Petroleum Vapor Intrusion (PVI) Investigation
Reuben's Market
84 Elm Street (Route 16)
Milo, Maine

December 21, 2010

Prepared for:

Maine Department of Environmental Protection

Prepared by:

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TABLE OF CONTENTS

Page

LIST OF FIGURES

LIST OF APPENDICES

SECTION 1. INTRODUCTION AND OBJECTIVES

This report documents the methods and results of a Petroleum Vapor Intrusion (PVI) investigation at Reuben's Market, 84 Elm Street (Route 16), Milo, Maine (**Figure 1, Site Location Map, Appendix 1**). The work was done at the request of the Maine Department of Environmental Protection (MEDEP), according to a work plan dated September 9, 2010 addressed to Mr. Paul Blood, MEDEP. The field work was completed in September 2010.

Prior assessments at the site, between 1997 and 2009 identified soil and groundwater with petroleum hydrocarbon impacts. The objectives of this investigation were as follows:

- Assess soil gas for air petroleum hydrocarbon (APH) concentrations in areas of known elevated concentrations in soil and groundwater (source areas),
- Evaluate soil gas concentration gradients away from known source areas,
- Assess soil gas APH concentrations near building slab foundations and at water service line entry points into buildings (preferential pathways and receptors),
- Assess relationships between petroleum compounds in soil, groundwater and soil gases via co-located samples and same day groundwater and soil gas samples,
- Further delineate petroleum impacts at the northeastern and southeastern limits of known impacts.

SECTION 2. SITE BACKGROUND

Reuben's Market is a convenience store and sandwich shop located on the southwest side of Elm Street. The property is developed with two buildings (Reuben's Market and a storage building), a fuel dispenser island and an underground storage tank (UST). A 1997 UST Site Assessment Report (filed with MEDEP Spill # 708-1997) documents the replacement of USTs at the site, and a history of gasoline storage in USTs since at least 1974. The area in front of the store is paved. The area surrounding the dispensers is packed gravel.

The "Hatch property" is across Elm Street from Reuben's Market, and was also investigated as part of this PVI investigation. The property is developed with two small buildings that are used for storage. A building that connected the two existing buildings was demolished at some time in the past.

The site features are shown on **Figure 2, Site Map, Appendix 1**.

Prior Studies

A summary report which provides background information about the Site, a description of prior investigations completed, and a compilation of data, was previously prepared by MAI and submitted to MEDEP. The letter report was addressed to Paul Blood, MEDEP, dated August 3, 2010. The following summarizes prior investigation activities at the site since 1997:

- Replacement of four USTs (three gasoline and one diesel) in the northern corner of the property at Reuben's Market in 1997 led to the discovery of a gasoline release. Soil was remediated by excavation and removal from the site. Reports document excavation and removal of 577 tons of impacted marine clay soil to depths of 12 to 13 feet below ground surface.
- Maine Department of Transportation (MEDOT) undertook road work along Elm Street in the summer of 2007, and encountered petroleum-impacted soil under the road.
- A Geoprobe investigation was undertaken by MAI at the request of MEDEP in September and October 2007 to delineate the petroleum impacts. Soil borings B-1 through B-25 were completed. The borings covered the Reuben's Market property, Elm Street, and the area in front of the buildings on Hatch's property. Monitoring wells MW-1 through MW-5 were installed on the Reuben's Market property. Soils were screened for volatile organic compounds (VOCs) with a photoionization detector (PID). Groundwater was monitored in October 2007 (MAI), August 2008 (MEDEP) and November 2008 (MEDEP). Groundwater samples were analyzed for gasoline range organics (GRO), oxygenates and benzene, toluene, ethylbenzene and xylenes (OBTEX).
- In June 2009 seven additional soil borings were completed to further delineate the horizontal extent of petroleum impacts (B-26 through B-32). Nine monitoring wells were installed (MW-6 through MW-12). Three soil samples were collected and analyzed for VPH.
- In June 2009 an electro-conductivity survey was completed to profile the vertical and horizontal extent of a silt and clay unit that separates upper and lower sand units.
- In September 2009 groundwater was monitored in all wells. Groundwater samples were submitted for VPH analysis (Massachusetts Department of Environmental Protection, (MADEP) Method VPH 04 1.1).
- In April 2009 groundwater was monitored in all wells. Samples were analyzed for VPH.

Site Hydrogeology

The investigation activities described above resulted in identification of an upper sand unit approximately 4 to 5 feet thick in the vicinity of Hatch's building and Elm Street, thickening to the southwest to more than 15 feet behind the Reuben's Market building, and more than 25 feet at MW-1 (based on soil logs and electro-conductivity survey results). The upper sand unit is underlain by a silt and clay unit that ranges from approximately 6 to 12 feet thick. A plastic clay unit with a few sand lenses underlies the silt and clay unit. The plastic clay unit ranges from 15 to 25 feet in thickness. The deeper borings at the site penetrated into a deeper sand unit beneath the clay, which is confined by the overlying fine grained units.

Based on gauging data collected on April 29, 2010, in the upper sand unit groundwater was encountered at depths of 4.85 to 11.91 feet below ground surface (corresponding to relative elevations of 91.47 to 83.10 feet) with a gradient to the southwest, towards the Sebec River. For the lower sand unit, the potentiometric surface was measured between 13.35 and 16.91 feet below ground surface (corresponding to relative elevations of 82.24 to 81.60) with a gentler gradient to the southwest than in the upper aquifer.

According to prior investigations described above, the petroleum impacts are confined to the upper sand unit and the top few feet of the silt and clay unit. No impacts to the deeper sand aquifer were identified.

Areas of Concern (AOCs)

Field VOC data from prior investigations were used to delineate an area of petroleum impacts in soil extending from the Hatch property, across Elm Street, to the southwest side of the Reuben's Market building. The delineated area, shown on Figure 2, is based on VOC concentrations exceeding 500 parts per million by volume (ppmv) with a PID. The impacts were generally limited to depths of 4 to 12 feet below ground surface.

Two AOCs, corresponding to petroleum impacted areas on the Reuben's Market property and Hatch's property are identified in **Figure 2, Site Map, Appendix 1**. The two AOCs are linked by soil borings in Elm Street that also show petroleum impacts. The two AOCs are not intended to indicate separate petroleum sources (although they may), but to focus the investigation on potential vapor impacts to the respective buildings.

AOC-1 Petroleum Impacted Area of Reuben's Market Property. This AOC encompasses the area of impacted soil and groundwater on the Reuben's Market property. There is no documented source for the petroleum impacts. They do not appear to be related to the USTs and dispenser island, which are located to the northeast of the store building. Soil borings in between the UST/dispenser area and AOC-1 did not show petroleum impacts in the soil logs or VOC field screening data. The impacts in AOC-1 were not thoroughly delineated to the southwest in previous investigations, where no sample points were available between B-31 and MW-1, a distance of 140 feet.

AOC – 2 Petroleum Impacted Area of Hatch's Property. AOC-2 encompasses the area of impacted soil and groundwater on the Hatch's property, on the northeast side of Elm Street, as shown on Figure 2. There is no documented source for these impacts at the Hatch property, such as former USTs or releases. The impacts were not thoroughly delineated to the north in prior investigations.

Underground Utilities as Preferential Pathways

The Site and surrounding area are served by public water provided by the Milo Water District, and private septic systems. Figure 2 shows the location of the public water line along Elm Street, and the service lines to Reuben's Market and to one of the Hatch buildings. The water line trenches may provide preferential pathways for vapor migration to the buildings.

Both AOCs have buildings with slab-on-grade construction.

The septic system for the Reuben's building is located behind the building, down gradient of the high source area concentrations.

On April 29, 2010, when a full round of well gauging was completed at the site, the depth to groundwater ranged from 4.85 to 11.91 ft below ground surface, with shallower groundwater to the northeast, in AOC-2, at the MW-8 pair. Assuming water lines are buried approximately 5 feet, the utility trenches may be within the range of variation of the water table in AOC-2, and in the northern portions of AOC-1, near Elm Street. This may result in increased risk of vapors entering the trenches from groundwater.

SECTION 3. SCOPE OF WORK

The scope of work for the current investigation was outlined in a study plan dated September 9, 2010 and submitted to MEDEP (*Proposed VI Study Plan Reuben's Market, Milo*). The completed scope of work included the following:

- Completion of five (5) direct-push borings. Soils were logged and field screened using a PID. Borings were designated B33, B35, B36, B37, and B38. Boring B-34, planned for the inside of the Hatch building, was not completed due to lack of access.
- Installation of two (2) monitoring wells (MW13, MW14).
- Installation of eight soil vapor implants as follows:
    - five (5) soil vapor implants were installed using a Geoprobe drill rig (SG2, SG3, SG5, SG6, SG8)
    - two (2) soil vapor implants were installed into utility conduit backfill using hand installation methods (SG1, SG4)
    - one (1) sub-floor soil vapor implant was installed using hand installation methods (SG7)
- Collection and laboratory analysis of one (1) soil sample for VPH (MADEP Method VPH 04 1.1), B36 (7-8').
- Collection and laboratory analysis of five (5) groundwater samples for VPH (MADEP Method VPH 04 1.1): MW4, MW8S, MW11S, MW13, MW14. Three of the groundwater samples were from existing wells installed for prior investigations.
- Collection and laboratory analysis of eight (8) soil vapor samples (SG1-SG8) for:
    - chlorinated volatile organic compounds by EPA method TO-15,
    - volatile petroleum hydrocarbons in air (APH) by Massachusetts DEP's Air-Phase Petroleum Hydrocarbons (APH) method, Rev1 December 2009, and
    - fixed gases oxygen, carbon dioxide and methane (O_2, CO_2 and CH_4)

Where VPH data is available, laboratory analyses of soil samples from prior investigations are included in the data analysis for this investigation. This includes samples from B-27, B-28, and B-31, which were collected and analyzed in June 2009.

SECTION 4. METHODOLOGY

The general methodological approach and specific sampling and testing methodologies are presented in Tables 1 and 2 in Appendix 1.

4.1 General Methodology

The general methodology of this investigation was to test soil, groundwater and soil gas for concentrations of VPH compounds in the following categories of locations:

- Source areas locations, previously documented areas with high concentrations of petroleum hydrocarbons,
- Migration areas, offset from the documented source areas, for evaluation of contaminant migration,
- Preferential migration pathways such as underground utility trenches, and
- Potential receptors, such as buildings.

Soil, groundwater and soil gas samples from the same or a nearby location were collected for comparison of impacts in different media.

Table 1, General Methodology, Appendix 1, describes the samples collected in each category, and the rationale for each sample.

4.2 Sample Collection and Testing Methodologies

The sample collection and testing methodologies are described in **Table 2, Sample Collection and Testing Methodologies, Appendix 2**.

Soil boring logs are in **Appendix 2, Boring Logs and Monitoring Well Construction Details**.

Soil and groundwater samples were submitted to Analytics Environmental Laboratory LLC, via Maine Environmental Laboratory in Yarmouth, Maine, for analysis of VPH. A trip blank accompanied all groundwater samples.

Soil gas samples were submitted to Alpha Analytical, Mansfield, Massachusetts for analysis of chlorinated organic compounds and petroleum hydrocarbons. Field data sheets for soil gas sampling are in **Appendix 3, Soil Gas Field Data Sheets**.

Soil analytical results were compared to Table 5, Tier 2 Risk-Based Soil Remediation Guidelines for Petroleum Target Compounds and Hydrocarbon Fractions, in *Remediation Guidelines for Petroleum Contaminated Sites in Maine*, effective December 1, 2009 (referred to hereafter as OCW Guidelines).

Groundwater analytical results were compared to the following standards and guidelines:

- Maine Centers for Disease Control, Maximum Exposure Guidelines for drinking water, December 5, 2008, (MEGs),

- Massachusetts Contingency Plan Method 1 Groundwater Standards, Table 1, GW-2 Standards (310 CMR 40.0974(2), which apply to groundwater that is considered a potential source of indoor air contamination, and
- Draft (11/23/2010) Table B11, Groundwater Vapor Intrusion Screening Levels for Chronic Residential and Commercial Scenarios (ug/l), provided by MEDEP, (Draft MEDEP Screening Levels).

Soil gas analytical results were compared to MEDEP's Soil Gas Target concentrations (SGT), which are calculated by applying a 50 times factor to the MEDEP Indoor Air Target (IAT) concentrations in Table B6, Indoor Air Targets for Chronic Commercial Scenario (ug/m3) – 1/14/2010 Interim Final for Multi-Contaminant Sites, in *MEDEP Vapor Intrusion Evaluation Guidance, January 13, 2010.*

Full laboratory reports are in **Appendix 4, Laboratory Reports**. Laboratory data is summarized in **Tables 3 through 6 in Appendix 1, Figures and Tables**.

SECTION 5. RESULTS

5.1 Quality Assurance

Samples were collected in a consistent manner according to standard practices outlined in the Table 2.

The investigation resulted in data that appears to reasonably represent the contaminant concentrations in the media sampled.

Fixed gases were monitored in the field for quality assurance for soil gas samples. Ambient air and pre-sample and post-sample O_2 and CO_2 were measured during sample collection. CH4 was also monitored in the soil gas implants prior to sampling (pre-sample). O2, CO2 and CH4 were analyzed on soil gas samples submitted to the laboratory. The field and laboratory fixed gas data are presented in **Table 3, Fixed Gas Data, Appendix 1**.

Fixed gas data for all samples shows ambient O2 and CO2 at expected concentrations (20.9 and 0.0% by volume, respectively), and pre-sample concentrations appropriately lower (O2) and higher (CO2) than ambient concentrations, with the following exception: At SG-7 (sub slab) the pre-sample concentrations were equal to the ambient concentrations for both O2 and CO2. This sub-slab sample, although well sealed at the implant, was likely influenced by ambient O2 and CO2 due to the large opening in the slab (description in Table 2, Appendix 1) and the shallow depth of the sample.

Post-sample O2 and CO2 concentrations generally were equal to pre-sample concentrations except in SG-3. In SG-3 the O2 concentration decreased and the CO2 concentration increased. These changes are the opposite of that expected for ambient influence. A possible interpretation is that the differences reflect soil gas drawn from a wider zone with higher rates of aerobic biodegradation, as purging progressed. In SG-2 (for O2) and SG-6 (for CO2) the changes were small (0.1%) and may not be significant.

Laboratory analyses of O2 concentrations were lower than post-sample concentrations by 0.8 to 3.9% by volume. These decreases translate to 4.8 to 20.7% of the post-sample concentrations, which are within or near the +/-20% acceptable surrogate recovery limits in matrix spike data for laboratories.

Laboratory analyses of CO2 showed both increases (4 samples) and decreases (4 samples) in CO2 concentrations compared to the post-sample field analyses. The decreases were between 0.11 and 0.68% by volume and the increases ranged from 0.11 to 1.1 % by volume. These translate to differences as high as 42.5% (absolute value) compared to post-sample concentrations. The percent differences in 3 of the samples exceeded the +/-20% acceptable surrogate recovery limits in matrix spike data for laboratories.

CH4 was detected in field analyses of soil gas samples only in SG-3, at 12% of the LEL (5%). CH4 was not detected by the laboratory in any soil gas sample. The field presence of CH4 in SG-3 suggests an anomaly in the field CH4 testing.

5.2 Soil Samples

Five soil borings were completed during this investigation using Geoprobe direct push technology with continuous sampling and field screening for VOCs. Soil boring logs with field VOC concentrations are in Appendix 1. One soil sample (B-36, 7-8') was submitted for laboratory analysis of VPH. A summary of the laboratory data is in Table 4. Historical VPH analytical data for soil samples from B-27, B-28, and B-31, which were completed in June 2009, are also included in **Table 4, Soil Analytical Results, Appendix 1**. **Figure 3, Soil Analytical Data, Appendix 1** summarizes the VPH concentrations and distributions on a site plan.

None of the concentrations exceeded the outdoor commercial worker (OCW) scenario guidelines (*Remediation Guidelines for Petroleum Contaminated Sites in Maine*).

The sum of VPH compounds and fractions are the same order of magnitude in three of the four samples (581 to 698 mg/kg). In B-27, a source area boring from a prior investigation, the summed VPH compounds and fractions were much lower, ~4.5 mg/kg. The field VOC concentrations in B-27 ranged from below detection limits (ND) to 4.7 ppmv, suggesting that although B-27 is within the delineated source area, petroleum concentrations in soil within the source area vary.

The distribution of VPH concentrations generally supports the prior delineation of petroleum impacts that was based on field VOC concentrations exceeding 500 ppmv.

Field screening for VOCs in soil samples from B-33 and B-39 (to the northeast) and B-37 (to the southwest) showed no VOCs were detected in any intervals in these borings. Based on this information, the area of impacted soil does not extend beyond the boundaries delineated in prior investigations.

MTBE was not detected in any of the soil sample analyses.

5.3 Groundwater

Five groundwater samples were collected during this investigation, and submitted for laboratory analysis of VPH compounds and fractions. The analytical results, along with three sets of regulatory guidelines are shown in **Table 5, Groundwater Analytical Results, Appendix 1**. The well locations and analytical data are also shown on **Figure 4, Groundwater Analytical Data, Appendix 1.** Three of the wells were on the Reuben's Market property (AOC-1) and two were in front of the Hatch building in AOC-2.

The analytical results in Table 5 show one or more VPH compounds or fractions exceeded one or more of the groundwater guidelines in each well. The highest level of impacts to groundwater is in MW-8S in AOC-1. Decreasing impacts are seen in the data for down gradient and up gradient wells.

MTBE was not present in any of the analyses.

MW-11S, MW-13 and MW-14 are located near receptors. Of these monitoring wells, only MW-14 exceeded a groundwater vapor intrusion guideline (Table 5). In MW-14, the C5-C8 aliphatics fraction (3750 ug/l) exceeded the Massachusetts GW2 standard of 3000 ug/l.

5.4 Soil Gas

Eight soil vapor samples were collected during this investigation and submitted for laboratory analysis of volatile petroleum hydrocarbons by MA DEP's APH method, and a list of chlorinated organic compounds by EPA Method TO-15. The soil gas analytical results are summarized in **Table 6, Soil Gas Analytical Data**, and on **Figure 5, Soil Gas Analytical Data, Appendix 1** showing the concentration data and sample locations. The results are compared to Soil Gas Target (SGT) concentrations in Table 6.

No chlorinated organic compounds were detected in the laboratory analyses.

APH compounds were detected in all soil gas samples. The highest APH concentrations were in the implants that were installed 2 ft above the water table (implant depth 7 to 8 feet below ground surface), in the silt and clay unit within the area of elevated soil and/or groundwater impacts (SG-3, SG-2, SG-5, SG-6). Samples from each of these implants had two or more APH compounds that exceeded the SGT guidelines. The highest APH concentrations at the site were in SG-3, a source area sample in AOC-2. All BTEX compounds, both aliphatic fractions, and the aromatic fraction exceeded the SGTs in SG-3.

APH concentrations were lower in the shallower implants emplaced in the artificial fill and/or sand unit above the silt and clay unit. These implants were emplaced to test potential preferential pathways and receptors (SG-1, SG-4 and SG-7). The lower concentrations in the shallow implants show there is a decline in concentration with vertical distance from the impacted silt and clay layer and the water table (which is within the impacted silt and clay layer). This suggests that impacted soil gas is held within the "tight" silt and clay unit, migrating out into the upper more permeable sand unit very slowly, and/or dispersing rapidly, resulting in significantly lower APH concentrations in samples collected from the shallower implants.

APH concentrations in implants in the fill and upper sandy unit, next to the building and utility receptors, do not exceed Maine SGTs (SG-1, SG-4 and SG-7).

SECTION 6. CONCLUSIONS

Soil

- Soil samples from B-36 (this investigation) and B-27, B-28 and B-31 (June 2009) do not exceed the Outdoor Commercial Worker remediation guidelines (*Remediation Guidelines for Petroleum Contaminated Sites in Maine, December 2009*), according to laboratory analytical data.
- Additional soil borings to the northeast and southwest confirm the horizontal extent of petroleum impacts at the site. Field VOCs by PID were below detection limits in the additional borings.
- Concentrations of VPH compounds and fractions were generally within an order of magnitude of each other in three of the four borings with VPH analyses.

Groundwater

- Groundwater laboratory analyses show regulatory guidelines for drinking water (Maine MEGs) and Draft Groundwater Vapor Intrusion Screening Levels (Commercial) were exceeded in each of the wells tested for one or more compounds. Three of the five wells tested exceeded Massachusetts GW-2 standards for vapor intrusion.
- The highest concentrations of volatile petroleum compounds in groundwater were in MW-8S, in front of the Hatch building. Concentrations decreased in the down gradient direction from MW-8S (MW-4, MW-14 and MW-11S) and up gradient (MW-13).
- In the wells located near receptors (MW-11S, MW-13 and MW-14) only MW-14 exceeded a groundwater vapor intrusion guideline (C5-C8 aliphatics, MA GW2 standards).

Soil Gas

- Chlorinated volatile organics were not detected in laboratory analyses of soil gas samples.
- APH concentrations were present in all samples. They exceeded the Soil Gas Target levels in soil gas samples from SG-2, SG-3, SG-5 and SG-6. No compounds exceeded the SGT levels in SG-1, SG-4, SG-7 and SG-8.
- The highest APH concentrations in soil gas were in the implants that were installed 2 ft above the water table (implant depth 7 to 8 feet below ground surface) and that were in locations of elevated soil and/or groundwater impacts. These deep implants were installed in the silt and clay unit below the upper sandy unit. The highest APH concentrations at the site were in SG-3, a source area sample 2 feet above the water table in AOC-2.
- APH concentrations were lower in the shallower implants emplaced in the artificial fill and/or sand unit to test potential preferential pathways and receptors (SG-1, SG-4 and SG-7). The data suggests that impacted soil gas is held within the "tight" silt and clay unit, migrating out into the upper more permeable sand unit very slowly, resulting in significantly lower APH concentrations in samples collected from the shallower implants.
- APH concentrations in implants in the fill and upper sandy unit, next to the building and utility receptors, do not exceed Maine SGTs (SG-1, SG-4 and SG-7).

