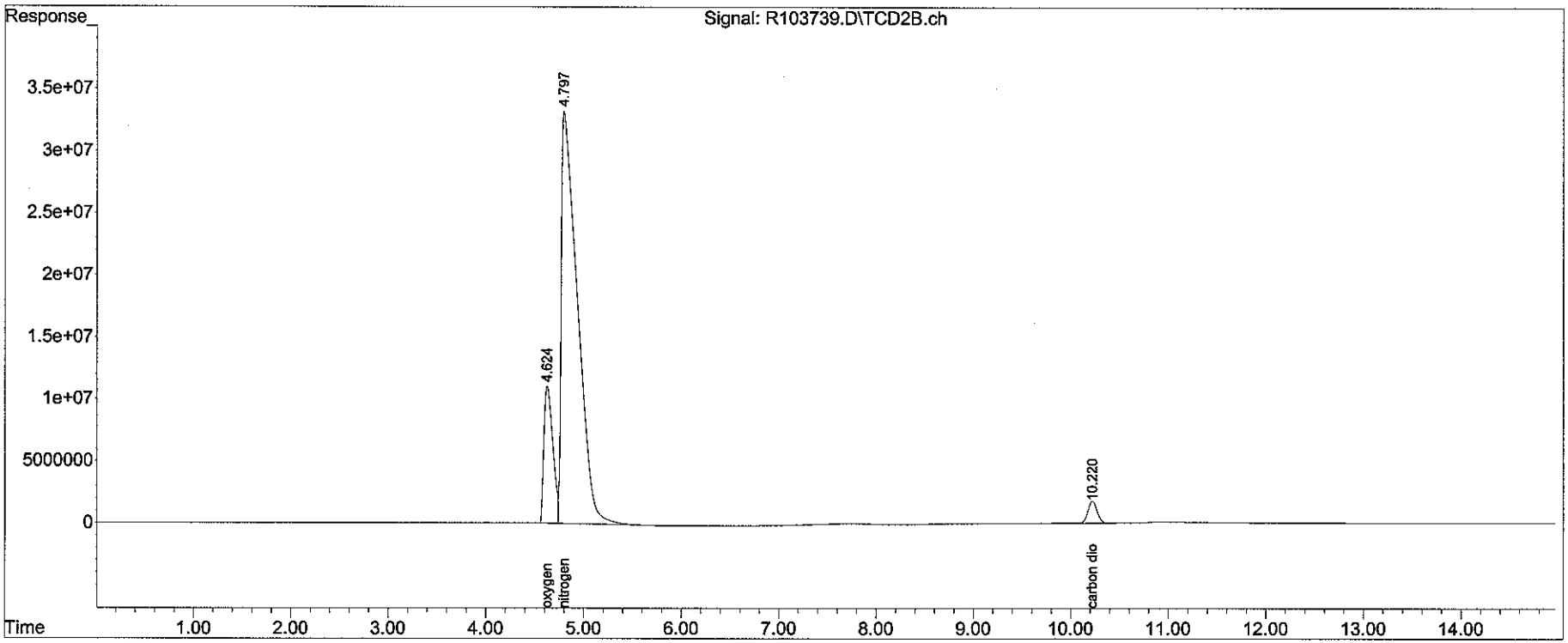


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103739.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 8:52 pm
Operator : airlab10:BS
Sample : L1014291-06D,4,0.5990,1
Misc : WG433267,ICAL5222
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:53:35 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