APPENDIX 1

Tables and Figures

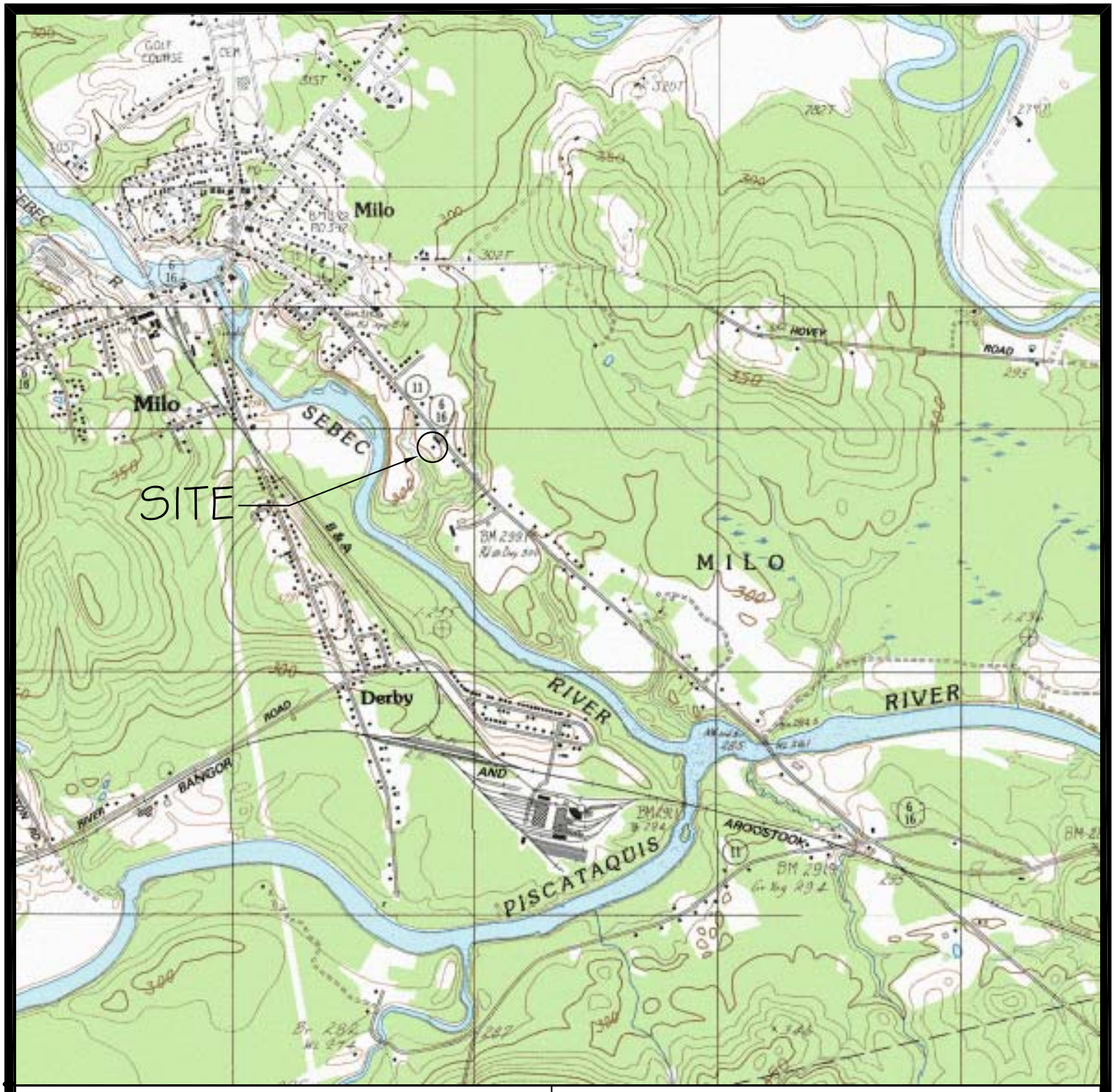


FIGURE 1

Site Location Map

Rueben's Market
Route 16
Milo, Maine

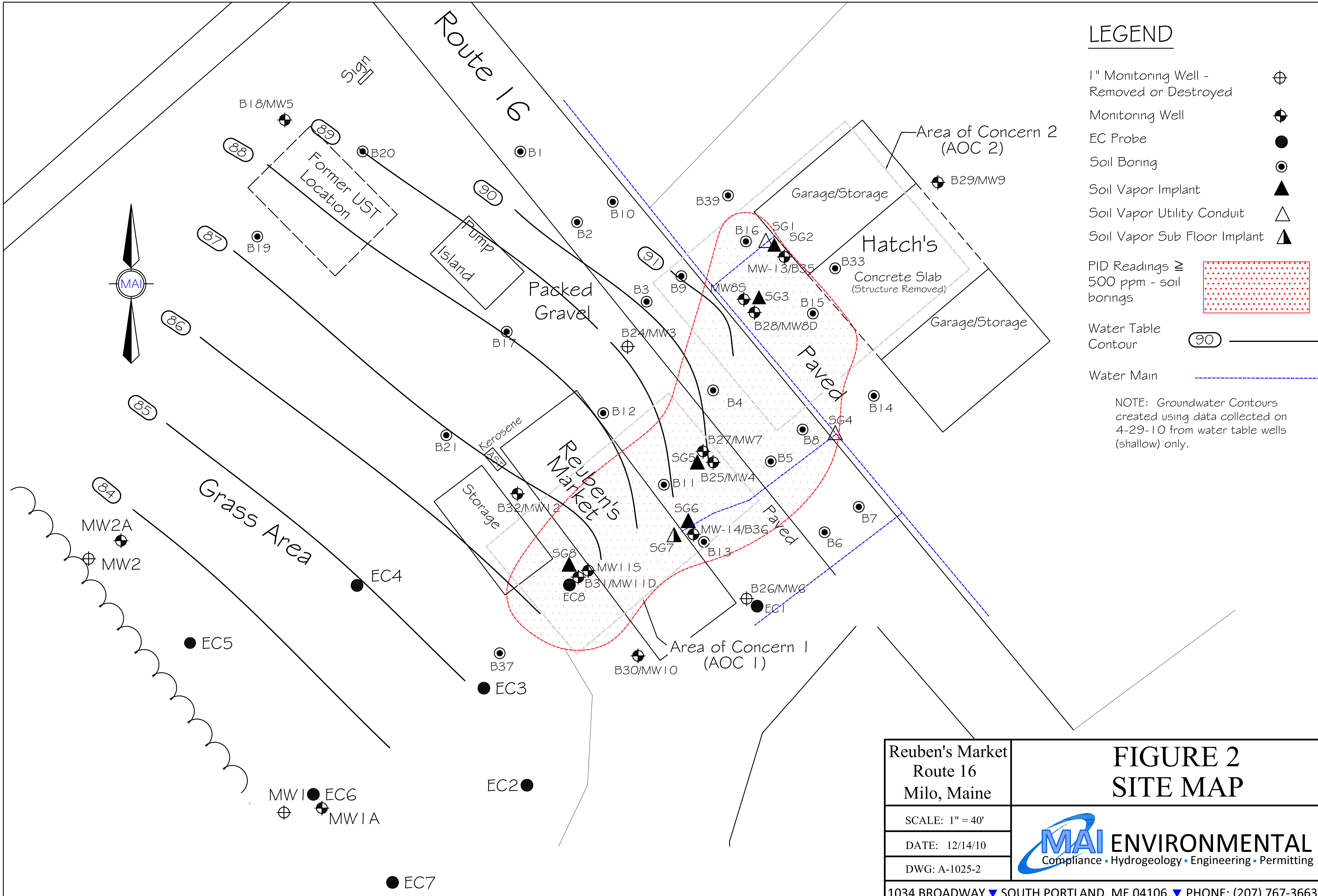
SOURCE: U.S.G.S. 7.5 Minute Topographic Quadrangle of Milo South, Maine.

SCALE: 1" = 2000'	DATE: 12/4/07	DWG: A-282-7014

MAI ENVIRONMENTAL

Compliance ▾ Hydrogeology ▾ Engineering ▾ Permitting

1034 BROADWAY ▾ SOUTH PORTLAND, ME 04106 ▾ PHONE: (207) 767-3663



Route 16
Sign
Former UST Location
Pump Island
Packed Gravel
Kerosene AST
Reuben's Market
Storage
Grass Area
Hatch's
Concrete Slab
(Structure Removed)
Garage/Storage
Garage/Storage
Paved
Paved
Area of Concern 2
(AOC 2)
Area of Concern 1
(AOC 1)
MAI
84
85
86
87
88
89
90
91
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17
B18/MW5
B19
B20
B21
B24/MW3
B25/MW4
B26/MW6
B27/MW7
B28/MW8D
B29/MW9
B30/MW10
B31/MW11D
B32/MW12
B33
B37
B39
MW-13/B35
MW-14/B36
MW8S
MW11S
MW1
MW1A
MW2
MW2A
EC1
EC2
EC3
EC4
EC5
EC6
EC7
EC8
SG1
SG2
SG3
SG4
SG5
SG6
SG7
SG8
LEGEND
1" Monitoring Well - Removed or Destroyed
Monitoring Well
EC Probe
Soil Boring
Soil Vapor Implant
Soil Vapor Utility Conduit
Soil Vapor Sub Floor Implant
PID Readings ≥ 500 ppm - soil borings
Water Table Contour
Water Main
NOTE: Groundwater Contours created using data collected on 4-29-10 from water table wells (shallow) only.

Reuben's Market Route 16 Milo, Maine	FIGURE 2 SITE MAP
SCALE: 1" = 40'	MAI ENVIRONMENTAL Compliance • Hydrogeology • Engineering • Permitting
DATE: 12/14/10	
DWG: A-1025-2	

1034 BROADWAY ▼ SOUTH PORTLAND, ME 04106 ▼ PHONE: (207) 767-3663

B28, 5-10'	
Sample Date	6/25/2009
Units	mg/kg
VPH-sum	637.69
BTEX	19.07
Napthalene	8.62
C5-C8 Al	51
C9-C12 Al	351
C9-C10 Ar	208

B27, 10-11'	
Sample Date	6/25/2009
Units	mg/kg
VPH-sum	4.459
BTEX	0.876 J
Napthalene	0.253
C5-C8 Al	ND
C9-C12 Al	3.33
C9-C10 Ar	ND

B31, 11-12'	
Sample Date	6/25/2009
Units	mg/kg
VPH-sum	698.88
BTEX	ND
Napthalene	2.88
C5-C8 Al	ND
C9-C12 Al	588
C9-C10 Ar	108

B36 (7-8')	
Sample Date	9/29/2010
Units	mg/kg
VPH-sum	581.55
BTEX	5.55 J
Napthalene	ND
C5-C8 Al	204
C9-C12 Al	266
C9-C10 Ar	106

LEGEND

- 1" Monitoring Well - Removed or Destroyed
- Monitoring Well
- EC Probe
- Soil Boring
- Soil Vapor Implant
- Soil Vapor Utility Conduit
- Soil Vapor Sub Floor Implant
- PID Readings ≧ 500 ppm - soil borings
- Water Table Contour (90)
- Water Main

NOTE: Groundwater Contours created using data collected on 4-29-10 from water table wells (shallow) only.

DATA TABLE NOTES
ND = Not Detected
J = Concentration detected Below Calibration Range - Estimated Value

Reuben's Market Route 16 Milo, Maine	FIGURE 3 SOIL ANALYTICAL DATA
SCALE: 1" = 40'	MAI ENVIRONMENTAL Compliance • Hydrogeology • Engineering • Permitting
DATE: 12/14/10	
DWG: A-1025-2	

1034 BROADWAY ▼ SOUTH PORTLAND, ME 04106 ▼ PHONE: (207) 767-3663

MW-8S	
Sample Date	9/29/2010
Units	ug/l
VPH-sum	31863
BTEX	6295
Napthalene	288
C5-C8 Aliph	14900
C9-C12 Aliph	5820
C9-C10 Arom	4560

MW-13	
Sample Date	9/29/2010
Units	ug/L
VPH-sum	418
BTEX	87
Napthalene	ND
C5-C8 Aliph	251
C9-C12 Aliph	41 J
C9-C10 Arom	39

MW-11S	
Sample Date	9/29/2010
Units	ug/L
VPH-sum	2753
BTEX	78 J
Napthalene	37
C5-C8 Aliph	228 J
C9-C12 Aliph	1220
C9-C10 Arom	1190

MW-4	
Sample Date	9/29/2010
Units	ug/L
VPH-sum	14309
BTEX	3045
Napthalene	204
C5-C8 Aliph	8200
C9-C12 Aliph	1560
C9-C10 Arom	1300

MW-14	
Sample Date	9/30/2010
Units	ug/L
VPH-sum	5903
BTEX	1370 J
Napthalene	ND
C5-C8 Aliph	3750
C9-C12 Aliph	417 J
C9-C10 Arom	366

LEGEND

- 1" Monitoring Well - Removed or Destroyed
- Monitoring Well
- EC Probe
- Soil Boring
- Soil Vapor Implant
- Soil Vapor Utility Conduit
- Soil Vapor Sub Floor Implant
- PID Readings ≧ 500 ppm - soil borings
- Water Table Contour (90)
- Water Main

NOTE: Groundwater Contours created using data collected on 4-29-10 from water table wells (shallow) only.

DATA TABLE NOTES
ND = Not Detected
J = Concentration detected Below Calibration Range - Estimated Value

Route 16
Sign
Former UST Location
Pump Island
Packed Gravel
Grass Area
Garage/Storage
Hatch's
Concrete Slab
(Structure Removed)
Garage/Storage
Paved
Paved
Kerosene
AST
Storage
Reuben's Market
Area of Concern 2
(AOC 2)
Area of Concern 1
(AOC 1)
MAI
B18/MW5
B20
B19
B1
B10
B2
B39
B16
SG1
SG2
MW-13/B35
B33
B29/MW9
B3
B9
MW8S
SG3
B15
B28/MW8D
B24/MW3
B17
B4
B14
SG4
B8
B12
B21
B27/MW7
SG5
B5
B25/MW4
B11
B32/MW12
SG6
MW-14/B36
B7
SG7
B13
B6
SG8
MW11S
B31/MW11D
EC8
B26/MW6
EC1
B37
B30/MW10
MW2A
MW2
EC4
EC5
EC3
EC2
MW1
EC6
MW1A
EC7

Reuben's Market Route 16 Milo, Maine	FIGURE 4 GROUNDWATER ANALYTICAL DATA
SCALE: 1" = 40'	
DATE: 12/14/10	
DWG: A-1025-2	

MAI ENVIRONMENTAL
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1034 BROADWAY ▼ SOUTH PORTLAND, ME 04106 ▼ PHONE: (207) 767-3663

FIGURE 5
SOIL GAS ANALYTICAL DATA

Reuben's Market
Route 16
Milo, Maine

SCALE: 1" = 40'

DATE: 12/14/10

DWG: A-1025-2

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LEGEND

- 1" Monitoring Well - Removed or Destroyed
- Monitoring Well
- EC Probe
- Soil Boring
- Soil Vapor Implant
- Soil Vapor Utility Conduit
- Soil Vapor Sub Floor Implant
- PID Readings ≧ 500 ppm - soil borings
- Water Table Contour (90)
- Water Main

NOTE: Groundwater Contours created using data collected on 4-29-10 from water table wells (shallow) only.

DATA TABLE NOTES
ND = Not Detected

SG-1 (2')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	280
BTEX	ND
Napthalene	ND
C5-C8 Aliph	ND
C9-C12 Aliph	280
C9-C10 Arom	ND

SG-2 (7.5')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	12314
BTEX	2414
Napthalene	100
C5-C8 Aliph	3000
C9-C12 Aliph	4400
C9-C10 Arom	2400

SG-3 (7')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	8893000
BTEX	1063000
Napthalene	ND
C5-C8 Aliph	7400000
C9-C12 Aliph	270000
C9-C10 Arom	160000

SG-4 (4')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	279.2
BTEX	11.2
Napthalene	ND
C5-C8 Aliph	120
C9-C12 Aliph	130
C9-C10 Arom	18

SG-5 (8')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	38714
BTEX	1649
Napthalene	65
C5-C8 Aliph	19000
C9-C12 Aliph	6000
C9-C10 Arom	12000

SG-6 (8')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	47841
BTEX	641
Napthalene	ND
C5-C8 Aliph	39000
C9-C12 Aliph	6600
C9-C10 Arom	1600

SG-7 (1.5' Subslab)	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	64
BTEX	ND
Napthalene	ND
C5-C8 Aliph	24
C9-C12 Aliph	40
C9-C10 Arom	ND

SG-8 (8')	
Sample Date	9/30/2010
Units	ug/m3
APH-sum	2146
BTEX	11
Napthalene	ND
C5-C8 Aliph	1800
C9-C12 Aliph	280
C9-C10 Arom	55

Route 16
Sign
Former UST Location
Pump Island
Packed Gravel
Grass Area
Garage/Storage
Hatch's
Concrete Slab
(Structure Removed)
Area of Concern 2 (AOC 2)
Area of Concern 1 (AOC 1)
Paved
Storage
Kerosene AST
MAI
B18/MW5
B20
B19
B1
B10
B2
B39
B16
SG1
SG2
MW-13/B35
B33
B29/MW9
B3
B9
MW8S
SG3
B15
B28/MW8D
B24/MW3
B17
B4
B14
B12
SG4
B8
B27/MW7
SG5
B5
B11
B25/MW4
B21
B32/MW12
SG6
MW-14/B36
B7
B6
SG7
B13
SG8
MW11S
B31/MW11D
EC8
B26/MW6
EC1
B30/MW10
B37
EC3
EC2
EC4
EC5
MW2A
MW2
MW1
EC6
MW1A
EC7

Table 1
General Methodology

Category	Sample ID/Media	Rationale
Source Area		
	SG-5/Soil Gas	Assess contaminant concentrations in soil gas above water table in known source area (B-25 /MW-4) in front of Reuben's Market.
	SG-3/Soil Gas	Assess contaminant concentrations in soil gas iabove water table in known source area (B-28/MW-8S) in front of Hatch's building.
	MW-4/Groundwater	Existing MW, sampled to assess contaminant concentrations in source area groundwater, near soil gas sample SG-5 and upgradient of Reuben's Market building.
	MW-8S/Groundwater	Existing MW, sampled to assess contaminant concentrations in source area groundwater, near soil gas sample SG-3 and downgradient of Hatch's building.
Migration		
	SG-2/Soil Gas	Assess contaminant concentrations in soil gas upgradient of known source area (B-28/MW-8S) and source area sample SG-3. In front of the Hatch building.
	SG-6/Soil Gas	Assess contaminant migration from source area sample SG-5.
	SG-8/Soil Gas	Assess contaminant concentrations in soil gas on downgradient side of Reuben's Market building.
	MW-13/Groundwater	New MW, to provide groundwater contaminant concentration data upgradient of known source area, next to Hatch building (near slab), and near soil gas samples SG-1 and SG-2 and soil sample B-35.
	MW-14/Groundwater	New MW, to assess contaminant concentrations in groundwater near Reuben's Market building, west of known source area (B-25/MW-4) and near soil gas samples SG-6 and SG-7 and soil sample B-36
	MW-11S/Groundwater	Existing MW, sampled to assess contaminant concentrations in groundwater on downgradient side of Reuben's Market building, near soil gas sample SG-8.
	B-33/Soil	Further delineate northeastern extent of impacted soil.
	B-35/Soil	Assess contaminant concentrations in soil upgradient of known source area (B-28/MW-8S), and provide soil data for comparison to nearby soil gas (SG-1 and SG-2) and groundwater (MW-13) samples.
	B-36/Soil	Assess contaminant concentrations in soil adjacent to Hatch building, and downgradient of known source area (B-25/MW-4)

Table 1
General Methodology, cont.

Category	Sample ID/Media	Rationale
Source Area, cont.		
	B-39/Soil	Further delineate northeastern extent of impacted soil, east of Hatch building.
	B-37/Soil	Further delineate southwestern extent of impacted soil, southwest of Reuben's Market building.
Preferential Pathways		
	SG-1/Soil Gas 2 feet	Assess soil gas concentration in backfill of water service line entry point. In front of the Hatch building (AOC-2).
	SG-4/Soil Gas 4 feet	Assess soil gas concentration in water main trench along Elm Street, where main crosses source area and connects to water service line in center of source area.
	SG-7/Soil Gas 1.5 feet	Assess sub-slab contaminant concentrations at water line entry point, Reuben's Market building.
Receptors		
	SG-1/Soil Gas	Assess soil gas concentration adjacent to slab of Hatch's building and in water service entry point, in front of Hatch building (AOC-2).
	SG-2/Soil Gas	Assess soil gas concentration adjacent to slab of Hatch's building. In front of the Hatch building (AOC-2)..
	SG-6/Soil Gas	Assess contaminant concentrations adjacent to slab of Reuben's Market building.
	SG-7/Soil Gas 1.5 feet	Assess sub-slab contaminant concentrations at water line entry point, Reuben's Market building.
	SG-8/Soil Gas	Assess near-slab contaminant concentrations in soil gas on downgradient side of Reuben's Market building.

Notes: Soil gas sample depths are ~2 feet above water table except other depths are noted.
Groundwater sample intakes were 1 foot below water table surface.