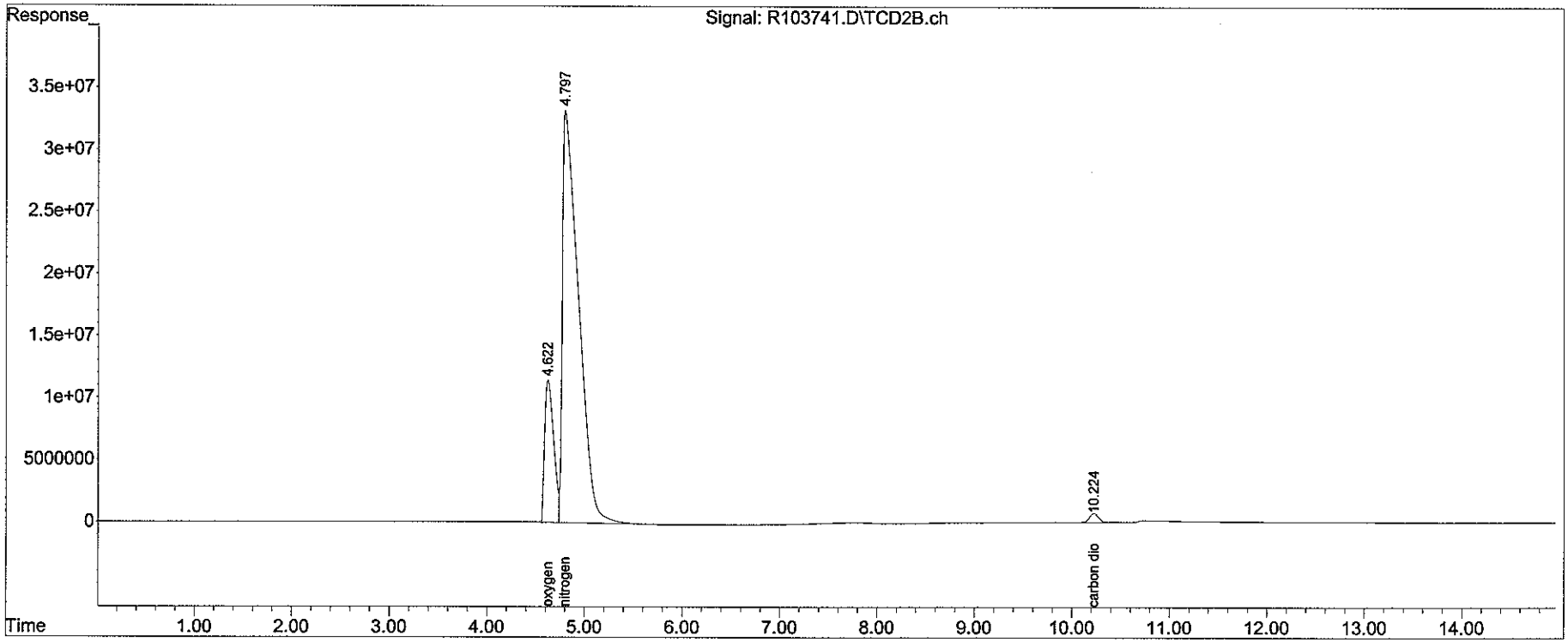


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103741.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 9:33 pm
Operator : airlab10:BS
Sample : L1014291-07D,4,0.6010,1
Misc : WG433267,ICAL5222
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:54:21 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

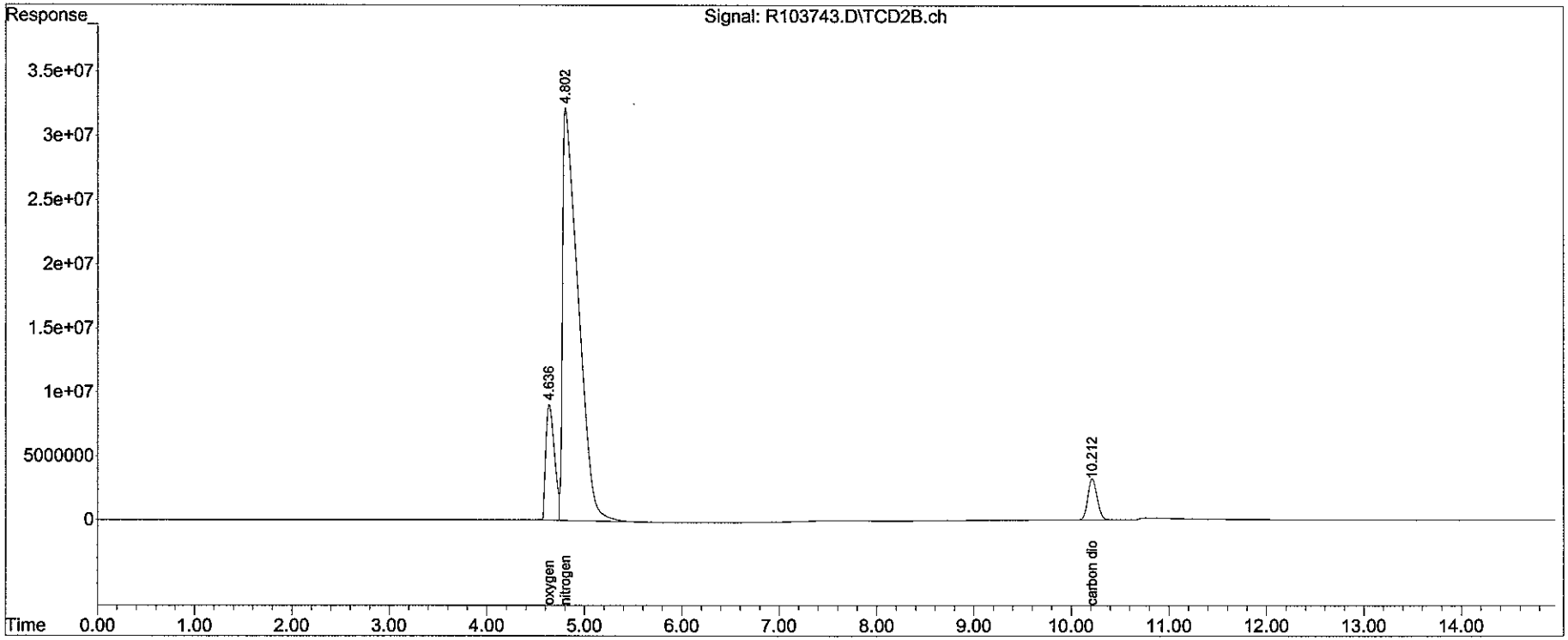


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103743.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 10:14 pm
Operator : airlab10:BS
Sample : L1014291-08D,4,0.5686,1
Misc : WG433267,ICAL5222
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 08:55:14 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