Table 2
Sample Collection and Testing Methodologies

Media	Sample Points (Depth ft)	Collection Methods	Field Testing	Laboratory Testing
Soil	B33 (15') B35 (15') B36 (15') B37 (20') B38 (15')	Soil borings were completed using MAI's Geoprobe 6620 DT direct-push drilling rig. Samples were collected in a 5' long disposable acetate liner at continuous depth intervals.	Thermo 580 B photoionization detector (PID). Calibrated using a 100 ppm isobutylene standard with a response factor of 1.0. MEDEP Poly-bag Headspace technique, MEDEP SOP DR #011	MADEP Hydrocarbon Fractions Analytical Methods. VPH - Volatile Petroleum Hydrocarbons.
Groundwater	MW8S (5-15' MW11S (3-13') MW13 (6-16') MW14 (7-17')	Monitoring wells were installed using MAI's Geoprobe 6620 DT direct-push drilling rig. Wells were made of 10' long, 1" dia. PVC well screen (10-slot) and solid riser pipe. The screens were placed across the observed water table such that 2' of screen extended above the water table and 8' below. The well screen sections were back filled with filter sand to 6" above top of implant and sealed with hydrated bentonite clay. Groundwater samples were collected using "Low flow" sampling methods.	DO, turbidity, water level, field screen GW with PID.	MADEP Hydrocarbon Fractions Analytical Methods. VPH - Volatile Petroleum Hydrocarbons.
Soil Gas	SG2 (7.5') SG3 (7') SG5 (8') SG6 (8') SG8 (8')	Soil gas implants (6" long) were installed to a depth of 2' above the observed water table using MAI's Geoprobe 6620 DT direct-push drilling rig. The implants were installed through the drill casing, backfilled with filter sand and sealed with bentonite clay. Soil gas was collected using a peristaltic pump at a low flow rate (100 ml/min) to minimize the potential for short circuiting.	RKI Eagle, or MSA Orion Plus IR detector, Multi-Gas Meter. Rotameter - model P single flow tube meter Dwyer instruments magnehelic gauge (Model 2000-00 has a range of 0-0.50" w.c., minor divisions .01, calibrated for vertical scale position)	MADEP - Air Phase Petroleum Hydrocarbons MA-APH (Air Phase Petroleum Hydrocarbons) with • limited TO-15 (TCA/PCE and breakdown products) • EDB (ethylene dibromide) • fixed gases (Methane, O2 and CO2)

Table 2 (Cont'd)
Sample Collection and Testing Methodologies

Media	Sample Points (Depth ft)	Collection Methods	Field Testing	Laboratory Testing
Soil Gas Utility Conduits	SG1 (2') SG4 (4')	Utility trench soil gas implants were installed using a hand-operated barrel auger and shop vac to advance the open hole. Once advanced to the target depth, the soil gas implant was installed into the utility conduit, back filled with filter sand, and sealed with bentonite. Soil gas was collected using a peristaltic pump at a low flow rate (100 ml/min) to minimize the potential for short circuiting.	MA-APH (Air Phase Petroleum Hydrocarbons) with • limited TO-15 (TCA/PCE and breakdown products) • EDB (ethylene dibromide) • fixed gases (Methane, O2 and CO2)	MADEP - Air Phase Petroleum Hydrocarbons MA-APH (Air Phase Petroleum Hydrocarbons) with • limited TO-15 (TCA/PCE and breakdown products) • EDB (ethylene dibromide) • fixed gases (Methane, O2 and CO2)
Soil Gas Sub Slab	SG7 (1.5 feet)	The sub slab soil gas implant was in installed in an existing 2 by 2-foot opening in the concrete floor of Reuben's Market. The location was at the owner's request so new cuts would not be made in the floor. MAI installed the soil gas implant using a hand barrel auger. The implant was back filled with filter sand and sealed at the surface with bentonite. The entire 2 by 2-foot opening was not sealed. Soil gas was collected using a peristaltic pump at a low flow rate (100 ml/min) to minimize the potential for short circuiting.	MA-APH (Air Phase Petroleum Hydrocarbons) with • limited TO-15 (TCA/PCE and breakdown products) • EDB (ethylene dibromide) • fixed gases (Methane, O2 and CO2)	MADEP - Air Phase Petroleum Hydrocarbons MA-APH (Air Phase Petroleum Hydrocarbons) with • limited TO-15 (TCA/PCE and breakdown products) • EDB (ethylene dibromide) • fixed gases (Methane, O2 and CO2)

Table 3: Fixed Gas Data

	AOC-1, Reubens					AOC-2, Hatch		
Sample ID	**SG-4**	**SG-5**	**SG-6**	**SG-7**	**SG-8**	**SG-1**	**SG-2**	**SG-3**
Sample Depth (ft):	4	8	8	Sub-floor	8	2	7.5	7
Depth to Water (ft):	9	10.2	10.2	10.2	10	7.35	8.56	8.56
O2								
Ambient O2 (%):	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
Pre-sample O2 (%):	18.7	17.9	20.3	20.9	18.9	18.7	19.3	18
Post Sample O2 (%):	18.7	17.9	20.3	20.9	18.9	18.7	19.4	16.8
Lab O2 (%):	15.7	14.2	17.5	18.2	17.3	15.1	15.5	16
CO2								
Ambient CO2 (%):	0	0	0	0	0	0	0	0
Pre-sample CO2 (%):	1.8	2.8	1.2	0.6	2.2	2	1.2	2.2
Post Sample CO2 (%):	1.8	2.8	1.3	0.6	2.2	2	1.2	3
Lab CO2 (%):	1.93	3.48	1.16	0.488	2.01	2.11	1.71	1.99
CH4								
Pre-sample CH4 (%LEL):	0	0	0	0	0	0	0	12
Lab CH4 (%):	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4
Soil Analytical Data, Volatile Petroleum Hydrocarbon (VPH)

Sample ID	**B-36, 7-8' (MW-14)**	**B-27, 10-11' (MW-7)**	**B-28, 5-10' (MW-8D)**	**B-31, 11-12' MW-11D)**	**OCW Soil Guideline** [1]
Sample Date	9/29/2010	6/25/2009	6/25/2009	6/25/2009	
VOCs by PID, ppmv	131	4.7	1372	542	--
VPH Analytes, mk/kg					
Benzene	ND	0.713	ND	ND	86
Toluene	ND	ND	1.93	ND	10000
Ethylbenzene	4.690	0.163J	3.82	ND	420
m/p- Xylenes	ND	0.446J	8.69	ND	--
o-Xylene	0.860J	ND	4.63	ND	--
Xylenes, total	0.860J	0.446J	13.32	ND	10000
Methyl tert butyl ether	ND	ND	ND	ND	2600
Naphthalene	ND	0.253	8.62	2.88	200
C5-C8 Aliphatic	204	ND	51	ND	10000
C9-C12 Aliphatics	266	ND	208	588	10000
C9-C10 Aromatic	106	3.330J	351	108	5100

NOTES - [1] Outdoor Commercial Worker (OCW) scenario, Table 5, Tier 2 Cumulative Risk-Based Soil Remediation Guidelines for Petroleum Target Compounds and Hydrocarbon Fractions, Remediation Guidelines for Petroleum Contaminated Sites in Maine, effective December 1, 2009
-- = No guideline for this compound
ND = Not detected above the laboratory reporting limit
J = Compound detected below calibrated range, concentration estimated
mg/kg = milligrams per kilogram
ppmv = parts per million by volume
PID = photoionization detector

TABLE 5
Groundwater Analytical Results

	AOC-1, Reuben's Market			AOC-2, Hatch's					
Sample ID	**MW-11S**	**MW-4**	**MW-14**	**MW-13**	**MW-8S**	**Trip Blank**	**MA GW2 Standard [1]**	**ME MEGs 2010 [3]**	**Draft VI Screening-Commercial [2]**
Units	Micrograms per liter (ug/l)								
VPH Analytes									
Benzene	ND	**2090**	**1340**	**68**	**1330**	ND	2000	**4**	6.9
Toluene	6J	42	11J	4	**1410**	ND	50000	**600**	16000
Ethylbenzene	16	**268**	19J	4	**714**	ND	20000	**30**	15
Xylenes, total	56	645	ND	11	**2841**	ND	9000	**1000**	410
Methyl tert butyl ether	ND	ND	ND	ND	ND	ND	50000	**35**	2000
Naphthalene	**37**	**204**	ND	ND	**288**	ND	1000	**10**	20
C5-C8 Aliphatic	228J	**8200**	**3750**	251	**14900**	ND	3000	**300**	3.2
C9-C12 Aliphatics	**1220**	**1560**	417J	41J	**5820**	ND	5000	**700**	2.7
C9-C10 Aromatic	**1190**	**1300**	**366**	39	**4560**	ND	7000	**200**	130

NOTES - [1] Massachusetts Contingency Plan Method 1 Groundwater Standards, Table1, GW-2 Standards, (310 CMR 40.0974(2)), for groundwater that is considered a potential source of indoor air contamination; exceedances are shaded

[2] Draft (11/23/2010) Table B11, Groundwater Vapor Intrusion Screening Levels for Chronic Residential and Commercial Scenarios (ug/l), provided by MEDEP, (Draft MEDEP Screening Levels).

[3] Maine Department of Human Services, Centers for Disease Control, Maximum Exposure Guidelines (MEGs) for drinking water, December 14, 2010.; exceedances are in bold font

VPH = Volatile Petroleum Hydrocarbons, MA DEP Method

-- = No standard or guideline for this compound

ND = Not detected above the laboratory reporting limit

J = Compound detected below calibrated range, concentration estimated

TABLE 6
Soil Gas Analytical Results

	AOC-1, Reuben's Market				AOC-2, Hatch's				
Sample ID (depth)	**SG-5 (8')**	**SG-6 (8')**	**SG-7 (sub-floor)**	**SG-8 (8')**	**SG-1 (2')**	**SG-2 (7.5')**	**SG-3 (7')**	**SG-4 (4')**	**Regulatory Guidelines**
Analyte	All units are micrograms per cubic meter (ug/m^3)								SGT [1]
Chlorinated VOCs (TO-15) [2]	ND	ND	ND	ND	ND	ND	ND	ND	
APH									
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	20.5
Benzene	700	98	ND	ND	ND	34	85000	ND	80
Toluene	81	200	ND	11	ND	640	360000	6.0	220000
Ethylbenzene	340	86	ND	ND	ND	190	78000	ND	245
m/p- Xylenes	510	200	ND	ND	ND	1200	440000	5.2	-
o-Xylene	18	57	ND	ND	ND	350	100000	ND	-
Xylenes, total	528	257	ND	ND	ND	1550	540000	5.2	4400
Naphthalene	65	ND	ND	ND	ND	100	ND	ND	18
Methyl tert butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	23.5
C5-C8 Aliphatic, Adjusted	19000	39000	24	1800	ND	3000	7400000	120	9000
C9-C12 Aliphatics, Adjusted	6000	6600	40	280	280	4400	270000	130	9000
C9-C10 Aromatic, Total	12000	1600	ND	55	ND	2400	160000	18	2200

NOTES - [1] Soil Gas Target (SGT) = 50 times the MEDEP Indoor Air Target for Chronic Commercial-Multi Contaminant Scenario, Table B6 – 01/14/10 MEDEP Vapor Intrusion Evaluation Guidance; exceedances are shaded.
[2] Chlorinated volatile organic compounds by EPA Method TO-15. Analyte List: Vinyl chloride, 1,1-Dichloroethene, Trans-1,2-Dichloroethene, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 1,1,1-Trichloroethane, Trichloroethene, 1,2-Dibromomethane, Tetrachloroethene,
ND = Not detected above the laboratory reporting limit

APPENDIX 2

Boring Logs and Well Construction Details

MAI Environmental

Rueben's Market	Route 16 Milo, ME	**BORING DESIGNATION**	**B33**
Project Number:	1025 - VI Study	Drilling Rig:	Geoprobe 6620DT
Geologist:	Paul Prescott	Sampling Method:	Dual Tube Sampler
Date Drilled:	9/29/10	Total Depth of Borehole:	15 Feet
Drilling Method:	Direct Push Boring		

Clay | Sand | Silt | Silty Sand | Asphalt | Bentonite | Filter Sand | Screen | Riser

Sample ID	Lithology	Description	Depth (ft)	PID Reading (ppm)	Notes	Well Completion
S1		Brown coarse Sand and Gravel		ND		
		Brown SILT, few fine Sand				
S1				ND		
		Brown SILT, few fine Sand lenses, trace clay	5			
S2				ND		
S2				ND		
		Brown SILT, with fine Sand lenses, trace clay	10			
S3				ND		
S3				ND		
		Bottom of Boring - 15-feet	15			

MAI Environmental

Rueben's Market	Route 16 Milo, ME	**BORING DESIGNATION**	**B35/MW13**
Project Number:	1025 - VI Study	Drilling Rig:	Geoprobe 6620DT
Geologist:	Paul Prescott	Sampling Method:	Dual Tube Sampler
Date Drilled:	9/29/10	Total Depth of Borehole:	15 Feet
Drilling Method:	Direct Push Boring	**NOTE: 5' Sample Intervals Composited For PID Screening**	

Clay Sand Silt Silty Sand Asphalt Bentonite Filter Sand Screen Riser

Sample ID	Lithology	Description	Depth (ft)	PID Reading (ppm)	Notes	Well Completion
		Asphalt				
		Orange/Brown coarse Sand and Gravel				
S1				ND		
		Grey SILT, few fine Sand				
S1				ND		
		Brown SILT, few fine Sand lenses	5			
S2				ND		
S2				ND		
		Brown SILT, with fine Sand lenses	10			
S3				ND		
S3				ND		
		Bottom of Boring - 15-feet	15			

MAI Environmental

Rueben's Market	Route 16 Milo, ME	**BORING DESIGNATION**	**B36/MW14**
Project Number:	1025 - VI Study	Drilling Rig:	Geoprobe 6620DT
Geologist:	Paul Prescott	Sampling Method:	Dual Tube Sampler
Date Drilled:	9/29/10	Total Depth of Borehole:	15 Feet
Drilling Method:	Direct Push Boring	**NOTE: 5' Sample Intervals Composited For PID Screening**	

Clay Sand Silt Silty Sand Asphalt Bentonite Filter Sand Screen Riser

Sample ID	Lithology	Description	Depth (ft)	PID Reading (ppm)	Notes	Well Completion
		Asphalt				
		Orange/Brown SAND and Silt				
S1				ND		
S1		Brown SILT, and fine Sand		ND		
		Brown SILT and CLAY, few fine Sand lenses	5			
S2				9		
		Brown SILT and CLAY, few fine Sand lenses				
S2				131	Lab Sample (VPH)	
		Orange/Brown SILT and CLAY, trace fine sand	10			
S3				2		
		Orange/Brown SILT and CLAY, trace fine sand				
S3				3		
		Bottom of Boring - 15-feet	15			

MAI Environmental

Rueben's Market	Route 16 Milo, ME	**BORING DESIGNATION**	**B37**
Project Number:	1025 - VI Study	Drilling Rig:	Geoprobe 6620DT
Geologist:	Paul Prescott	Sampling Method:	Dual Tube Sampler
Date Drilled:	9/29/10	Total Depth of Borehole:	20 Feet
Drilling Method:	Direct Push Boring		

Clay | Sand | Silt | Silty Sand | Asphalt | Bentonite | Filter Sand | Screen | Riser

Sample ID	Lithology	Description	Depth (ft)	PID Reading (ppm)	Notes	Well Completion
		Brown SILT and Organics (Topsoil)				
		Orange/Brown SAND, few Gravel and silt				
S1				ND		
			5			
		Orange/Brown SAND, trace Silt				
S2				ND		
S2		Brown SILT, and fine Sand		ND		
		Brown fine to medium SAND, trace Silt				
S2				ND		
			10			
		Grey/Brown SAND, few Silt				
S3				ND		
		Brown SILT and fine SAND				
S3				ND	Wet	
		Grey SILT and CLAY, few fine sand lenses				
S3				ND		
			15			
		Grey SILT and CLAY few fine sand lenses				
S4				ND		
		Grey SILT and CLAY few fine sand lenses				
S4				ND		
			20			
		Bottom of Boring - 20-feet				

MAI Environmental

Rueben's Market	Route 16 Milo, ME	**BORING DESIGNATION**	**B38**
Project Number:	1025 - VI Study	Drilling Rig:	Geoprobe 6620DT
Geologist:	Paul Prescott	Sampling Method:	Dual Tube Sampler
Date Drilled:	9/29/10	Total Depth of Borehole:	15 Feet
Drilling Method:	Direct Push Boring		

Clay | Sand | Silt | Silty Sand | Asphalt | Bentonite | Filter Sand | Screen | Riser

Sample ID	Lithology	Description	Depth (ft)	PID Reading (ppm)	Notes	Well Completion
S1		Brown SAND and Gravel, rock fragments		ND		
S1		Brown SILT, few fine Sand		ND		
S2		Brown/Grey SILT, few fine Sand lenses, trace clay	5	ND		
S2		Brown/Grey SILT, few fine Sand lenses, trace clay		ND		
S3		Brown/Grey SILT, few fine Sand lenses, trace clay	10	ND	Wet	
S3		Grey SILT and CLAY, few fine sand lenses		ND		
		Bottom of Boring - 15-feet	15			
			20			

APPENDIX 3

Soil Gas Field Data Sheets

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-1	
Sampling Purpose:	Receptor	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Soil	
Soil Type:	Fill	
Sample Depth:	2	FT
Depth to Water:	7.35	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	%
Subsurface Pressure/Vacuum:	0	IN H2O
Pre-sample O_2:	18.7	%
Pre-sample CO_2:	2	%
Pre-sample PID:	1	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	10:14 AM	
Sample End Time:	10:29 AM	
Post Sample O_2:	18.7	%
Post Sample CO_2:	2	%
Notes:	Adjacent to building - closest to subslab as possible.	

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-2	
Sampling Purpose:	Conduit/Pathway	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Asphalt	
Soil Type:	Fill	
Sample Depth:	7.5	FT
Depth to Water:	8.56	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	PPM
Subsurface Pressure/Vacuum:	-0.02	IN H2O
Pre-sample O_2:	19.3	%
Pre-sample CO_2:	1.2	%
Pre-sample PID:	5	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	9:50 AM	
Sample End Time:	10:04 AM	
Post Sample O_2:	19.4	%
Post Sample CO_2:	1.2	%
Notes:		

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-3	
Sampling Purpose:	Source	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Asphalt	
Soil Type:	Sand & Gravel	
Sample Depth:	7	FT
Depth to Water:	8.56	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	PPM
Subsurface Pressure/Vacuum:	0	IN H2O
Pre-sample O_2:	18	%
Pre-sample CO_2:	2.2	%
Pre-sample PID:	1236	PPM
Pre-sample CH4:	12	% LEL
Sample Initiation Time:	9:25 AM	
Sample End Time:	9:36 AM	
Post Sample O_2:	16.8	%
Post Sample CO_2:	3	%
Notes:	Soil was Silty Sand	

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-4	
Sampling Purpose:	Conduit/Pathway	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Asphalt	
Soil Type:	Sand & Gravel	
Sample Depth:	4	FT
Depth to Water:	9	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	PPM
Subsurface Pressure/Vacuum:	0	IN H2O
Pre-sample O_2:	18.7	%
Pre-sample CO_2:	1.8	%
Pre-sample PID:	0	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	10:43 AM	
Sample End Time:	10:57 AM	
Post Sample O_2:	18.7	%
Post Sample CO_2:	1.8	%
Notes:		

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-5	
Sampling Purpose:	Source	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Asphalt	
Soil Type:	Glacial Marine	
Sample Depth:	8	FT
Depth to Water:	10.2	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	PPM
Subsurface Pressure/Vacuum:	0	IN H2O
Pre-sample O_2:	17.9	%
Pre-sample CO_2:	2.8	%
Pre-sample PID:	9.9	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	8:40 AM	
Sample End Time:	8:52 AM	
Post Sample O_2:	17.9	%
Post Sample CO_2:	2.8	%
Notes:		

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-6	
Sampling Purpose:	Conduit/Pathway	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Asphalt	
Soil Type:	Glacial Marine	
Sample Depth:	8	FT
Depth to Water:	10.2	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	PPM
Subsurface Pressure/Vacuum:	0	IN H2O
Pre-sample O_2:	20.3	%
Pre-sample CO_2:	1.2	%
Pre-sample PID:	5	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	8:17 AM	
Sample End Time:	8:53 AM	
Post Sample O_2:	20.3	%
Post Sample CO_2:	1.3	%
Notes:		

Indoor Air Sampling Field Sheet
Maine DEP

VI Indoor Air Field Pre-EDD Form

		Units
Site Name & Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample I.D.:	SG-7	
Sampling Personnel:	Brown	
Collection Device:	Summa Canister	
Sample Type:	SSG - Subslab Gas	
Foundation Floor Type:	Dirt	
Foundation Wall Type:	Slab on grade	
Sump Hole:	No	
Penetrations in Floor:	Cracks	
Penetrations in Floor:	Water	
Penetrations in Floor:	Sewer	
Penetrations in Wall:	Cracks	
Penetrations in Wall:		
Penetrations in Wall:		
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	%
Pre-sample O2:	20.9	%
Pre-sample CO2:	0.6	%
Pre-sample PID:	0	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	11:28 AM	
Sample End Time:	11:39 AM	
Post Sample O2:	20.9	%
Post Sample CO2:	0.6	%
Notes/Observations:	Sample taken adjacent to water line/meter. Floor of store is different generations of poured concrete and wood over dirt.	

Soil Gas Sampling Field Sheet
Maine DEP

VI Soil Gas Field Pre-EDD Form

		Units
Site Name and Town:	Reubens Store - Milo, ME	
Date:	9/30/10	
Sample Point I.D.:	SG-8	
Sampling Purpose:	Migration	
Sampling Personnel:	S. Brown	
Collection Device:	Summa Canister	
Sample Penetration Location:	Soil	
Soil Type:	Glacial Marine	
Sample Depth:	8	FT
Depth to Water:	10	FT
Suspected Contaminant of Concern:	Petroleum	
Ambient O2:	20.9	%
Ambient CO2:	0	PPM
Subsurface Pressure/Vacuum:	0	IN H2O
Pre-sample O_2:	18.9	%
Pre-sample CO_2:	2.2	%
Pre-sample PID:	0	PPM
Pre-sample CH4:	0	% LEL
Sample Initiation Time:	11:17 AM	
Sample End Time:	11:25 AM	
Post Sample O_2:	18.9	%
Post Sample CO_2:	2.2	%
Notes:		

APPENDIX 4

Laboratory Reports

analytics environmental laboratory LLC

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www.analyticslab.com

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

Report Number: 67945

Revision: Rev. 0

Re: MAI 388-10

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 October 2010 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
67945-1	09/29/10	B36-7'-8'	Volatile Petroleum Hydrocarbons	
67945-2	09/29/10	MW-85	Volatile Petroleum Hydrocarbons	
67945-3	09/29/10	MW-4	Volatile Petroleum Hydrocarbons	
67945-4	09/30/10	MW-14	Volatile Petroleum Hydrocarbons	
67945-5	09/29/10	MW-13	Volatile Petroleum Hydrocarbons	
67945-6	09/29/10	MW-115	Volatile Petroleum Hydrocarbons	
67945-7	09/29/10	Trip Blank	Electronic Data Deliverable	
	09/29/10	Trip Blank	Volatile Petroleum Hydrocarbons	

Sample Receipt Exceptions: None

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

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

Authorized signature 

Stephen L. Knollmeyer Lab. Director

Date 10/13/2010

analytics environmental laboratory LLC

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

October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: B36-7'-8'

SAMPLE DATA

Lab Sample ID: 67945-1
Matrix: Solid
Percent Solid: 81
Dilution Factor: 671
Collection Date: 09/29/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	33600	µg/kg	**204000**
Unadjusted C9-C12 Aliphatics[1]	N/A	33600	µg/kg	**378000**
Benzene	C5-C8	1340	µg/kg	U
Ethylbenzene	C9-C12	1340	µg/kg	**4690**
Methyl-tert-butyl ether	C5-C8	1340	µg/kg	U
Naphthalene	N/A	1340	µg/kg	U
Toluene	C5-C8	1340	µg/kg	U
m- & p-Xylenes	C9-C12	2680	µg/kg	U
o-Xylene	C9-C12	1340	µg/kg	**860 J**
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	33600	µg/kg	**204000**
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	33600	µg/kg	**266000**
C9-C10 Aromatic Hydrocarbons[1]	N/A	6710	µg/kg	**106000**
Surrogate % Recovery (2,5-Dibromotoluene) PID				128
Surrogate % Recovery (2,5-Dibromotoluene) FID				120
Surrogate Acceptance Range				70-130%

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

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

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

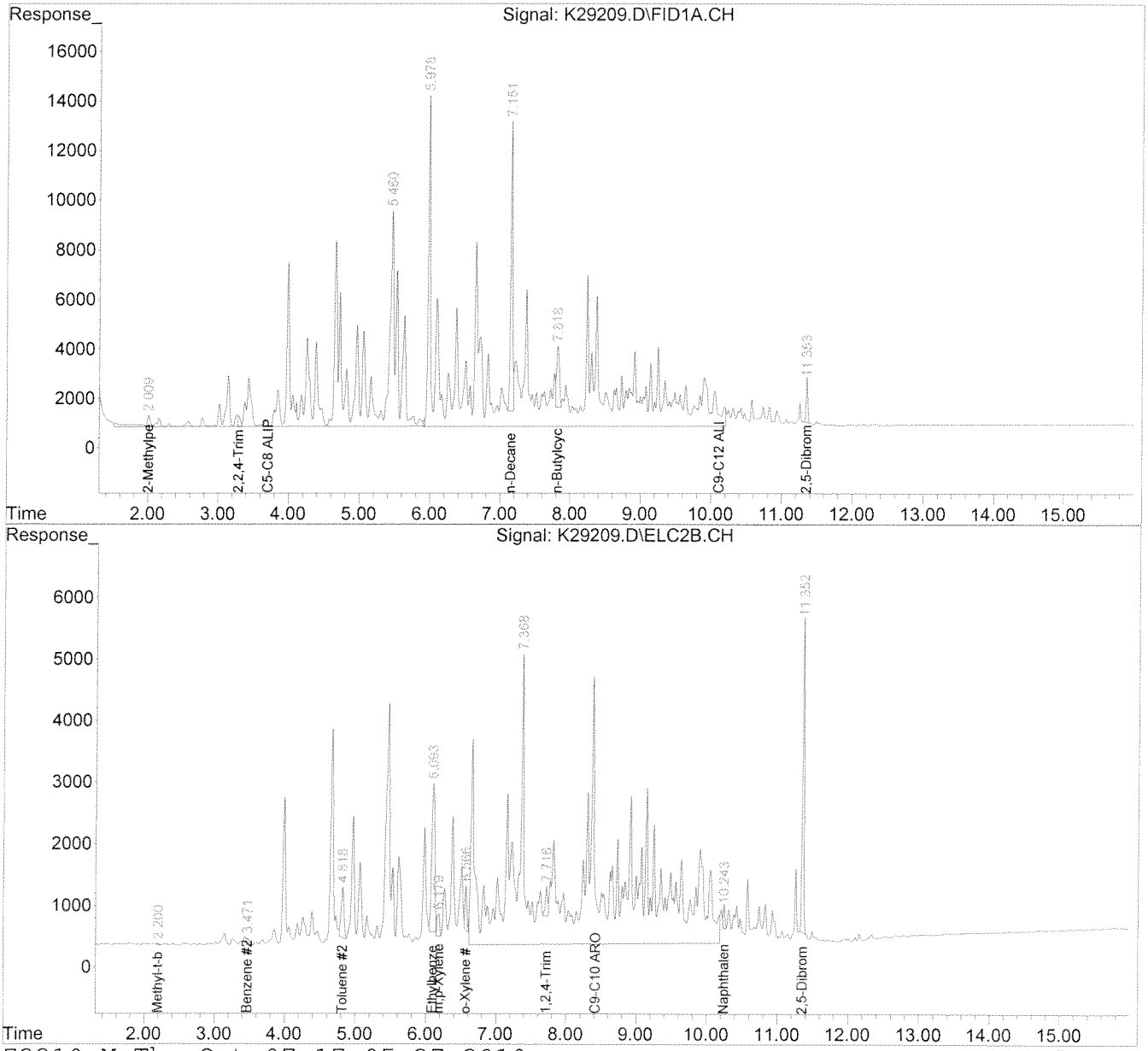
Authorized signature: 

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29209.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 7:57 pm
Operator : JJL
Sample : 67945-1,10X
Misc : 10,11.10,SOIL
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 17:04:25 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

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



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PO Box 1107
Yarmouth, ME 04096-1107

October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: MW-85

SAMPLE DATA

Lab Sample ID: 67945-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 20
Collection Date: 09/29/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	1000	µg/L	**17700**
Unadjusted C9-C12 Aliphatics[1]	N/A	1000	µg/L	**13900**
Benzene	C5-C8	40	µg/L	**1330**
Ethylbenzene	C9-C12	40	µg/L	**714**
Methyl-tert-butyl ether	C5-C8	40	µg/L	U
Naphthalene	N/A	40	µg/L	**288**
Toluene	C5-C8	40	µg/L	**1410**
m- & p-Xylenes	C9-C12	80	µg/L	**2230**
o-Xylene	C9-C12	40	µg/L	**611**
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	1000	µg/L	**14900**
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	1000	µg/L	**5820**
C9-C10 Aromatic Hydrocarbons[1]	N/A	200	µg/L	**4560**
Surrogate % Recovery (2,5-Dibromotoluene) PID				89
Surrogate % Recovery (2,5-Dibromotoluene) FID				86
Surrogate Acceptance Range				70-130%

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

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

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

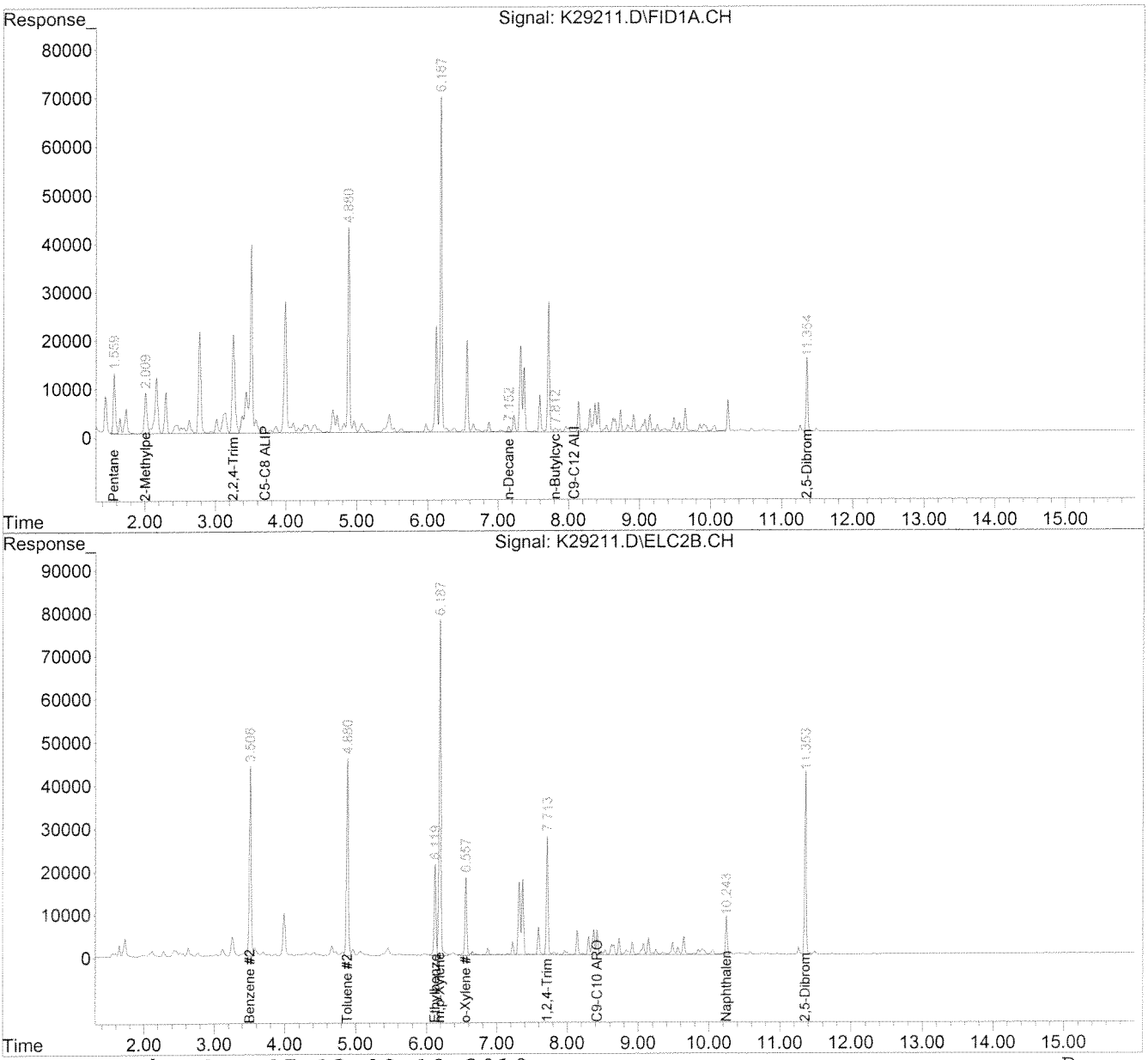
Authorized signature:

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29211.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 8:47 pm
Operator : JJL
Sample : 67945-2,20X
Misc : 250
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 12:00:00 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

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



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PO Box 1107
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October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: MW-4

SAMPLE DATA

Lab Sample ID: 67945-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 20
Collection Date: 09/29/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	1000	µg/L	**10300**
Unadjusted C9-C12 Aliphatics[1]	N/A	1000	µg/L	**3770**
Benzene	C5-C8	40	µg/L	**2090**
Ethylbenzene	C9-C12	40	µg/L	**268**
Methyl-tert-butyl ether	C5-C8	40	µg/L	U
Naphthalene	N/A	40	µg/L	**204**
Toluene	C5-C8	40	µg/L	**42**
m- & p-Xylenes	C9-C12	80	µg/L	**645**
o-Xylene	C9-C12	40	µg/L	U
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	1000	µg/L	**8200**
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	1000	µg/L	**1560**
C9-C10 Aromatic Hydrocarbons[1]	N/A	200	µg/L	**1300**
Surrogate % Recovery (2,5-Dibromotoluene) PID				83
Surrogate % Recovery (2,5-Dibromotoluene) FID				81
Surrogate Acceptance Range				70-130%

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

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

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

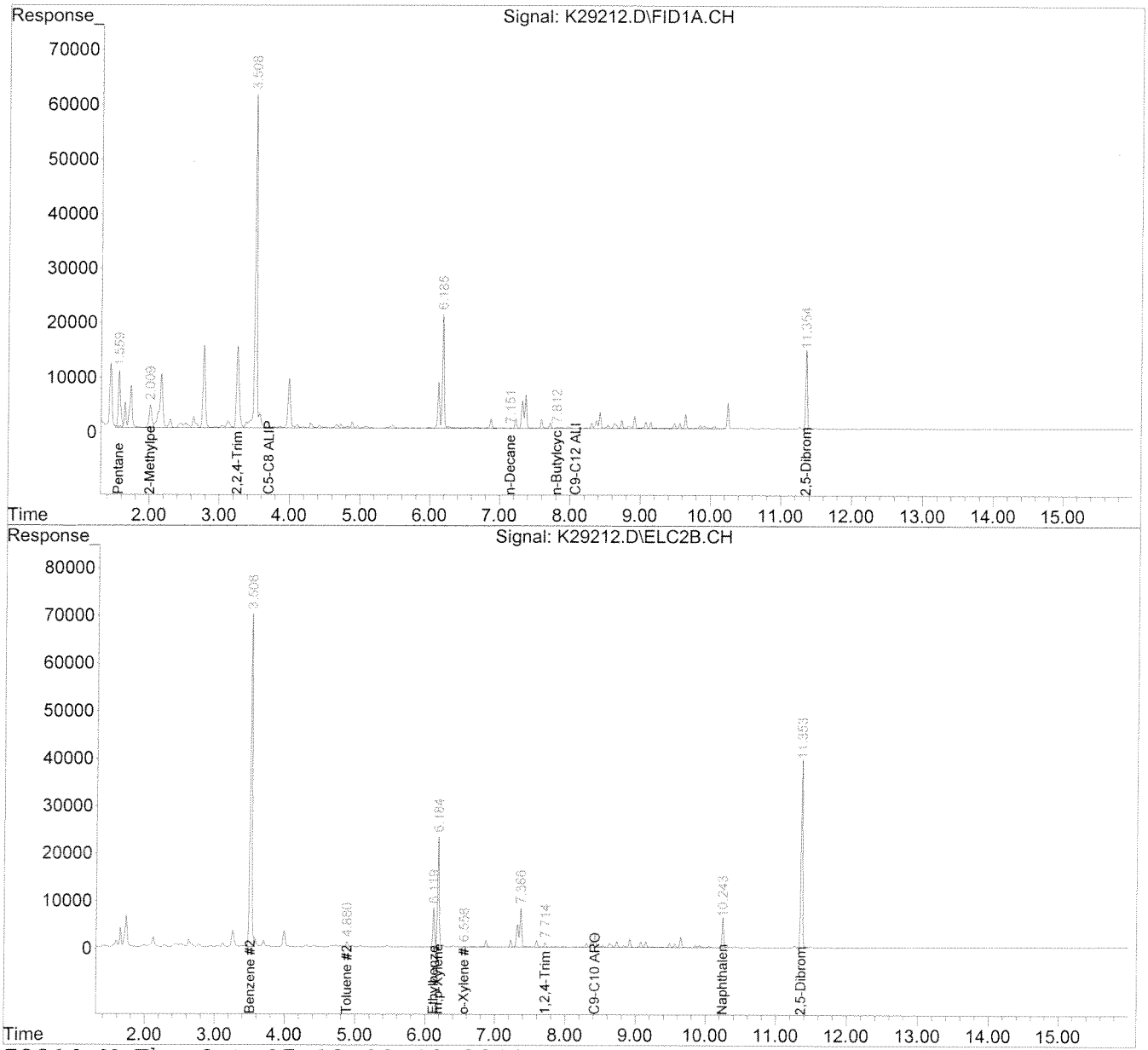
Authorized signature: 

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29212.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 9:12 pm
Operator : JJL
Sample : 67945-3,20X
Misc : 250
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 12:00:22 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

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



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October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: MW-14

SAMPLE DATA

Lab Sample ID: 67945-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 10
Collection Date: 09/30/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	500	µg/L	**5100**
Unadjusted C9-C12 Aliphatics[1]	N/A	500	µg/L	**802**
Benzene	C5-C8	20	µg/L	**1340**
Ethylbenzene	C9-C12	20	µg/L	**19 J**
Methyl-tert-butyl ether	C5-C8	20	µg/L	U
Naphthalene	N/A	20	µg/L	U
Toluene	C5-C8	20	µg/L	**11 J**
m- & p-Xylenes	C9-C12	40	µg/L	U
o-Xylene	C9-C12	20	µg/L	U
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	500	µg/L	**3750**
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	500	µg/L	**417 J**
C9-C10 Aromatic Hydrocarbons[1]	N/A	100	µg/L	**366**
Surrogate % Recovery (2,5-Dibromotoluene) PID				87
Surrogate % Recovery (2,5-Dibromotoluene) FID				99
Surrogate Acceptance Range				70-130%

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

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

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

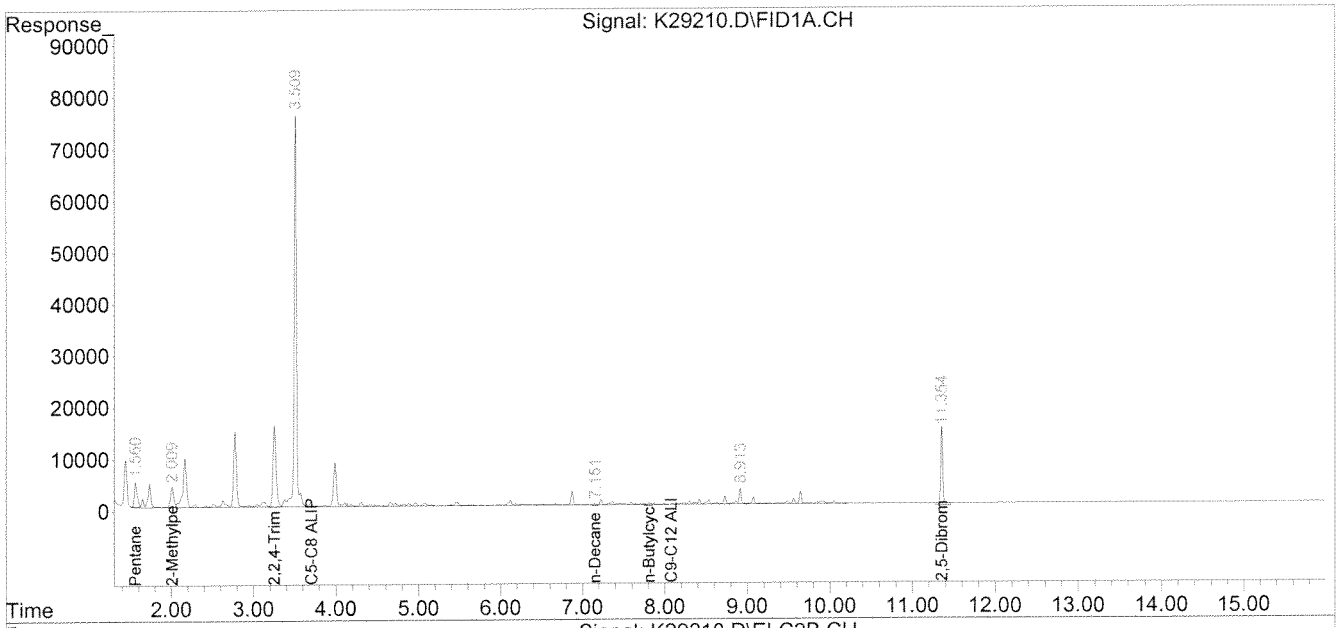
Authorized signature: 

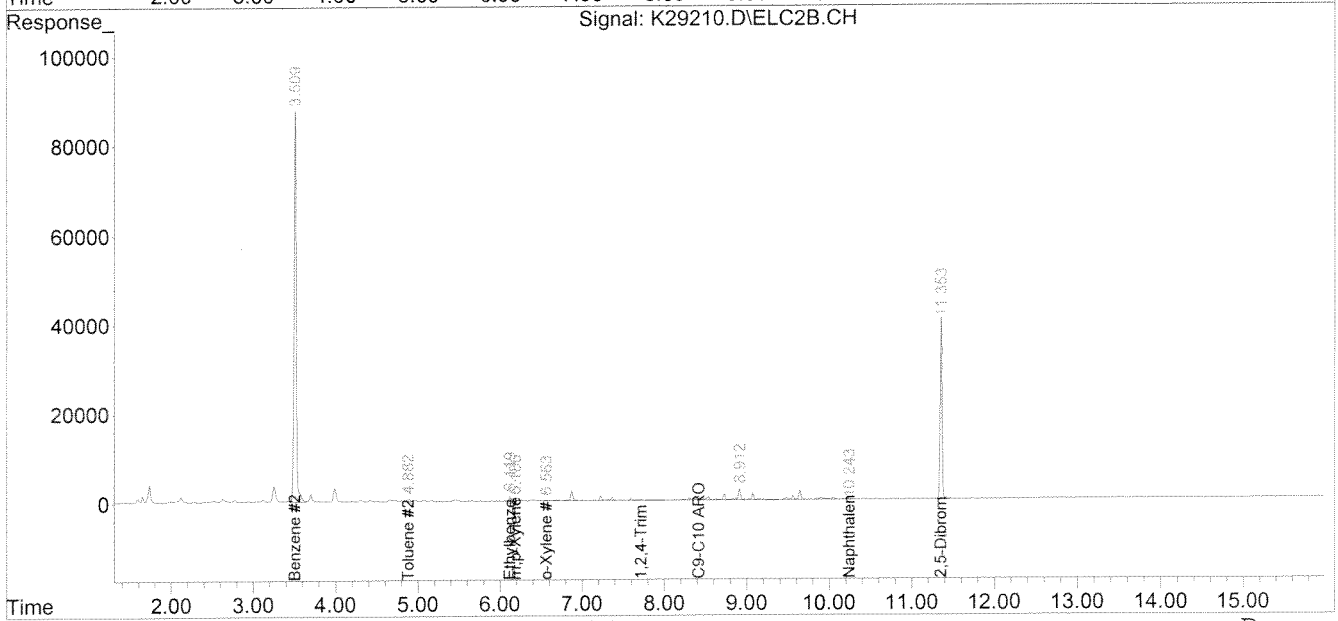
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29210.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 8:22 pm
Operator : JJL
Sample : 67945-4,10X
Misc : 500
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 11:59:33 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

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





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PO Box 1107
Yarmouth, ME 04096-1107

October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: MW-13

SAMPLE DATA

Lab Sample ID: 67945-5
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/29/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	50	µg/L	**323**
Unadjusted C9-C12 Aliphatics[1]	N/A	50	µg/L	**94**
Benzene	C5-C8	2	µg/L	**68**
Ethylbenzene	C9-C12	2	µg/L	**4**
Methyl-tert-butyl ether	C5-C8	2	µg/L	U
Naphthalene	N/A	2	µg/L	U
Toluene	C5-C8	2	µg/L	**4**
m- & p-Xylenes	C9-C12	4	µg/L	**8**
o-Xylene	C9-C12	2	µg/L	**3**
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	50	µg/L	**251**
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	µg/L	**41 J**
C9-C10 Aromatic Hydrocarbons[1]	N/A	10	µg/L	**39**
Surrogate % Recovery (2,5-Dibromotoluene) PID				90
Surrogate % Recovery (2,5-Dibromotoluene) FID				87
Surrogate Acceptance Range				70-130%