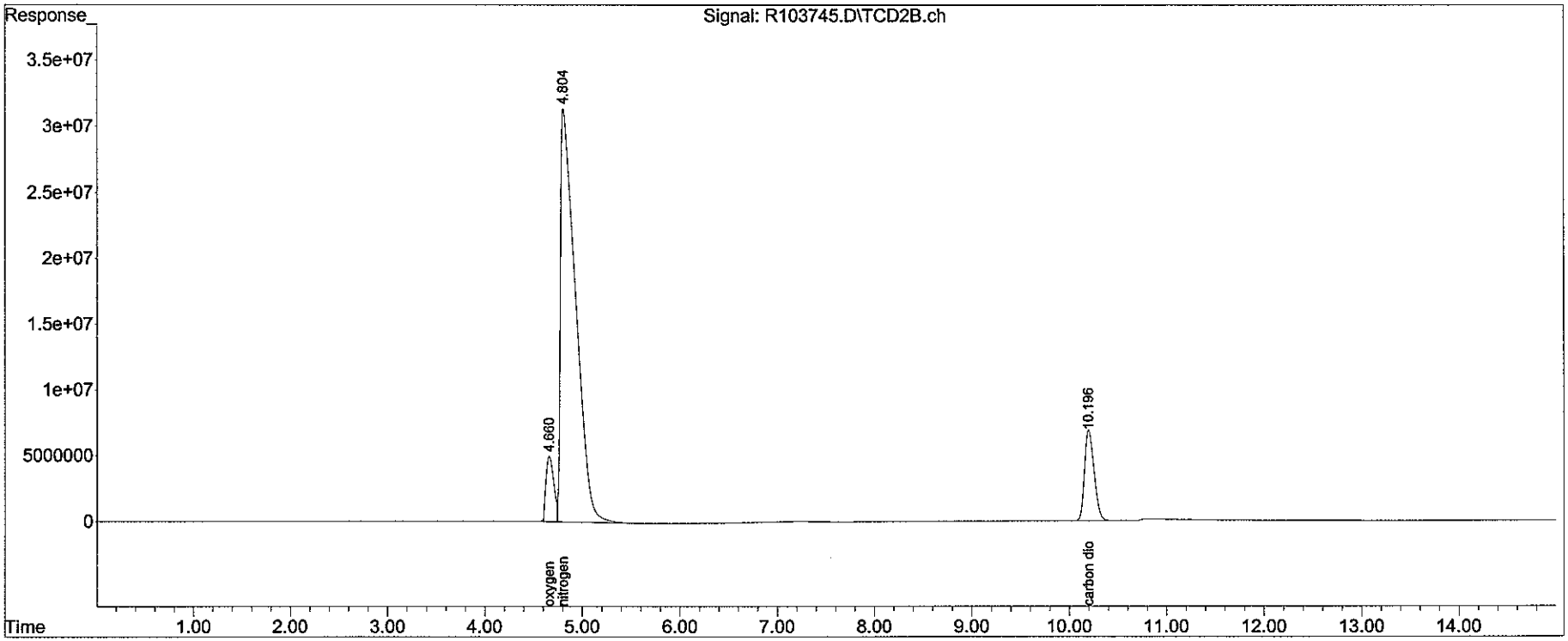


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\100920FG\
Data File : R103745.D
Signal(s) : TCD2B.ch
Acq On : 20 Sep 2010 10:55 pm
Operator : airlab10:BS
Sample : L1014291-09D,4,0.5437,1
Misc : WG433267,ICAL5222
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 21 09:13:55 2010
Quant Method : O:\Forensics\Data\airlab10\100920FG\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 :

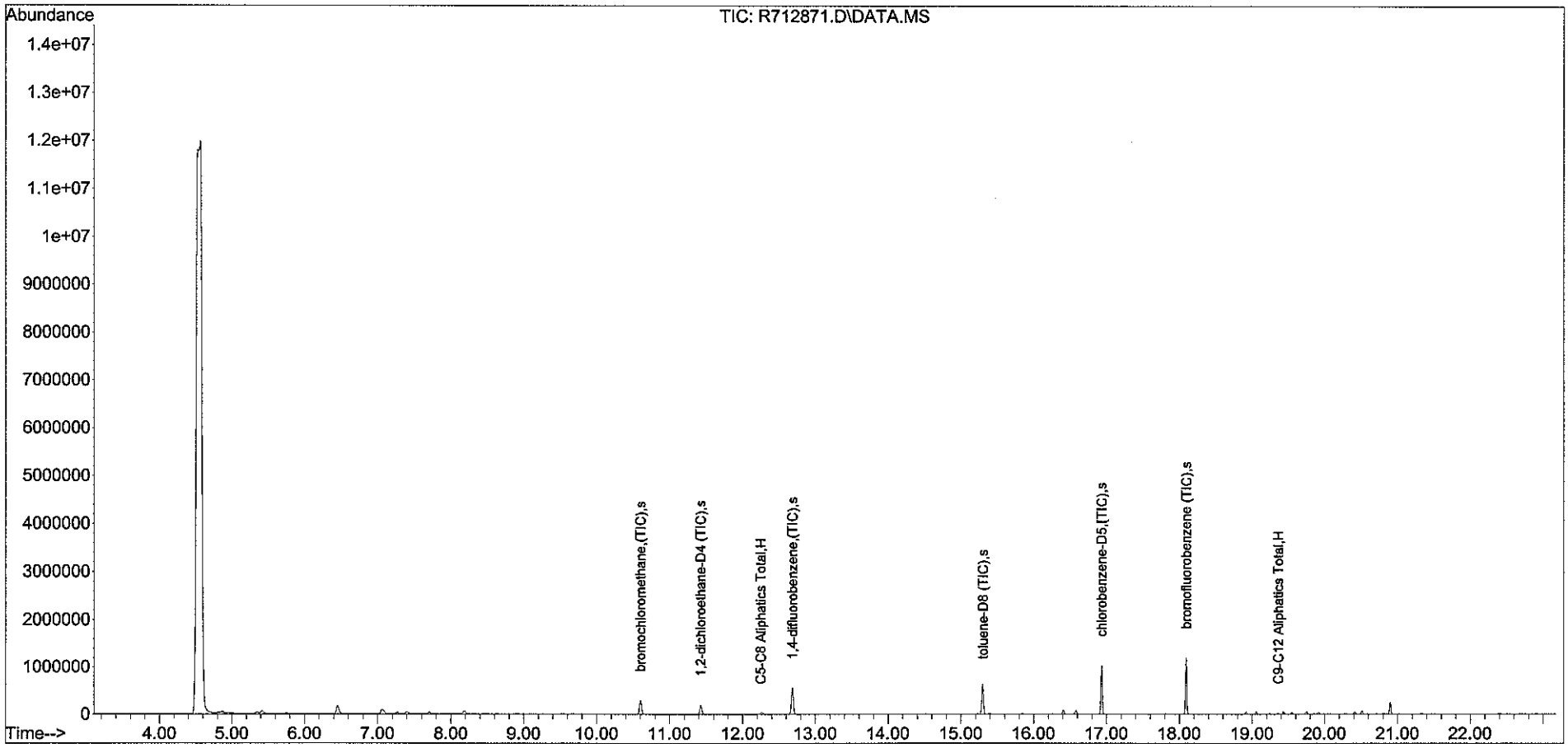


APH

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

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712871.D
Acq On : 18 Sep 2010 5:41 pm
Operator : AIRLAB7:ar
Sample : l1014291-01,3,250,250
Misc : wg433112,ical5336
ALS Vial : 8 Sample Multiplier: 1

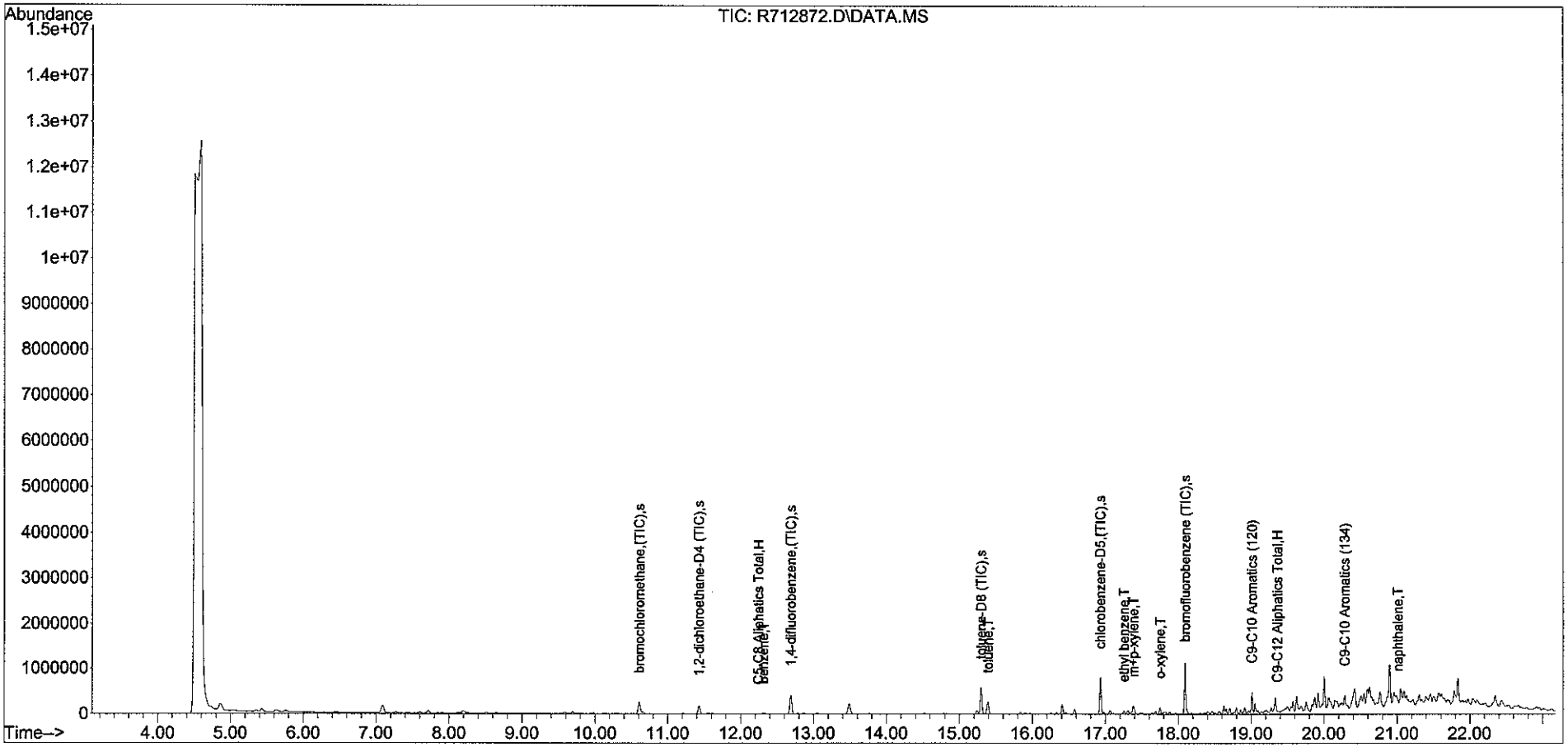
Quant Time: Sep 20 11:09:20 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712872.D
Acq On : 18 Sep 2010 6:41 pm
Operator : AIRLAB7:ar
Sample : 11014291-02,3,250,250
Misc : wg433112,ical5336
ALS Vial : 9 Sample Multiplier: 1