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

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

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

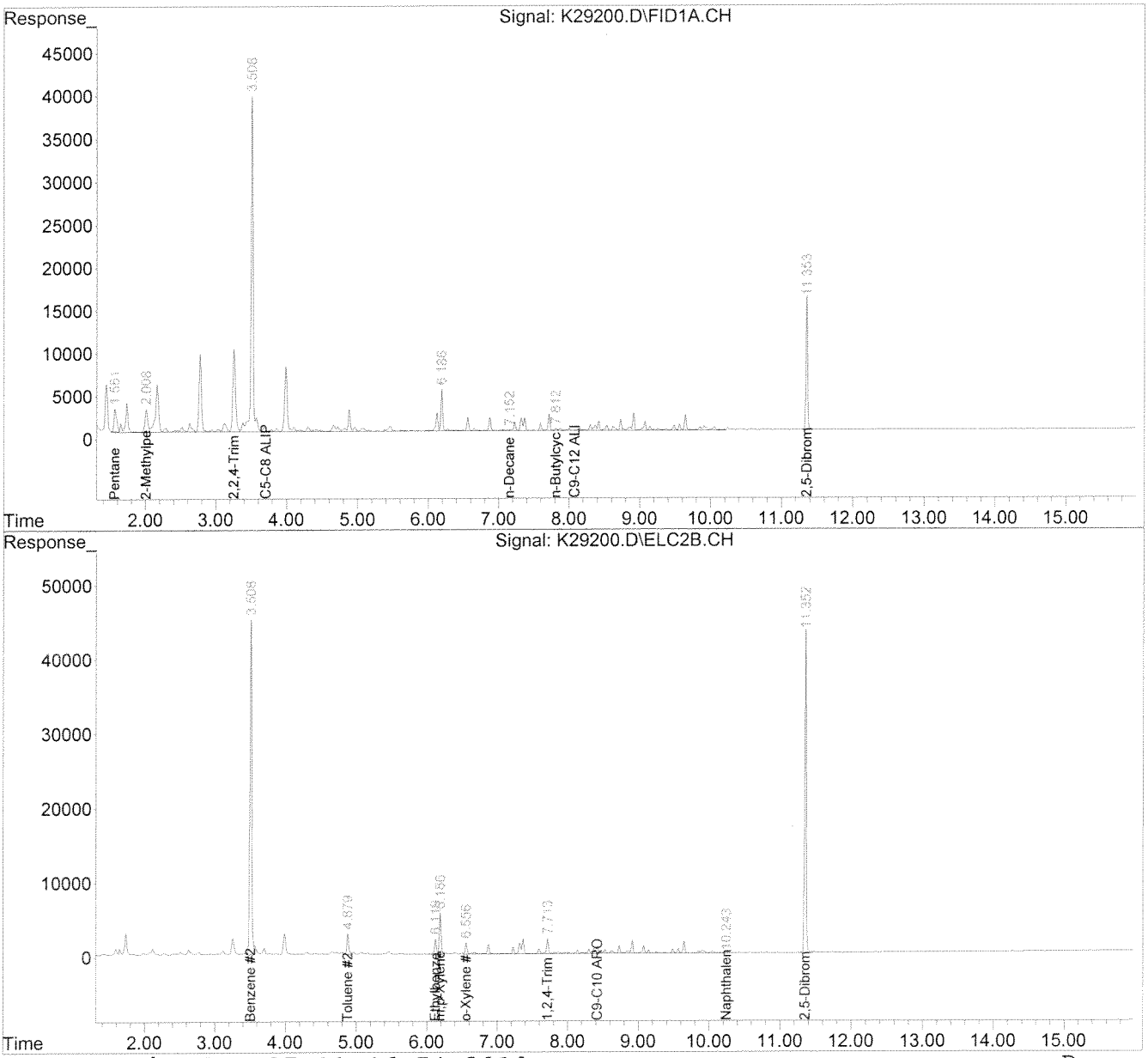
Authorized signature: Mulvill

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29200.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 4:07 pm
Operator : JJL
Sample : 67945-5
Misc : 5000
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 11:46:27 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

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



analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

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

October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: MW-115

SAMPLE DATA

Lab Sample ID: 67945-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 5
Collection Date: 09/29/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	250	µg/L	**234 J**
Unadjusted C9-C12 Aliphatics[1]	N/A	250	µg/L	**2490**
Benzene	C5-C8	10	µg/L	U
Ethylbenzene	C9-C12	10	µg/L	**16**
Methyl-tert-butyl ether	C5-C8	10	µg/L	U
Naphthalene	N/A	10	µg/L	**37**
Toluene	C5-C8	10	µg/L	**6 J**
m- & p-Xylenes	C9-C12	20	µg/L	**41**
o-Xylene	C9-C12	10	µg/L	**15**
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	250	µg/L	**228 J**
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	250	µg/L	**1220**
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	µg/L	**1190**
Surrogate % Recovery (2,5-Dibromotoluene) PID				88
Surrogate % Recovery (2,5-Dibromotoluene) FID				86
Surrogate Acceptance Range				70-130%

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

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

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

Authorized signature: 

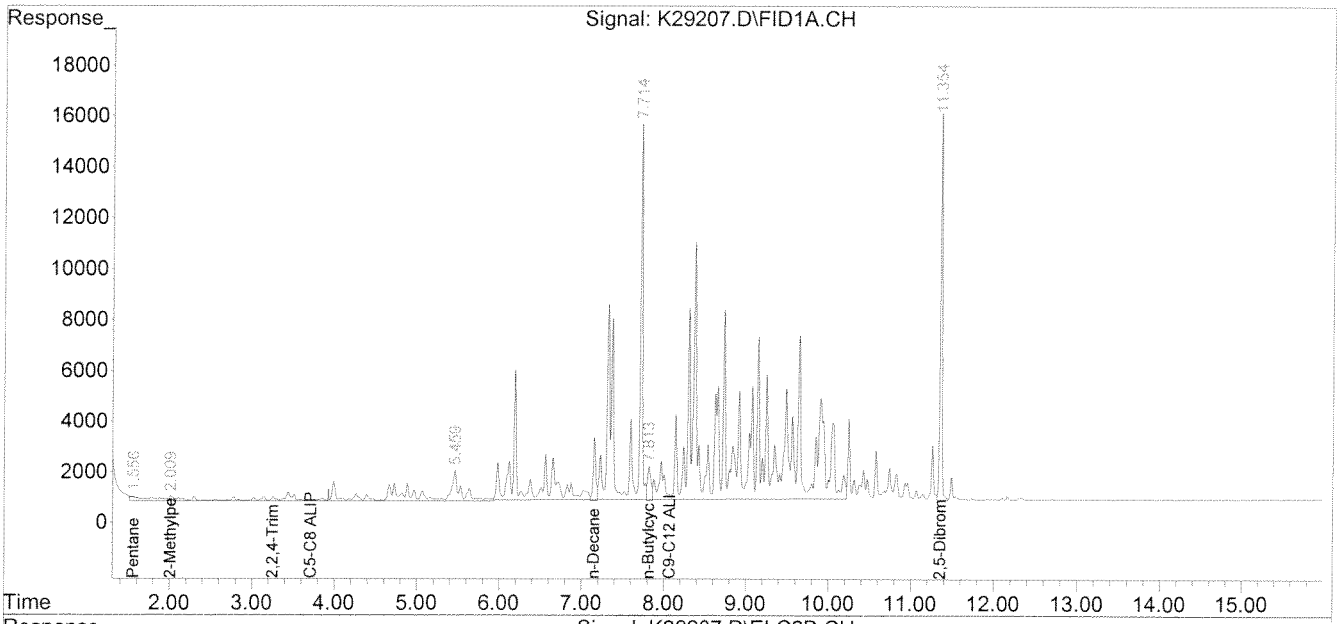
Quantitation Report (Not Reviewed)

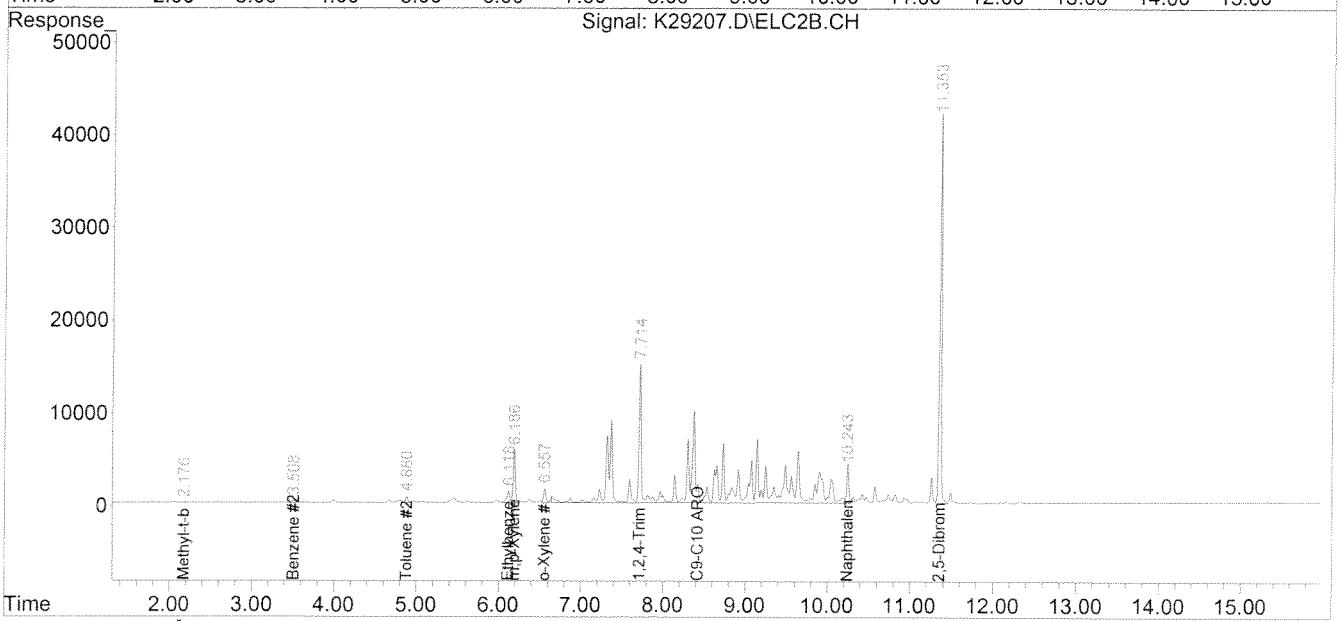
Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29207.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 7:08 pm
Operator : JJL
Sample : 67945-6,5X
Misc : 1000
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 11:54:45 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

JJ 10/7/10

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





analytics environmental laboratory LLC

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

October 13, 2010

CLIENT SAMPLE ID

Project Name: MAI 388-10

Project Number:

Client Sample ID: Trip Blank

SAMPLE DATA

Lab Sample ID: 67945-7
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/29/10
Lab Receipt Date: 10/04/10
Analysis Date: 10/06/10

VPH ANALYTICAL RESULTS

RANGE/TARGET ANALYTE	Elution Range	RL	Units	Result
Unadjusted C5-C8 Aliphatics[1]	N/A	50	µg/L	U
Unadjusted C9-C12 Aliphatics[1]	N/A	50	µg/L	U
Benzene	C5-C8	2	µg/L	U
Ethylbenzene	C9-C12	2	µg/L	U
Methyl-tert-butyl ether	C5-C8	2	µg/L	U
Naphthalene	N/A	2	µg/L	U
Toluene	C5-C8	2	µg/L	U
m- & p-Xylenes	C9-C12	4	µg/L	U
o-Xylene	C9-C12	2	µg/L	U
C5-C8 Aliphatics Hydrocarbons[1,2]	N/A	50	µg/L	U
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	µg/L	U
C9-C10 Aromatic Hydrocarbons[1]	N/A	10	µg/L	U
Surrogate % Recovery (2,5-Dibromotoluene) PID				81
Surrogate % Recovery (2,5-Dibromotoluene) FID				78
Surrogate Acceptance Range				70-130%

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

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

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

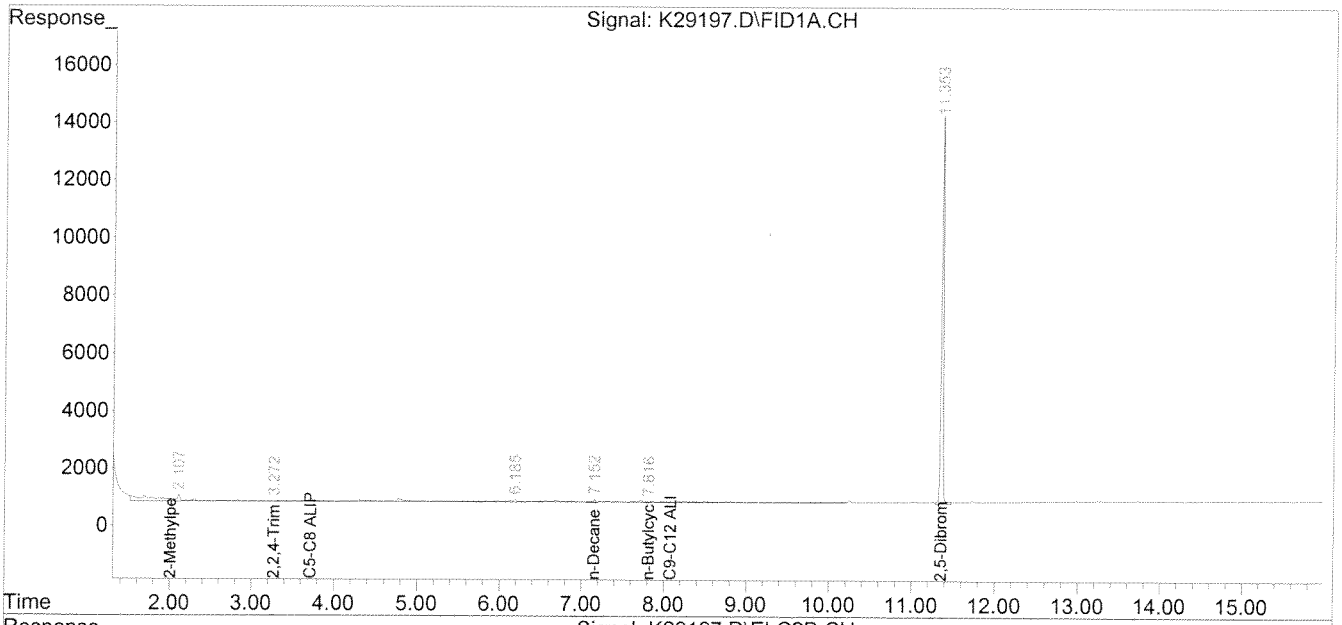
Authorized signature: _____

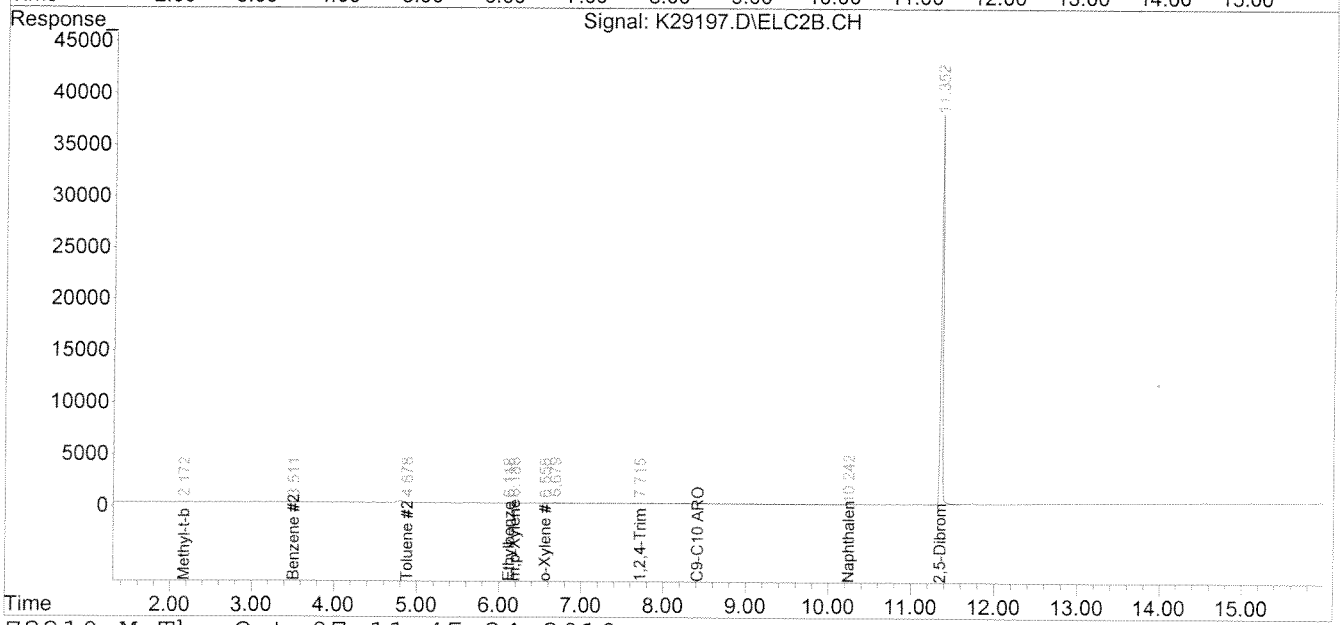
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\100610-K\
Data File : K29197.D
Signal(s) : Signal #1: FID1A.CH Signal #2: ELC2B.CH
Acq On : 06 Oct 2010 2:53 pm
Operator : JJL
Sample : 67945-7
Misc : 5000
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 07 11:45:17 2010
Quant Method : C:\msdchem\1\METHODS\VPH072210.M
Quant Title : Volatile Petroleum Hydrocarbons (VPH) MA DEP 2004
QLast Update : Fri Jul 23 15:04:23 2010
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

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





AL

MAINE ENVIRONMENTAL LABORATORY- Chain of Custody

One Main Street Yarmouth, Maine 04096-6716 (207) 846-6569 fax: (207) 846-9066
e-mail: melab@maine.rr.com

PROJECT MANAGER: H. Kodis | TELEPHONE | FAX # / E-MAIL

COMPANY | PURCHASE ORDER # / BILL TO

ADDRESS

PROJECT NAME: MAI 388-10 | SAMPLER NAME

LABORATORY REPORT #

Delivered by

TURNAROUND REQUEST
☒ Standard 10/13
☐ Priority (SURCHARGE)
me23120101 35
Quote #

SAMPLE IDENTIFICATION	# CONTAINERS	TYPE OF CONTAINERS	FIELD FILTRATION YES	FIELD FILTRATION NO	SAMPLE MATRIX	GRAB	COMP.	METHOD PRESERVED	SAMPLING DATE	SAMPLING TIME	ANALYSES: TPH	LABORATORY IDENTIFICATION/ SUBCONTRACTOR
336-7'-8'	1/1	VOA		X	Soil	X		① ≤6°C ② MeOH/≤6°C	09/29/10		X	67945-1
MW-85	3			X	GW	X		HCl/≤6°C			X	-2
MW-4				X		X					X	-3
MW-14				X		X			09/30/10		X	-4
MW-13				X		X			09/29/10		X	-5
MW-115				X		X					X	-6
Trip Blank	3	VOA	Field Filtered	X	H2O	X					X	-7

Received within hold time ☒ yes ☐ no ☐ N/A
Received in good condition ☒ yes ☐ no ☐ N/A
Temp. Blank °C 4° /Frozen ice packs ☐ N/A
Samples received preserved ☒ yes ☐ no ☐ N/A
Custody seal present ☐ yes ☒ no
Labels ck'd by @ 10/4/10

COMMENTS
MEDEP EDD (DEP VI Study - Milo, ME)
BB 10/4/10

	DATE	TIME
RELINQUISHED BY SAMPLER:		
RELINQUISHED BY: Kurt Hoppe @ 10/4/10	10/4/10	1:30
RELINQUISHED BY:	DATE	TIME

RECEIVED BY:
RECEIVED BY:
RECEIVED BY LABORATORY:

COC-04 6/20

ANALYTICAL REPORT

Lab Number:	L1015430
Client:	MAI Environmental 1034 Broadway South Portland, ME 04106
ATTN:	Paul Prescott
Phone:	(207) 767-3663
Project Name:	REUBENS
Project Number:	Not Specified
Report Date:	10/11/10

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: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1015430-01	SG-1	MILO, ME	09/30/10 10:29
L1015430-02	SG-2	MILO, ME	09/30/10 10:04
L1015430-03	SG-3	MILO, ME	09/30/10 09:36
L1015430-04	SG-4	MILO, ME	09/30/10 10:57
L1015430-05	SG-5	MILO, ME	09/30/10 08:52
L1015430-06	SG-6	MILO, ME	09/30/10 08:30
L1015430-07	SG-7	MILO, ME	09/30/10 11:39
L1015430-08	SG-8	MILO, ME	09/30/10 11:25
L1015430-09	CAN 454	MILO, ME	

Project Name: REUBENS **Lab Number:** L1015430

Project Number: Not Specified **Report Date:** 10/11/10

MADEP MCP Response Action Analytical Report Certification

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

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

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

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

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

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 23, 2010.

The canister certification data is provided as an addendum.

The internal standards were within method criteria.

Volatile Organics in Air (Low Level)

L1015430-01 through -08 have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Fixed Gas

L1015430-01 through -06: Prior to sample analysis, the canisters were pressurized with UHP Nitrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Nitrogen resulted in a dilution of

Project Name: REUBENS **Lab Number:** L1015430
Project Number: Not Specified **Report Date:** 10/11/10

Case Narrative (continued)

the sample. The reporting limits have been elevated accordingly.

L1015430-07 and -08: 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.

Petroleum Hydrocarbons in Air
L1015430-01, -05, -06, -08 have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

L1015430-02, -03, and WG436066-5 Duplicate have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample. The samples were re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

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

Authorized Signature: Kathleen O'Brien

Title: Technical Director/Representative Date: 10/11/10

AIR

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-01 D
Client ID: SG-1
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 17:01
Analyst: AJ

Date Collected: 09/30/10 10:29
Date Received: 10/04/10
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								
Vinyl chloride	ND	3.96	--	ND	10.1	--		19.8
1,1-Dichloroethene	ND	3.96	--	ND	15.7	--		19.8
trans-1,2-Dichloroethene	ND	3.96	--	ND	15.7	--		19.8
1,1-Dichloroethane	ND	3.96	--	ND	16.0	--		19.8
cis-1,2-Dichloroethene	ND	3.96	--	ND	15.7	--		19.8
1,2-Dichloroethane	ND	3.96	--	ND	16.0	--		19.8
1,1,1-Trichloroethane	ND	3.96	--	ND	21.6	--		19.8
Trichloroethene	ND	3.96	--	ND	21.3	--		19.8
1,2-Dibromoethane	ND	3.96	--	ND	30.4	--		19.8
Tetrachloroethene	ND	3.96	--	ND	26.8	--		19.8

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	76		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	77		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-02 D
Client ID: SG-2
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 17:39
Analyst: AJ

Date Collected: 09/30/10 10:04
Date Received: 10/04/10
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								
Vinyl chloride	ND	4.12	--	ND	10.5	--		20.62
1,1-Dichloroethene	ND	4.12	--	ND	16.3	--		20.62
trans-1,2-Dichloroethene	ND	4.12	--	ND	16.3	--		20.62
1,1-Dichloroethane	ND	4.12	--	ND	16.7	--		20.62
cis-1,2-Dichloroethene	ND	4.12	--	ND	16.3	--		20.62
1,2-Dichloroethane	ND	4.12	--	ND	16.7	--		20.62
1,1,1-Trichloroethane	ND	4.12	--	ND	22.5	--		20.62
Trichloroethene	ND	4.12	--	ND	22.1	--		20.62
1,2-Dibromoethane	ND	4.12	--	ND	31.7	--		20.62
Tetrachloroethene	ND	4.12	--	ND	27.9	--		20.62

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	73		60-140
Bromochloromethane	78		60-140
chlorobenzene-d5	76		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-03 D
Client ID: SG-3
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 22:02
Analyst: AJ

Date Collected: 09/30/10 09:36
Date Received: 10/04/10
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								
Vinyl chloride	ND	326.	--	ND	833.	--		1630
1,1-Dichloroethene	ND	326.	--	ND	1290	--		1630
trans-1,2-Dichloroethene	ND	326.	--	ND	1290	--		1630
1,1-Dichloroethane	ND	326.	--	ND	1320	--		1630
cis-1,2-Dichloroethene	ND	326.	--	ND	1290	--		1630
1,2-Dichloroethane	ND	326.	--	ND	1320	--		1630
1,1,1-Trichloroethane	ND	326.	--	ND	1780	--		1630
Trichloroethene	ND	326.	--	ND	1750	--		1630
1,2-Dibromoethane	ND	326.	--	ND	2500	--		1630
Tetrachloroethene	ND	326.	--	ND	2210	--		1630

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	74		60-140
Bromochloromethane	74		60-140
chlorobenzene-d5	88		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-04 D
Client ID: SG-4
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 18:53
Analyst: AJ

Date Collected: 09/30/10 10:57
Date Received: 10/04/10
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								
Vinyl chloride	ND	2.11	--	ND	5.38	--		10.53
1,1-Dichloroethene	ND	2.11	--	ND	8.34	--		10.53
trans-1,2-Dichloroethene	ND	2.11	--	ND	8.34	--		10.53
1,1-Dichloroethane	ND	2.11	--	ND	8.52	--		10.53
cis-1,2-Dichloroethene	ND	2.11	--	ND	8.34	--		10.53
1,2-Dichloroethane	ND	2.11	--	ND	8.52	--		10.53
1,1,1-Trichloroethane	ND	2.11	--	ND	11.5	--		10.53
Trichloroethene	ND	2.11	--	ND	11.3	--		10.53
1,2-Dibromoethane	ND	2.11	--	ND	16.2	--		10.53
Tetrachloroethene	ND	2.11	--	ND	14.3	--		10.53

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	70		60-140
Bromochloromethane	70		60-140
chlorobenzene-d5	72		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-05 D
Client ID: SG-5
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 19:31
Analyst: AJ

Date Collected: 09/30/10 08:52
Date Received: 10/04/10
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								
Vinyl chloride	ND	3.45	--	ND	8.81	--		17.24
1,1-Dichloroethene	ND	3.45	--	ND	13.6	--		17.24
trans-1,2-Dichloroethene	ND	3.45	--	ND	13.6	--		17.24
1,1-Dichloroethane	ND	3.45	--	ND	13.9	--		17.24
cis-1,2-Dichloroethene	ND	3.45	--	ND	13.6	--		17.24
1,2-Dichloroethane	ND	3.45	--	ND	13.9	--		17.24
1,1,1-Trichloroethane	ND	3.45	--	ND	18.8	--		17.24
Trichloroethene	ND	3.45	--	ND	18.5	--		17.24
1,2-Dibromoethane	ND	3.45	--	ND	26.5	--		17.24
Tetrachloroethene	ND	3.45	--	ND	23.4	--		17.24

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	73		60-140
Bromochloromethane	75		60-140
chlorobenzene-d5	82		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-06 D
Client ID: SG-6
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 20:08
Analyst: AJ

Date Collected: 09/30/10 08:30
Date Received: 10/04/10
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								
Vinyl chloride	ND	3.42	--	ND	8.73	--		17.09
1,1-Dichloroethene	ND	3.42	--	ND	13.5	--		17.09
trans-1,2-Dichloroethene	ND	3.42	--	ND	13.5	--		17.09
1,1-Dichloroethane	ND	3.42	--	ND	13.8	--		17.09
cis-1,2-Dichloroethene	ND	3.42	--	ND	13.5	--		17.09
1,2-Dichloroethane	ND	3.42	--	ND	13.8	--		17.09
1,1,1-Trichloroethane	ND	3.42	--	ND	18.6	--		17.09
Trichloroethene	ND	3.42	--	ND	18.4	--		17.09
1,2-Dibromoethane	ND	3.42	--	ND	26.2	--		17.09
Tetrachloroethene	ND	3.42	--	ND	23.2	--		17.09

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	78		60-140
Bromochloromethane	78		60-140
chlorobenzene-d5	90		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-07 D
Client ID: SG-7
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 23:17
Analyst: AJ

Date Collected: 09/30/10 11:39
Date Received: 10/04/10
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								
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.58	--		2
trans-1,2-Dichloroethene	ND	0.400	--	ND	1.58	--		2
1,1-Dichloroethane	ND	0.400	--	ND	1.62	--		2
cis-1,2-Dichloroethene	ND	0.400	--	ND	1.58	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
1,1,1-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Trichloroethene	ND	0.400	--	ND	2.15	--		2
1,2-Dibromoethane	ND	0.400	--	ND	3.07	--		2
Tetrachloroethene	ND	0.400	--	ND	2.71	--		2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	66		60-140
Bromochloromethane	74		60-140
chlorobenzene-d5	71		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID: L1015430-08 D
Client ID: SG-8
Sample Location: MILO, ME
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/07/10 21:24
Analyst: AJ

Date Collected: 09/30/10 11:25
Date Received: 10/04/10
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								
Vinyl chloride	ND	1.00	--	ND	2.55	--		5
1,1-Dichloroethene	ND	1.00	--	ND	3.96	--		5
trans-1,2-Dichloroethene	ND	1.00	--	ND	3.96	--		5
1,1-Dichloroethane	ND	1.00	--	ND	4.04	--		5
cis-1,2-Dichloroethene	ND	1.00	--	ND	3.96	--		5
1,2-Dichloroethane	ND	1.00	--	ND	4.04	--		5
1,1,1-Trichloroethane	ND	1.00	--	ND	5.45	--		5
Trichloroethene	ND	1.00	--	ND	5.37	--		5
1,2-Dibromoethane	ND	1.00	--	ND	7.68	--		5
Tetrachloroethene	ND	1.00	--	ND	6.78	--		5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	65		60-140
Bromochloromethane	72		60-140
chlorobenzene-d5	69		60-140

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 10/07/10 13:41

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 for sample(s): 01-08 Batch: WG436065-4								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: REUBENS

Project Number: Not Specified

Lab Number: L1015430

Report Date: 10/11/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-08 Batch: WG436065-3								
Vinyl chloride	91		-		70-130	-		
1,1-Dichloroethene	105		-		70-130	-		
trans-1,2-Dichloroethene	102		-		70-130	-		
1,1-Dichloroethane	113		-		70-130	-		
cis-1,2-Dichloroethene	106		-		70-130	-		
1,2-Dichloroethane	110		-		70-130	-		
1,1,1-Trichloroethane	105		-		70-130	-		
Trichloroethene	98		-		70-130	-		
1,2-Dibromoethane	103		-		70-130	-		
Tetrachloroethene	103		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436065-5 QC Sample: L1015430-02 Client ID: SG-2						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-01	D	Date Collected:	09/30/10 10:29
Client ID:	SG-1		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 12:06			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.1		%	2.71	--	2.712
Methane	ND		%	0.271	--	2.712
Carbon Dioxide	2.11		%	0.271	--	2.712

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-02	D	Date Collected:	09/30/10 10:04
Client ID:	SG-2		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 12:47			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.5		%	2.50	--	2.499
Methane	ND		%	0.250	--	2.499
Carbon Dioxide	1.71		%	0.250	--	2.499

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-03	D	Date Collected:	09/30/10 09:36
Client ID:	SG-3		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 13:28			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	16.0		%	1.63	--	1.626
Methane	ND		%	0.163	--	1.626
Carbon Dioxide	1.99		%	0.163	--	1.626

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-04	D	Date Collected:	09/30/10 10:57
Client ID:	SG-4		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 14:09			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	15.7		%	2.10	--	2.105
Methane	ND		%	0.210	--	2.105
Carbon Dioxide	1.93		%	0.210	--	2.105

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-05	D	Date Collected:	09/30/10 08:52
Client ID:	SG-5		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 14:50			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	14.2		%	1.72	--	1.724
Methane	ND		%	0.172	--	1.724
Carbon Dioxide	3.48		%	0.172	--	1.724

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-06	D	Date Collected:	09/30/10 08:30
Client ID:	SG-6		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 15:31			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	17.5		%	1.71	--	1.709
Methane	ND		%	0.171	--	1.709
Carbon Dioxide	1.16		%	0.171	--	1.709

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-07	D	Date Collected:	09/30/10 11:39
Client ID:	SG-7		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 16:12			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	18.2		%	2.70	--	2.696
Methane	ND		%	0.270	--	2.696
Carbon Dioxide	0.488		%	0.270	--	2.696

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-08	D	Date Collected:	09/30/10 11:25
Client ID:	SG-8		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor		Extraction Method:	
Analytical Method:	51,3C			
Analytical Date:	10/09/10 16:53			
Analyst:	RY			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Oxygen	17.3		%	2.01	--	2.009
Methane	ND		%	0.201	--	2.009
Carbon Dioxide	2.01		%	0.201	--	2.009

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 51,3C
Analytical Date: 10/09/10 09:39
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
Fixed Gases by GC - Mansfield Lab for sample(s): 01-08 Batch: WG436611-2					
Oxygen	ND		%	1.00	--
Methane	ND		%	0.100	--
Carbon Dioxide	ND		%	0.100	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: REUBENS

Project Number: Not Specified

Lab Number: L1015430

Report Date: 10/11/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 Batch: WG436611-1								
Oxygen	94		-		80-120	-		
Methane	106		-		80-120	-		
Carbon Dioxide	107		-		80-120	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-10 QC Sample: L1015430-06 Client ID: SG-6						
Oxygen	17.5	17.6	%	1		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	1.16	1.16	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-11 QC Sample: L1015430-07 Client ID: SG-7						
Oxygen	18.2	18.7	%	3		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	0.488	0.485	%	1		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-12 QC Sample: L1015430-08 Client ID: SG-8						
Oxygen	17.3	17.3	%	0		5
Methane	ND	ND	%	NC		5
Carbon Dioxide	2.01	2.01	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-3 QC Sample: L1015481-01 Client ID: DUP Sample						
Methane	ND	ND	%	NC		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-4 QC Sample: L1015481-02 Client ID: DUP Sample						
Methane	ND	ND	%	NC		5

Lab Duplicate Analysis
Batch Quality Control

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-5 QC Sample: L1015430-01 Client ID: SG-1					
Oxygen	15.1	14.6	%	3	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	2.11	2.12	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-6 QC Sample: L1015430-02 Client ID: SG-2					
Oxygen	15.5	15.0	%	3	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	1.71	1.72	%	1	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-7 QC Sample: L1015430-03 Client ID: SG-3					
Oxygen	16.0	15.9	%	1	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	1.99	1.99	%	0	5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-8 QC Sample: L1015430-04 Client ID: SG-4					
Oxygen	15.7	15.8	%	1	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	1.93	1.93	%	0	5

Lab Duplicate Analysis
Batch Quality Control

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436611-9 QC Sample: L1015430-05 Client ID: SG-5					
Oxygen	14.2	14.6	%	3	5
Methane	ND	ND	%	NC	5
Carbon Dioxide	3.48	3.49	%	0	5

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-01	D	Date Collected:	09/30/10 10:29
Client ID:	SG-1		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/06/10 17:20			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	10	--	5
Methyl tert butyl ether	ND		ug/m3	10	--	5
Benzene	ND		ug/m3	10	--	5
Toluene	ND		ug/m3	10	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/m3	60	--	5
Ethylbenzene	ND		ug/m3	10	--	5
p/m-Xylene	ND		ug/m3	20	--	5
o-Xylene	ND		ug/m3	10	--	5
Naphthalene	ND		ug/m3	10	--	5
C9-C12 Aliphatics, Adjusted	280		ug/m3	70	--	5
C9-C10 Aromatics Total	ND		ug/m3	50	--	5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	141		50-200
Bromochloromethane	144		50-200
Chlorobenzene-d5	129		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-02	D2	Date Collected:	09/30/10 10:04
Client ID:	SG-2		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/07/10 02:02			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
p/m-Xylene	1200		ug/m3	20	--	5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	138		50-200
Bromochloromethane	119		50-200
Chlorobenzene-d5	126		50-200

Project Name: REUBENS **Lab Number:** L1015430

Project Number: Not Specified **Report Date:** 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-02	D	Date Collected:	09/30/10 10:04
Client ID:	SG-2		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/06/10 17:56			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	4.0	--	2
Methyl tert butyl ether	ND		ug/m3	4.0	--	2
Benzene	34		ug/m3	4.0	--	2
Toluene	640		ug/m3	4.0	--	2
C5-C8 Aliphatics, Adjusted	3000		ug/m3	24	--	2
Ethylbenzene	190		ug/m3	4.0	--	2
p/m-Xylene	1100	E	ug/m3	8.0	--	2
o-Xylene	350		ug/m3	4.0	--	2
Naphthalene	100		ug/m3	4.0	--	2
C9-C12 Aliphatics, Adjusted	4400		ug/m3	28	--	2
C9-C10 Aromatics Total	2400		ug/m3	20	--	2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	144		50-200
Bromochloromethane	123		50-200
Chlorobenzene-d5	147		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-03	D2	Date Collected:	09/30/10 09:36
Client ID:	SG-3		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/08/10 06:40			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
Toluene	360000		ug/m3	6400	--	3200

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	67		50-200
Bromochloromethane	70		50-200
Chlorobenzene-d5	76		50-200

Project Name: REUBENS **Lab Number:** L1015430

Project Number: Not Specified **Report Date:** 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-03	D	Date Collected:	09/30/10 09:36
Client ID:	SG-3		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/07/10 09:41			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	1300	--	650
Methyl tert butyl ether	ND		ug/m3	1300	--	650
Benzene	85000		ug/m3	1300	--	650
Toluene	560000	E	ug/m3	1300	--	650
C5-C8 Aliphatics, Adjusted	7400000		ug/m3	7800	--	650
Ethylbenzene	78000		ug/m3	1300	--	650
p/m-Xylene	340000	E	ug/m3	2600	--	650
o-Xylene	100000		ug/m3	1300	--	650
Naphthalene	ND		ug/m3	1300	--	650
C9-C12 Aliphatics, Adjusted	270000		ug/m3	9100	--	650
C9-C10 Aromatics Total	160000		ug/m3	6500	--	650

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	158		50-200
Bromochloromethane	148		50-200
Chlorobenzene-d5	174		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-03	D	Date Collected:	09/30/10 09:36
Client ID:	SG-3		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/07/10 22:02			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Toluene	740000	E	ug/m3	3200	--	1600
p/m-Xylene	440000		ug/m3	6400	--	1600

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	74		50-200
Bromochloromethane	76		50-200
Chlorobenzene-d5	92		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-04	Date Collected:	09/30/10 10:57
Client ID:	SG-4	Date Received:	10/04/10
Sample Location:	MILO, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	10/06/10 19:13		
Analyst:	AJ		

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

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	ND		ug/m3	2.0	--	1
Toluene	6.0		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	120		ug/m3	12	--	1
Ethylbenzene	ND		ug/m3	2.0	--	1
p/m-Xylene	5.2		ug/m3	4.0	--	1
o-Xylene	ND		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	18		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	130		50-200
Bromochloromethane	136		50-200
Chlorobenzene-d5	122		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-05	D	Date Collected:	09/30/10 08:52
Client ID:	SG-5		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/06/10 19:50			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	10	--	5
Methyl tert butyl ether	ND		ug/m3	10	--	5
Benzene	700		ug/m3	10	--	5
Toluene	81		ug/m3	10	--	5
C5-C8 Aliphatics, Adjusted	19000		ug/m3	60	--	5
Ethylbenzene	340		ug/m3	10	--	5
p/m-Xylene	510		ug/m3	20	--	5
o-Xylene	18		ug/m3	10	--	5
Naphthalene	65		ug/m3	10	--	5
C9-C12 Aliphatics, Adjusted	6000		ug/m3	70	--	5
C9-C10 Aromatics Total	12000		ug/m3	50	--	5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	145		50-200
Bromochloromethane	134		50-200
Chlorobenzene-d5	144		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-06	D	Date Collected:	09/30/10 08:30
Client ID:	SG-6		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/06/10 20:27			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	10	--	5
Methyl tert butyl ether	ND		ug/m3	10	--	5
Benzene	98		ug/m3	10	--	5
Toluene	200		ug/m3	10	--	5
C5-C8 Aliphatics, Adjusted	39000		ug/m3	60	--	5
Ethylbenzene	86		ug/m3	10	--	5
p/m-Xylene	200		ug/m3	20	--	5
o-Xylene	57		ug/m3	10	--	5
Naphthalene	ND		ug/m3	10	--	5
C9-C12 Aliphatics, Adjusted	6600		ug/m3	70	--	5
C9-C10 Aromatics Total	1600		ug/m3	50	--	5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	146		50-200
Bromochloromethane	138		50-200
Chlorobenzene-d5	167		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-07	Date Collected:	09/30/10 11:39
Client ID:	SG-7	Date Received:	10/04/10
Sample Location:	MILO, ME	Field Prep:	Not Specified
Matrix:	Soil_Vapor		
Analytical Method:	96,APH		
Analytical Date:	10/06/10 21:04		
Analyst:	AJ		

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

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	ND		ug/m3	2.0	--	1
Toluene	ND		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	24		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	40		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	137		50-200
Bromochloromethane	122		50-200
Chlorobenzene-d5	130		50-200

Project Name: REUBENS
Project Number: Not Specified
Lab Number: L1015430
Report Date: 10/11/10

SAMPLE RESULTS

Lab ID:	L1015430-08	D	Date Collected:	09/30/10 11:25
Client ID:	SG-8		Date Received:	10/04/10
Sample Location:	MILO, ME		Field Prep:	Not Specified
Matrix:	Soil_Vapor			
Analytical Method:	96,APH			
Analytical Date:	10/06/10 21:40			
Analyst:	AJ			

Quality Control Information

Sample Type:	200 ml/minute Composite
Sample Container Type:	Canister - 2.7 Liter
Sampling Flow Controller:	Mechanical
Sampling Zone:	Unknown
Sampling Flow Meter RPD of pre & post-sampling calibration check:	<=20%
Were all QA/QC procedures REQUIRED by the method followed?	Yes
Were all performance/acceptance standards for the required procedures achieved?	Yes
Were significant modifications made to the method as specified in Sect 11.1.2?	No

Petroleum Hydrocarbons in Air - Mansfield Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,3-Butadiene	ND		ug/m3	4.0	--	2
Methyl tert butyl ether	ND		ug/m3	4.0	--	2
Benzene	ND		ug/m3	4.0	--	2
Toluene	11		ug/m3	4.0	--	2
C5-C8 Aliphatics, Adjusted	1800		ug/m3	24	--	2
Ethylbenzene	ND		ug/m3	4.0	--	2
p/m-Xylene	ND		ug/m3	8.0	--	2
o-Xylene	ND		ug/m3	4.0	--	2
Naphthalene	ND		ug/m3	4.0	--	2
C9-C12 Aliphatics, Adjusted	280		ug/m3	28	--	2
C9-C10 Aromatics Total	55		ug/m3	20	--	2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	135		50-200
Bromochloromethane	120		50-200
Chlorobenzene-d5	128		50-200

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 96,APH
Analytical Date: 10/06/10 13:26
Analyst: AJ

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbons in Air - Mansfield Lab for sample(s): 01-08 Batch: WG436066-4					
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	--

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 96,APH
Analytical Date: 10/07/10 13:41
Analyst: AJ

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbons in Air - Mansfield Lab for sample(s): 03 Batch: WG436066-9					
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: REUBENS

Project Number: Not Specified

Lab Number: L1015430

Report Date: 10/11/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG436066-3								
1,3-Butadiene	76		-		70-130	-		
Methyl tert butyl ether	93		-		70-130	-		
Benzene	102		-		70-130	-		
Toluene	106		-		70-130	-		
C5-C8 Aliphatics, Adjusted	107		-		70-130	-		
Ethylbenzene	99		-		70-130	-		
p/m-Xylene	104		-		70-130	-		
o-Xylene	105		-		70-130	-		
Naphthalene	117		-		50-150	-		
C9-C12 Aliphatics, Adjusted	108		-		70-130	-		
C9-C10 Aromatics Total	100		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: REUBENS

Project Number: Not Specified

Lab Number: L1015430

Report Date: 10/11/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 03 Batch: WG436066-8								
1,3-Butadiene	73		-		70-130	-		
Methyl tert butyl ether	99		-		70-130	-		
Benzene	97		-		70-130	-		
Toluene	101		-		70-130	-		
C5-C8 Aliphatics, Adjusted	94		-		70-130	-		
Ethylbenzene	100		-		70-130	-		
p/m-Xylene	99		-		70-130	-		
o-Xylene	100		-		70-130	-		
Naphthalene	108		-		50-150	-		
C9-C12 Aliphatics, Adjusted	71		-		70-130	-		
C9-C10 Aromatics Total	94		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436066-5 QC Sample: L1015430-02 Client ID: SG-2						
1,3-Butadiene	ND	ND	ug/m3	NC		30
Methyl tert butyl ether	ND	ND	ug/m3	NC		30
Benzene	34	34	ug/m3	0		30
Toluene	640	630	ug/m3	2		30
C5-C8 Aliphatics, Adjusted	3000	3100	ug/m3	3		30
Ethylbenzene	190	190	ug/m3	0		30
p/m-Xylene	1100E	1100	ug/m3	0	E	30
o-Xylene	350	360	ug/m3	3		30
Naphthalene	100	120	ug/m3	18		30
C9-C12 Aliphatics, Adjusted	4400	4500	ug/m3	2		30
C9-C10 Aromatics Total	2400	2400	ug/m3	0		30
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG436066-5 QC Sample: L1015430-02 Client ID: SG-2						
p/m-Xylene	1200	1100	ug/m3	9		30