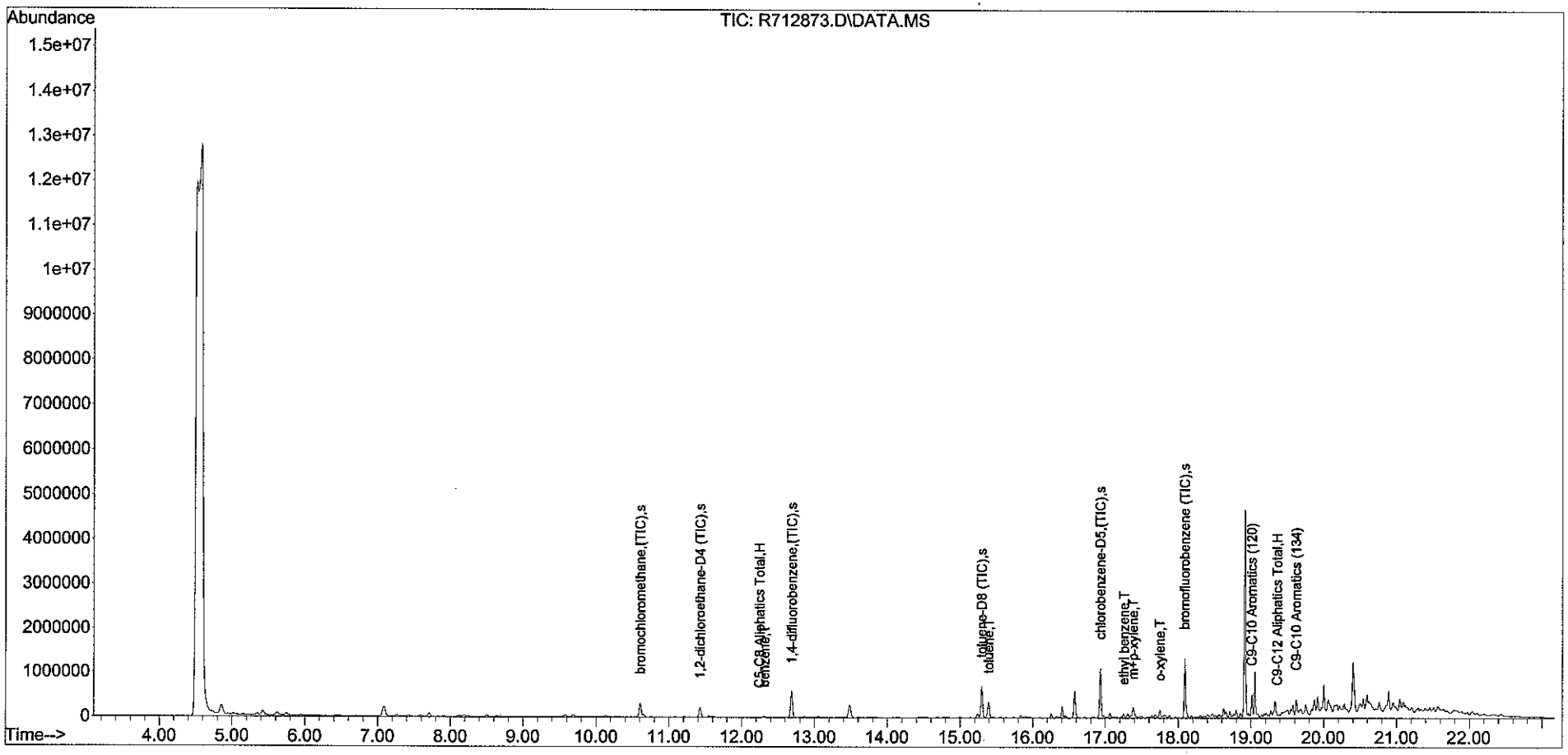
Quant Time: Sep 20 11:10:55 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .[redacted]Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712873.D
Acq On : 18 Sep 2010 7:17 pm
Operator : AIRLAB7:ar
Sample : l1014291-03,3,250,250
Misc : wg433112,ical5336
ALS Vial : 10 Sample Multiplier: 1

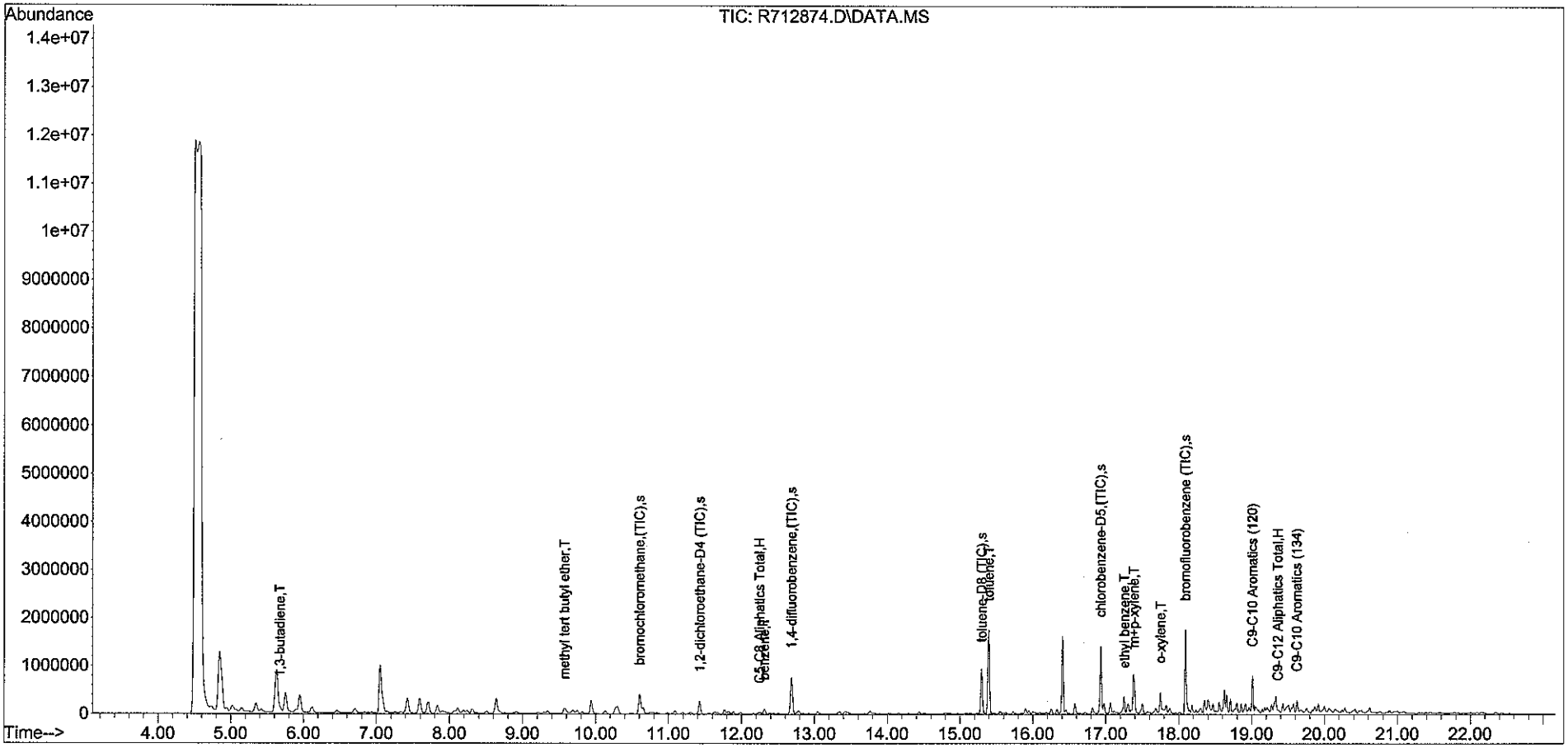
Quant Time: Sep 20 11:11:47 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712874.D
Acq On : 18 Sep 2010 7:54 pm
Operator : AIRLAB7:ar
Sample : 11014291-04,3,250,250
Misc : wg433112,ical5336
ALS Vial : 11 Sample Multiplier: 1