Project Name: REUBENS **Lab Number:** L1015430

Project Number: **Report Date:** 10/11/10

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
L1015430-01	SG-1	0358	#16 AMB		-	-	200	204	2
L1015430-01	SG-1	537	2.7L Can	L1014119	-29.5	-5.9	-	-	-
L1015430-02	SG-2	0270	#90 SV		-	-	200	199	1
L1015430-02	SG-2	217	2.7L Can	L1014119	-29.5	-0.8	-	-	-
L1015430-03	SG-3	0468	#90 SV		-	-	200	205	2
L1015430-03	SG-3	199	2.7L Can	L1014119	-29.1	-3.4	-	-	-
L1015430-04	SG-4	0252	#90 SV		-	-	200	203	1
L1015430-04	SG-4	325	2.7L Can	L1014119	-29.5	-4.1	-	-	-
L1015430-05	SG-5	0265	#90 SV		-	-	200	200	0
L1015430-05	SG-5	476	2.7L Can	L1014119	-29.5	-2.1	-	-	-
L1015430-06	SG-6	0003	#90 SV		-	-	200	200	0
L1015430-06	SG-6	175	2.7L Can	L1014119	-29.5	-1.9	-	-	-
L1015430-07	SG-7	0448	#90 SV		-	-	200	200	0
L1015430-07	SG-7	109	2.7L Can	L1014119	-29.5	-4.1	-	-	-
L1015430-08	SG-8	0023	#90 SV		-	-	200	204	2
L1015430-08	SG-8	261	2.7L Can	L1014119	-29.0	-1.9	-	-	-

Air Volatiles Can Certification

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1014119
Report Date: 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01
Client ID: CAN 383 SHELF 9
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 09/15/10 19:14
Analyst: RY

Date Collected: 09/10/10 00:00
Date Received: 09/10/10
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	0.233	0.200	--	0.823	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	0.221	0.200	--	0.930	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:*** L1014119

Project Number: CANISTER QC BAT ***Report Date:*** 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01 Date Collected: 09/10/10 00:00

Client ID: CAN 383 SHELF 9 Date Received: 09/10/10

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	0.307	0.200	--	2.35	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:*** L1014119

Project Number: CANISTER QC BAT ***Report Date:*** 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01 Date Collected: 09/10/10 00:00

Client ID: CAN 383 SHELF 9 Date Received: 09/10/10

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:*** L1014119

Project Number: CANISTER QC BAT ***Report Date:*** 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01 Date Collected: 09/10/10 00:00

Client ID: CAN 383 SHELF 9 Date Received: 09/10/10

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: L1014119
Report Date: 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01
Client ID: CAN 383 SHELF 9
Sample Location:
Date Collected: 09/10/10 00:00
Date Received: 09/10/10
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								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	81		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	79		60-140

Project Name: BATCH CANISTER CERTIFICATION ***Lab Number:*** L1014119

Project Number: CANISTER QC BAT ***Report Date:*** 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01
Client ID: CAN 383 SHELF 9
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/16/10 19:26
Analyst: RY

Date Collected: 09/10/10 00:00
Date Received: 09/10/10
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	0.054	0.050	--	0.267	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	0.093	0.050	--	0.522	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	0.256	0.050	--	1.96	0.383	--		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
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1

Project Name: BATCH CANISTER CERTIFICATION ***Lab Number:*** L1014119

Project Number: CANISTER QC BAT ***Report Date:*** 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01 Date Collected: 09/10/10 00:00

Client ID: CAN 383 SHELF 9 Date Received: 09/10/10

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								
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
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1014119
Report Date: 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01
Client ID: CAN 383 SHELF 9
Sample Location:
Date Collected: 09/10/10 00:00
Date Received: 09/10/10
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								
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1014119
Report Date: 10/11/10

Air Canister Certification Results

Lab ID: L1014119-01
Client ID: CAN 383 SHELF 9
Sample Location:
Date Collected: 09/10/10 00:00
Date Received: 09/10/10
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								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	80		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	79		60-140

AIR Petro Can Certification

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1014119

Project Number: CANISTER QC BAT **Report Date:** 10/11/10

AIR CAN CERTIFICATION RESULTS

Lab ID:	L1014119-01	Date Collected:	09/10/10 00:00
Client ID:	CAN 383 SHELF 9	Date Received:	09/10/10
Sample Location:	Not Specified	Field Prep:	Not Specified
Matrix:	Air		
Analytical Method:	96,APH		
Analytical Date:	09/15/10 19:14		
Analyst:	RY		

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: REUBENS
Project Number: Not Specified

Lab Number: L1015430
Report Date: 10/11/10

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(*)
L1015430-01A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-02A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-03A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-04A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-05A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-06A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-07A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-08A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	APH-10(30),FIXGAS(30),TO15-LL(30)
L1015430-09A	Canister - 2.7 Liter	N/A	N/A		NA	Present/Intact	CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	REUBENS	**Lab Number:**	L1015430
Project Number:	Not Specified	**Report Date:**	10/11/10

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:	REUBENS	**Lab Number:**	L1015430
Project Number:	Not Specified	**Report Date:**	10/11/10

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

PAGE 1 OF 1

ALPHA ANALYTICAL

CHAIN OF CUSTODY

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

Date Rec'd in Lab:

ALPHA Job #: L1015430

Client Information

Client: MEDEP VI Study Milo, Me
Address: Peter Eremita
312 Canco Rd
Portland, ME 04103
Phone: ~~Fax:~~ 207-822-6364
Email: Pete.M.Eremita@Maine.gov

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Reubens Milo, ME
Project Location:
Project #:
Project Manager:
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker: MEDEP-EDD
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:
Results to Pete Eremita & Diana.M.McKenzie@Maine.gov

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-14A by TO-15	TO-15 *See Attached	TO-15 SIM	APH	FIXED GASES O_2, CO_2	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
L1015430-1	SG-1	9/30/10	1014	1029	-30	-7*	SV	SB	2.7L	537	0388		X		X	X			*Gauge Erratic
-2	SG-2	↓	950	1004	-30	-5	↓	↓	↓	217	0270		X		X	X			
-3	SG-3	↓	925	936	-29	-5	↓	↓	↓	199	0468		X		X	X			
-4	SG-4	↓	1043	1057	-30	-5	↓	↓	↓	325	0252		X		X	X			
-5	SG-5	↓	840	852	-30	-5	↓	↓	↓	476	0265		X		X	X			
-6	SG-6	↓	817	830	-30	-5	↓	↓	↓	175	0003		X		X	X			
-7	SG-7	↓	1128	1139	-30	-5	↓	↓	↓	109	0448		X		X	X			
-8	SG-8	↓	1117	1125	-30	-5	↓	↓	↓	261	0023		X		X	X			

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

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
[signature]	10/1/10 0900	UPS	
UPS	10/4/10 1003	[signature]	10/4/10 1003

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-02 (19-Jun-09)

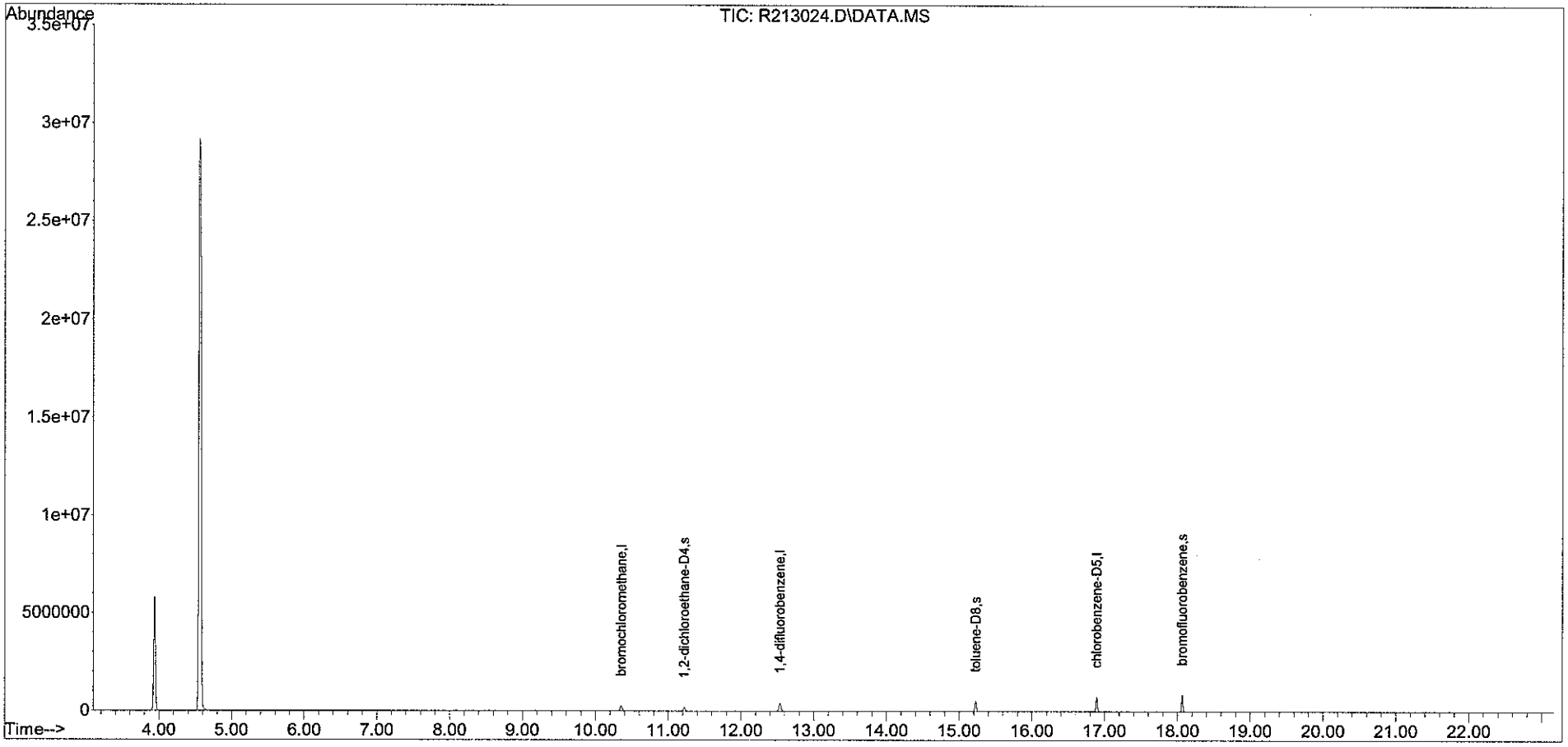
Serial_No:10111016:45

TO-15

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

Data Path : O:\Forensics\Data\AIR2\2010\101007T\
Data File : R213024.D
Acq On : 7 Oct 2010 5:01 pm
Operator : AIRPIANO2:aj
Sample : l1015430-01d,3,12.6250,250
Misc : wg436065,ical5215
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 07 19:55:15 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Jul 31 11:54:33 2010
Response via : Initial Calibration



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

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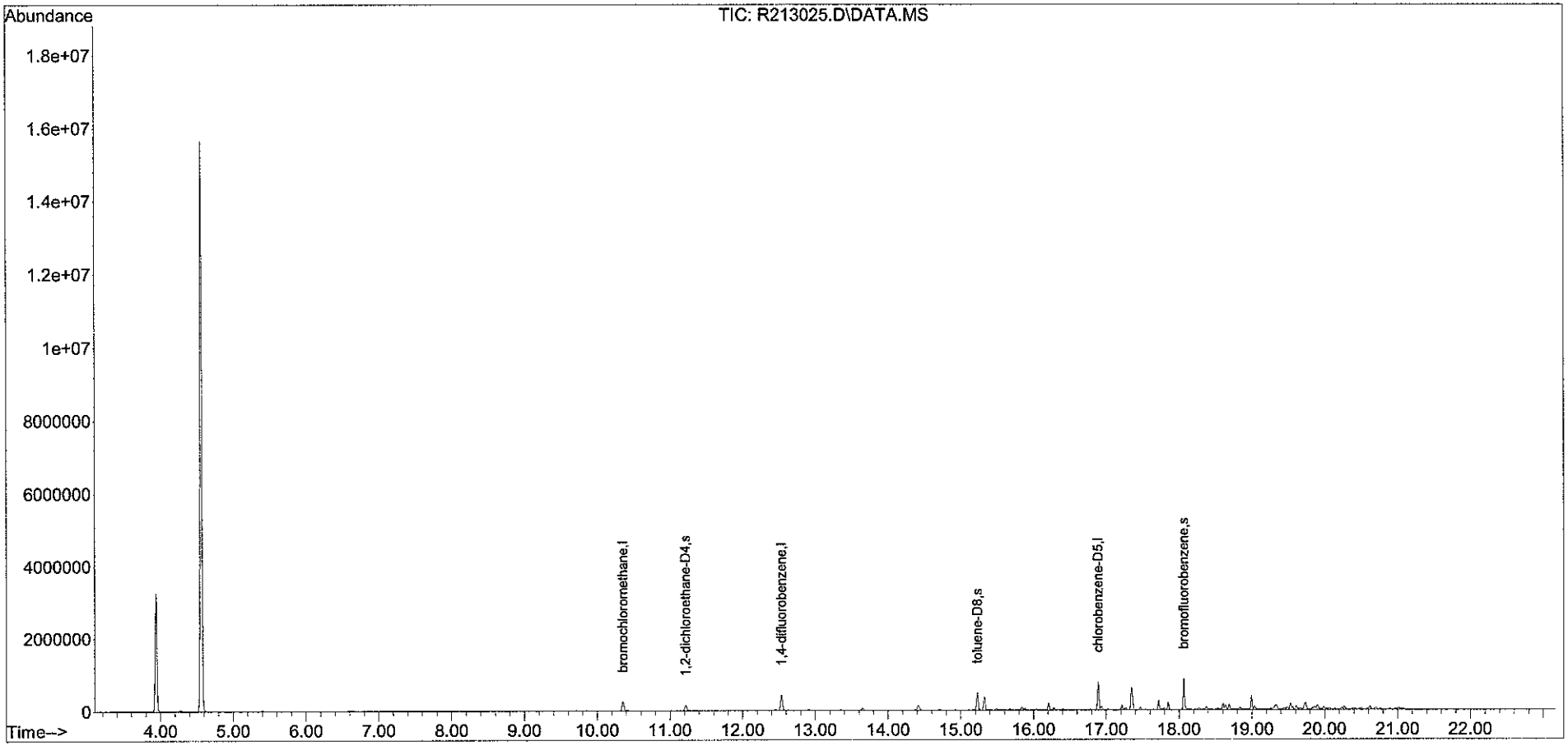
Data File : R213025.D
Acq On : 7 Oct 2010 5:39 pm
Operator : AIRPIANO2:aj
Sample : l1015430-02d,3,12.1250,250
Misc : wg436065,ical5215
ALS Vial : 10 Sample Multiplier: 1

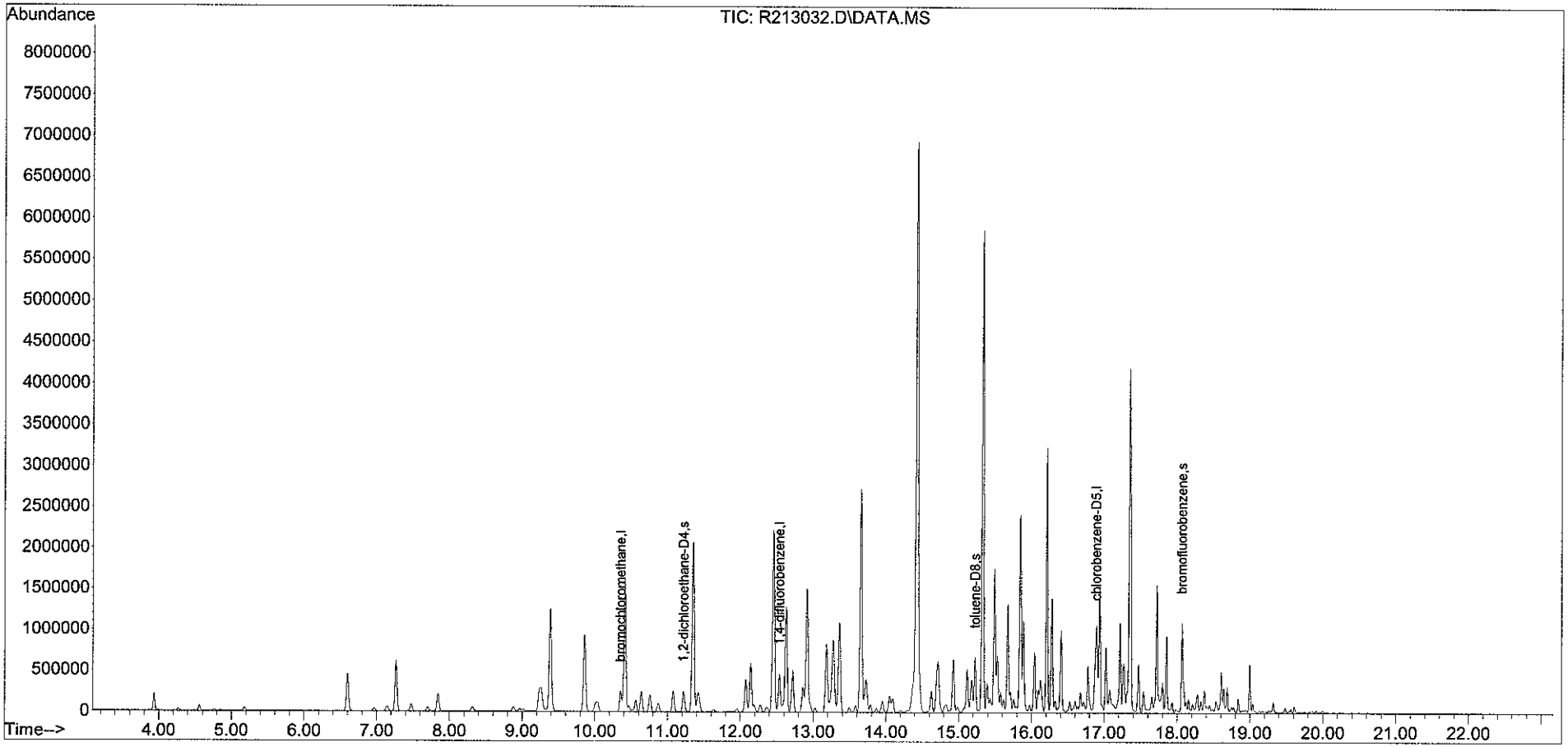
Quant Time: Oct 07 20:00:52 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Jul 31 11:54:33 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101007T\
Data File : R213032.D
Acq On : 7 Oct 2010 10:02 pm
Operator : AIRPIANO2:aj
Sample : l1015430-03d,3,0.1534,250
Misc : wg436065,ical5215
ALS Vial : 16 Sample Multiplier: 1