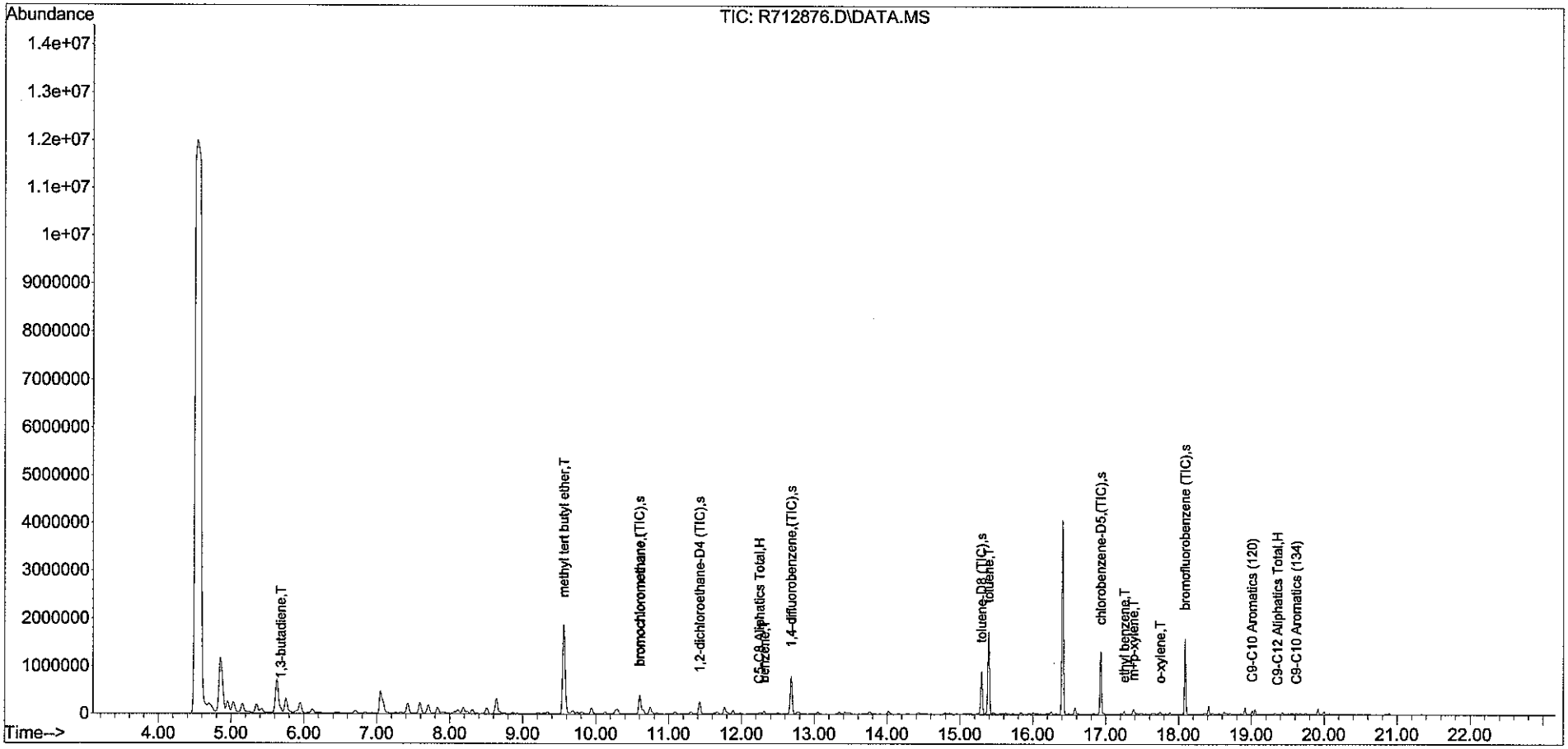
Quant Time: Sep 21 11:31:47 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .[redacted]Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712876.D
Acq On : 18 Sep 2010 9:06 pm
Operator : AIRLAB7:ar
Sample : l1014291-05,3,250,250
Misc : wg433112,ical5336
ALS Vial : 12 Sample Multiplier: 1

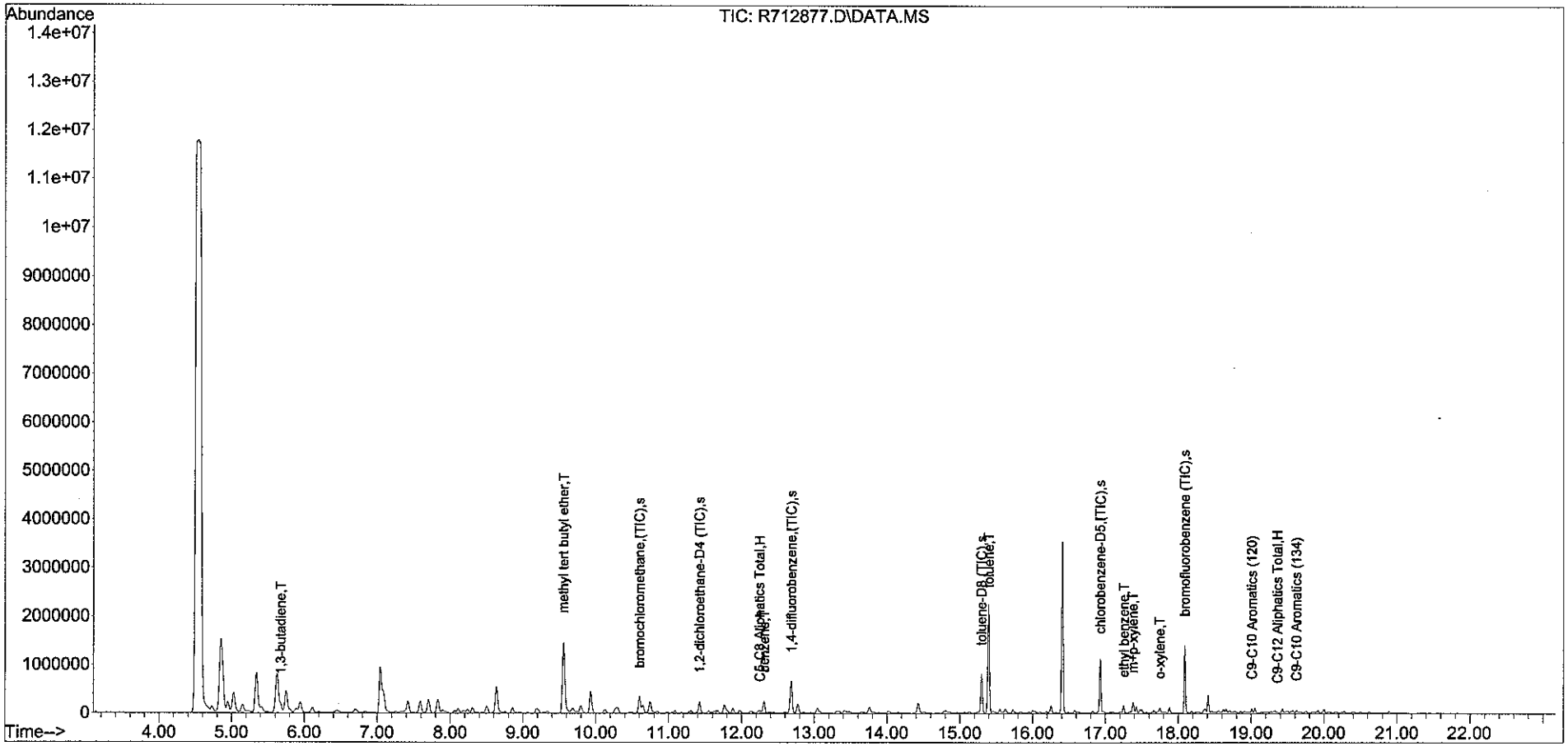
Quant Time: Sep 20 11:14:53 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



Sub List : APH_STD_M - .[redacted]Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712877.D
Acq On : 18 Sep 2010 9:42 pm
Operator : AIRLAB7:ar
Sample : l1014291-06,3,250,250
Misc : wg433112,ical5336
ALS Vial : 13 Sample Multiplier: 1

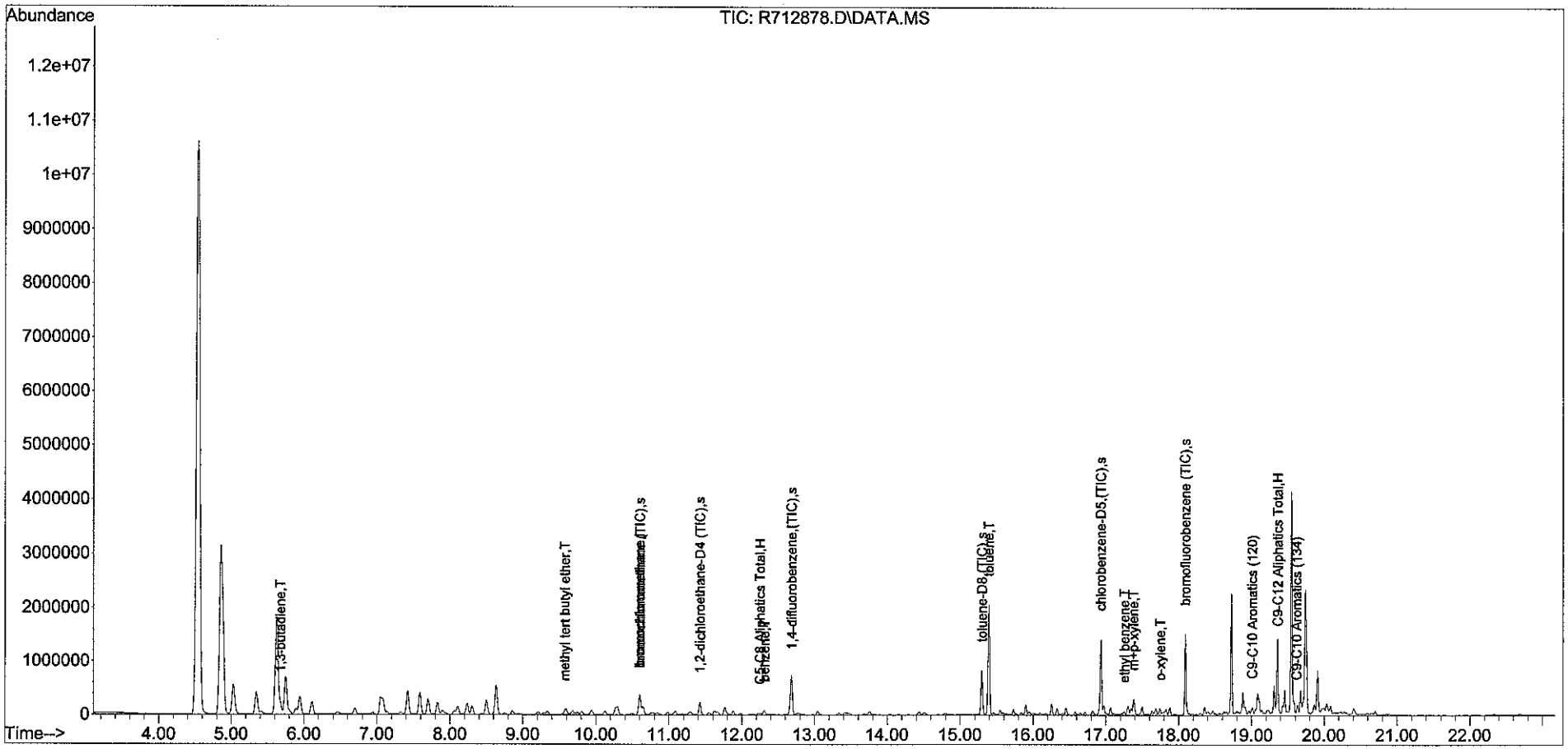
Quant Time: Sep 20 11:15:59 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712878.D
Acq On : 18 Sep 2010 10:16 pm
Operator : AIRLAB7:ar
Sample : l1014291-07d,3,50,250
Misc : wg433112,ical5336
ALS Vial : 14 Sample Multiplier: 1

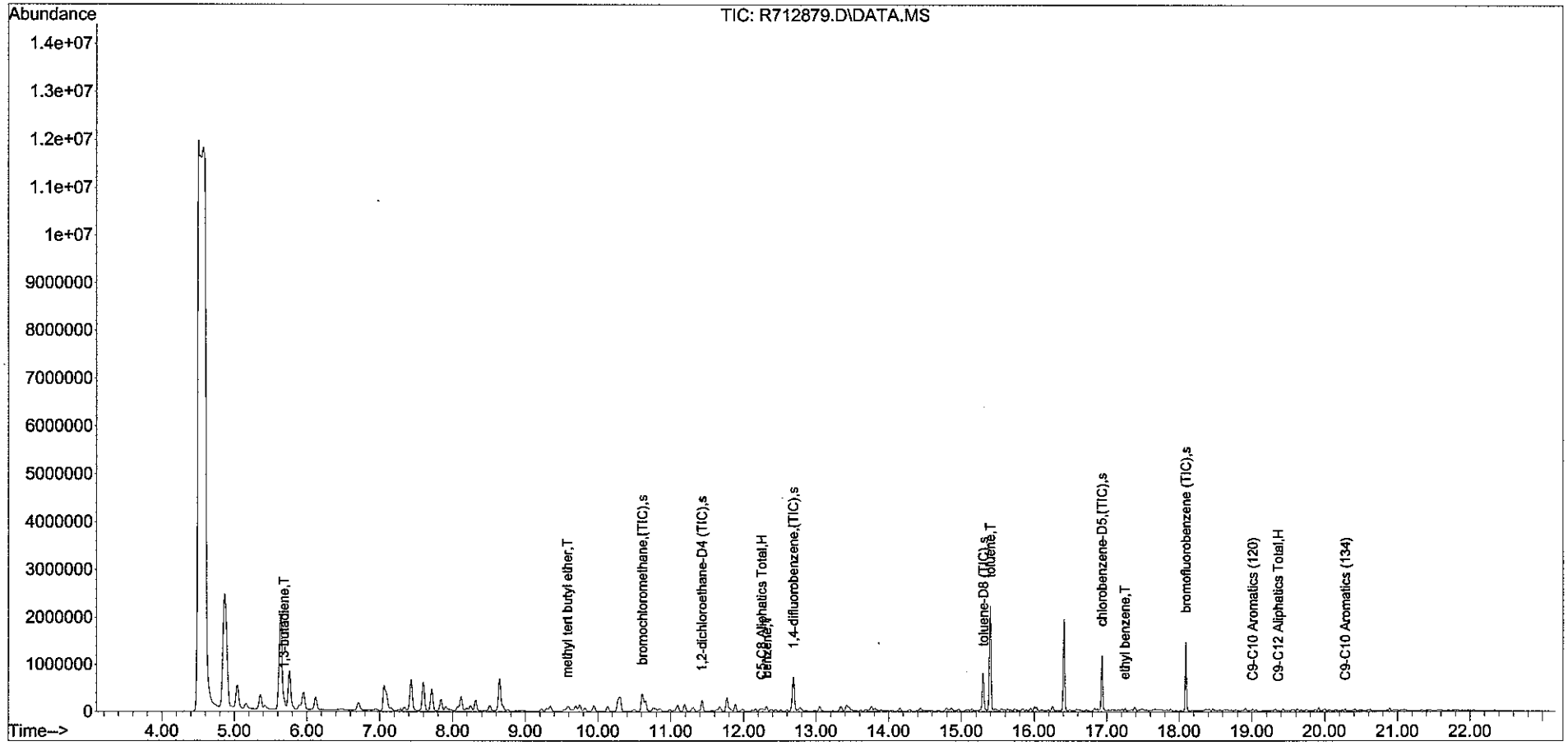
Quant Time: Sep 20 11:17:05 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\Airlab7\2010\100918A\
Data File : R712879.D
Acq On : 18 Sep 2010 10:52 pm
Operator : AIRLAB7:ar
Sample : 11014291-08,3,250,250
Misc : wg433112,ical5336
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 20 11:18:26 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\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\100918A\
Data File : R712880.D
Acq On : 18 Sep 2010 11:28 pm
Operator : AIRLAB7:ar
Sample : l1014291-09,3,250,250
Misc : wg433112,ical5336
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 20 11:19:49 2010
Quant Method : O:\Forensics\Data\Airlab7\2010\100918A\APH100907.M
Quant Title : APH Analysis
QLast Update : Tue Sep 07 16:21:34 2010
Response via : Initial Calibration