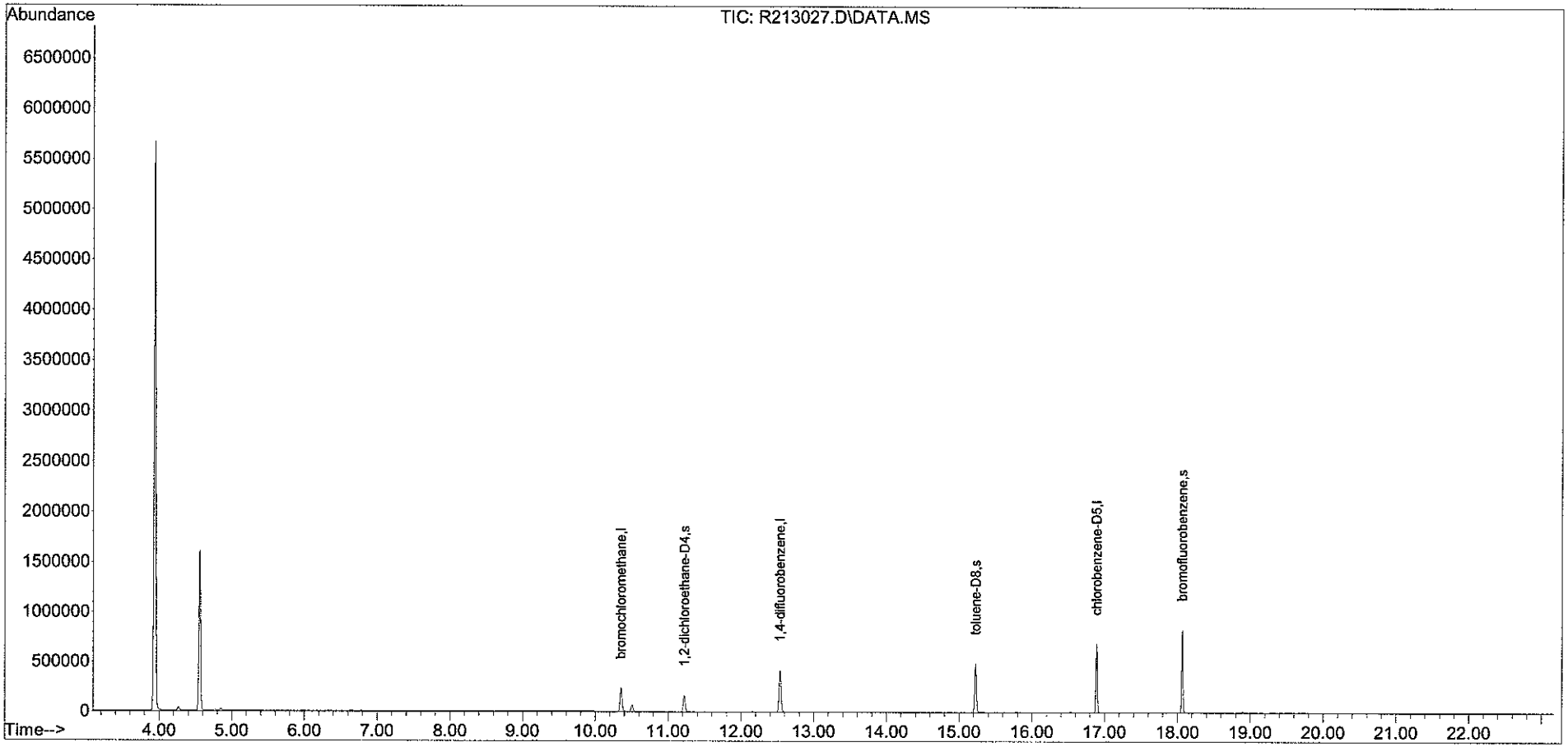
Quant Time: Oct 08 12:48:13 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Jul 31 11:54:33 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101007T\
Data File : R213027.D
Acq On : 7 Oct 2010 6:53 pm
Operator : AIRPIANO2:aj
Sample : l1015430-04d,3,23.750,250
Misc : wg436065,ical5215
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 07 20:03:04 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Jul 31 11:54:33 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101007T\
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Acq On : 7 Oct 2010 7:31 pm
Operator : AIRPIANO2:aj
Sample : 11015430-05d,3,14.5000,250
Misc : wg436065,ical5215
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 07 20:05:30 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
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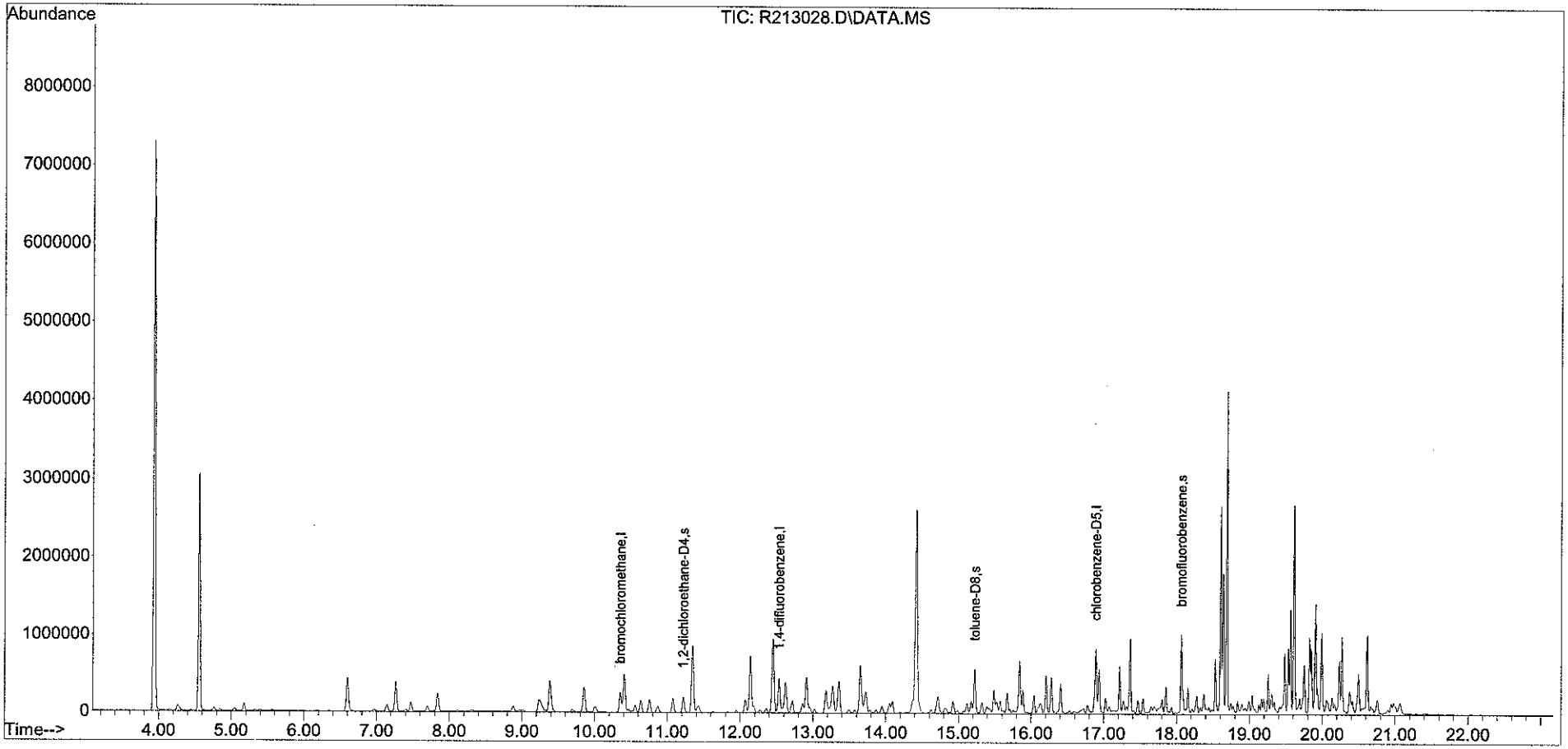
Response via : Initial Calibration



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

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Data File : R213029.D
Acq On : 7 Oct 2010 8:08 pm
Operator : AIRPIANO2:aj
Sample : l1015430-06d,3,14.6250,250
Misc : wg436065,ical5215
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 07 21:21:42 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
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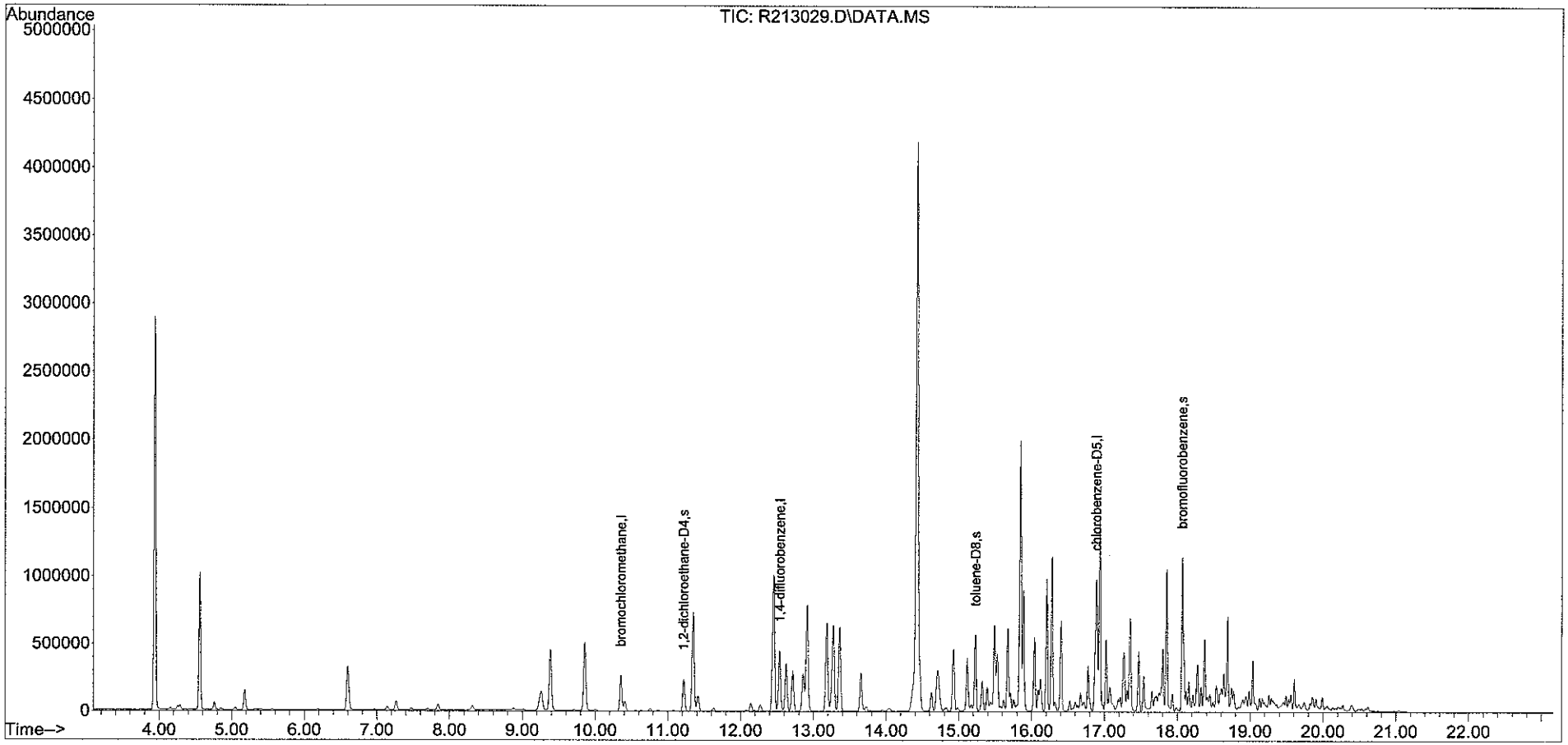
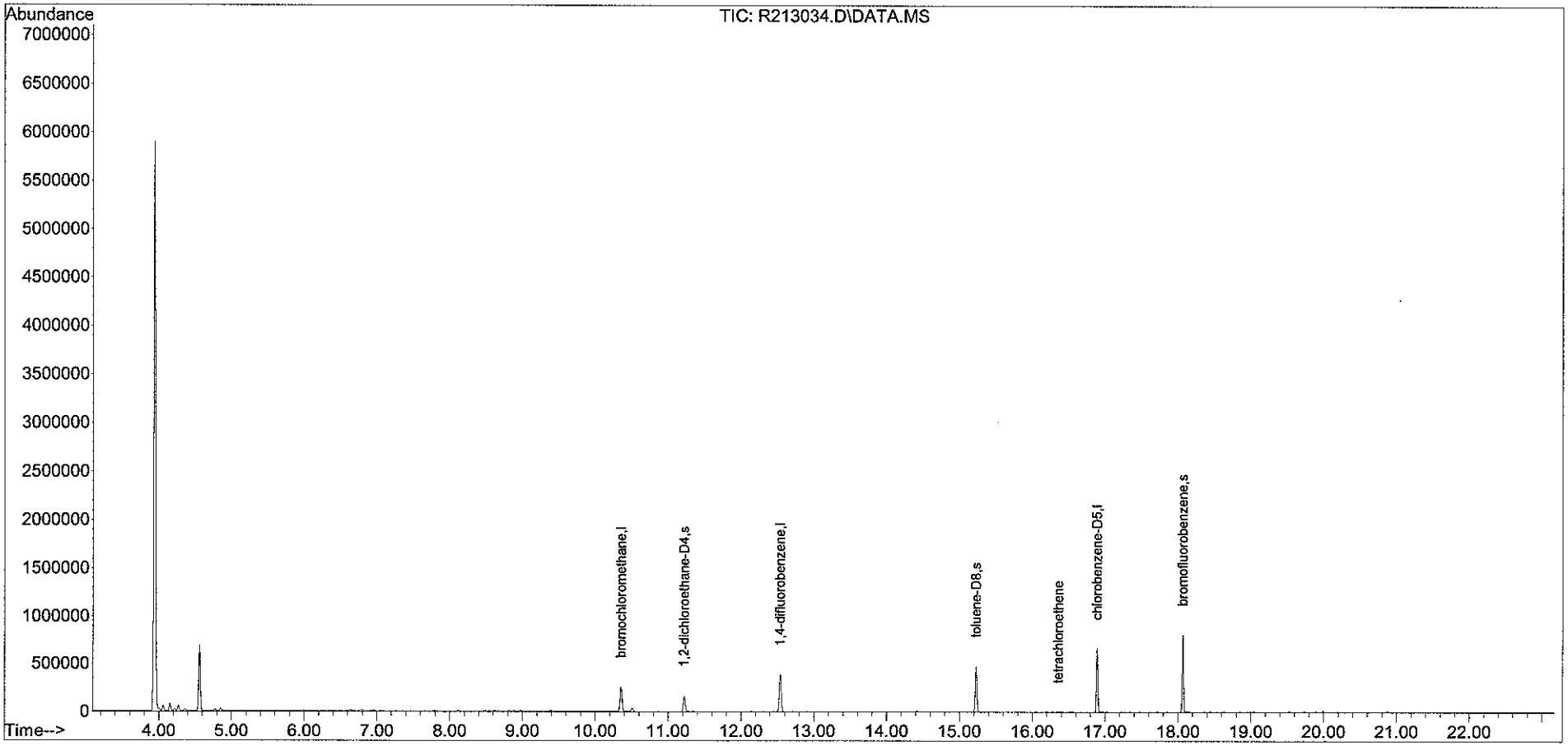
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101007T\
Data File : R213034.D
Acq On : 7 Oct 2010 11:17 pm
Operator : AIRPIANO2:aj
Sample : l1015430-07d,3,125,250
Misc : wg436065,ical5215
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 08 06:16:35 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Jul 31 11:54:33 2010
Response via : Initial Calibration



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

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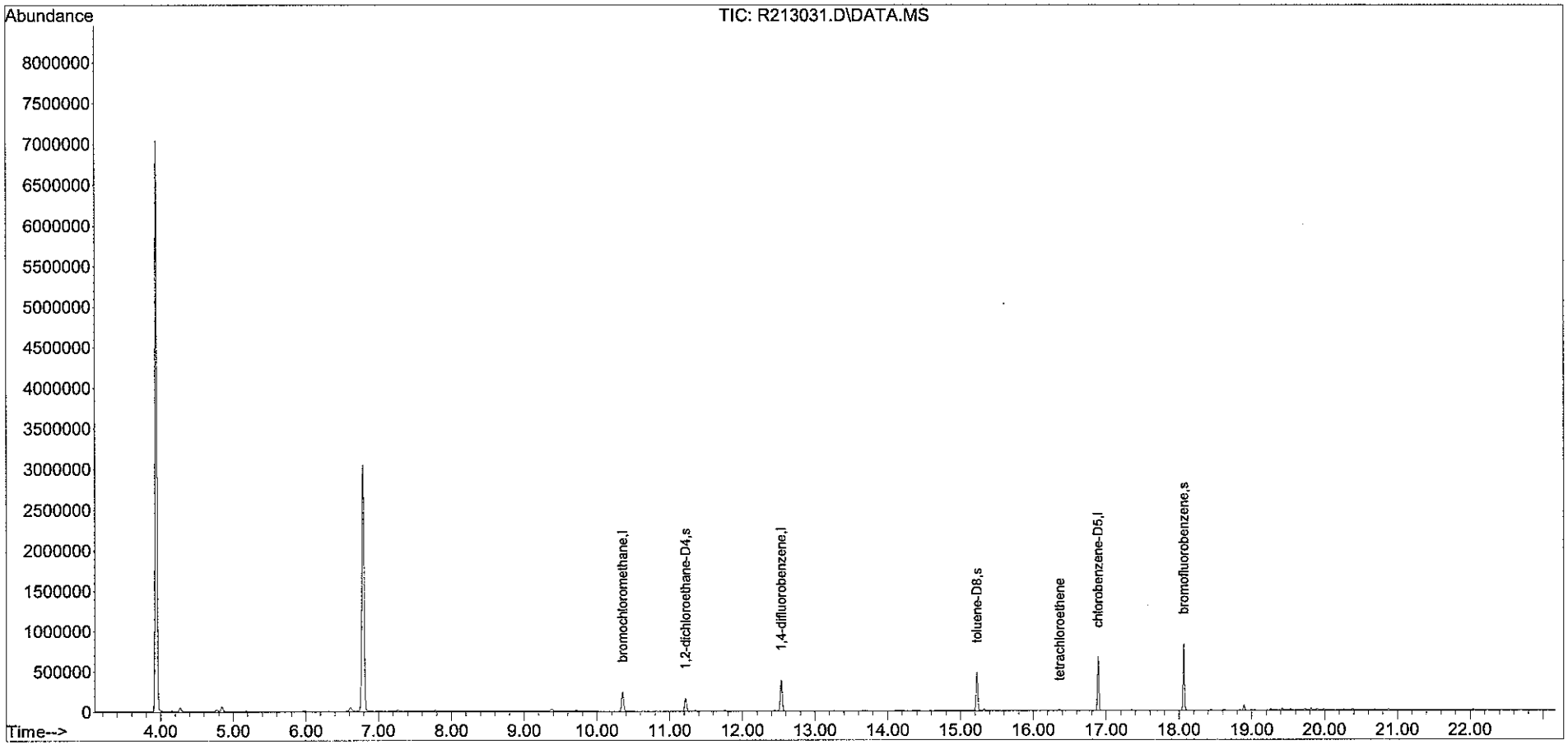
Data File : R213031.D
Acq On : 7 Oct 2010 9:24 pm
Operator : AIRPIANO2:aj
Sample : l1015430-08d,3,50,250
Misc : wg436065,ical5215
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 08 12:47:18 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007T\TALL100730.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Jul 31 11:54:33 2010
Response via : Initial Calibration



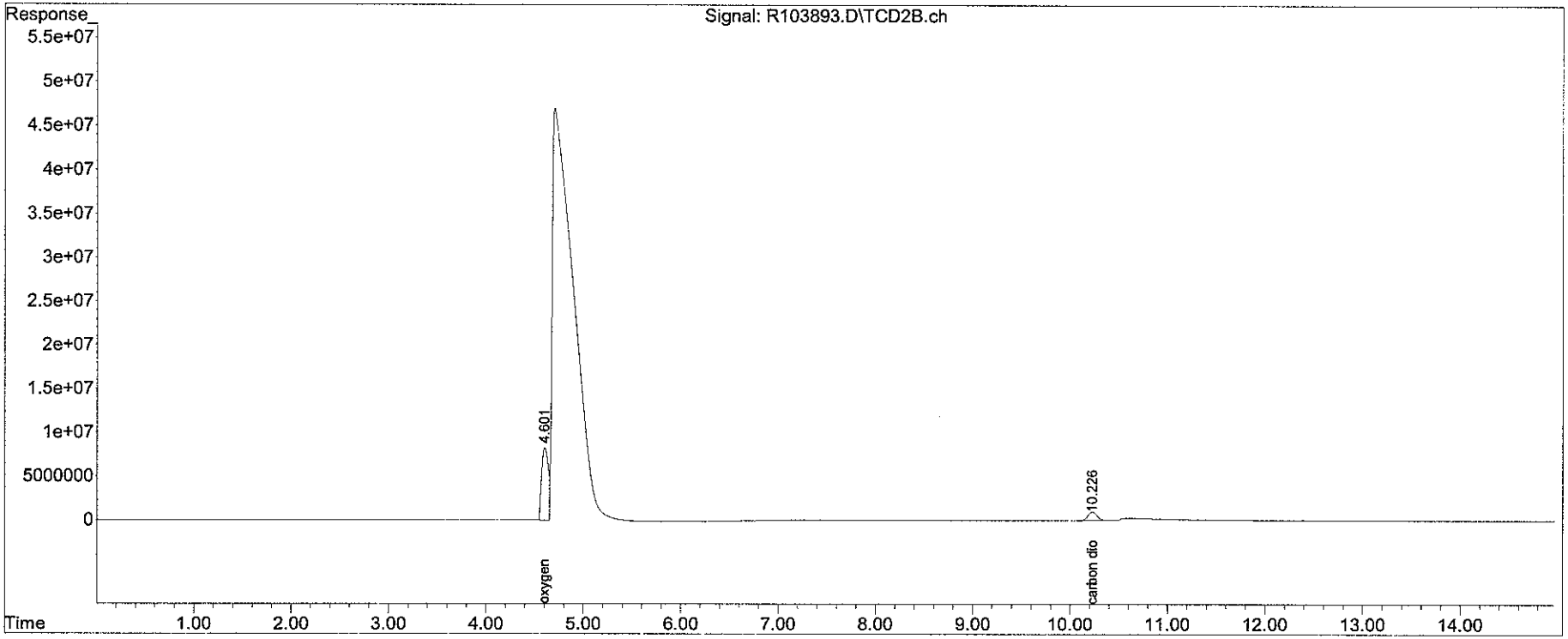
Fixed Gases

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103893.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 12:06 pm
Operator : airlab10:RY
Sample : L1015430-01D,4,0.3687,1
Misc : WG436611,ICAL5222
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 14:05:43 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

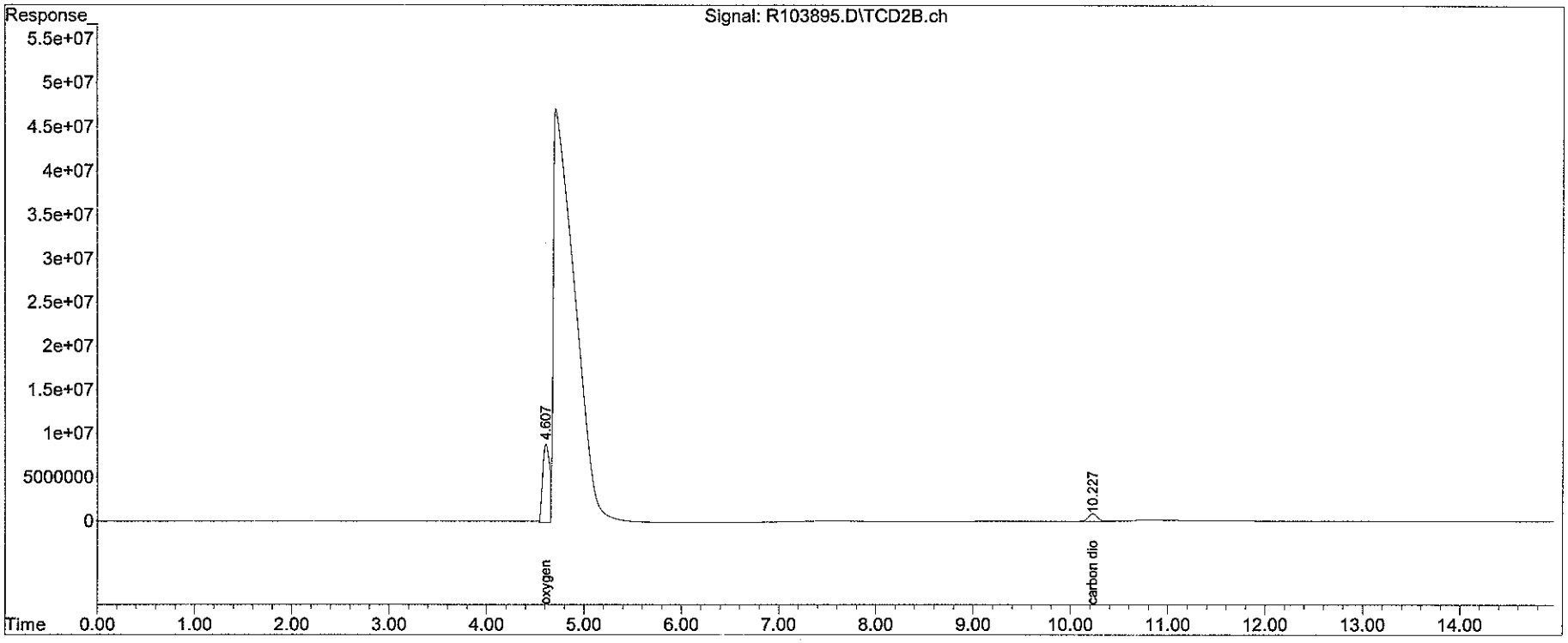


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103895.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 12:47 pm
Operator : airlab10:RY
Sample : L1015430-02D,4,0.4001,1
Misc : WG436611,ICAL5222
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 14:06:44 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

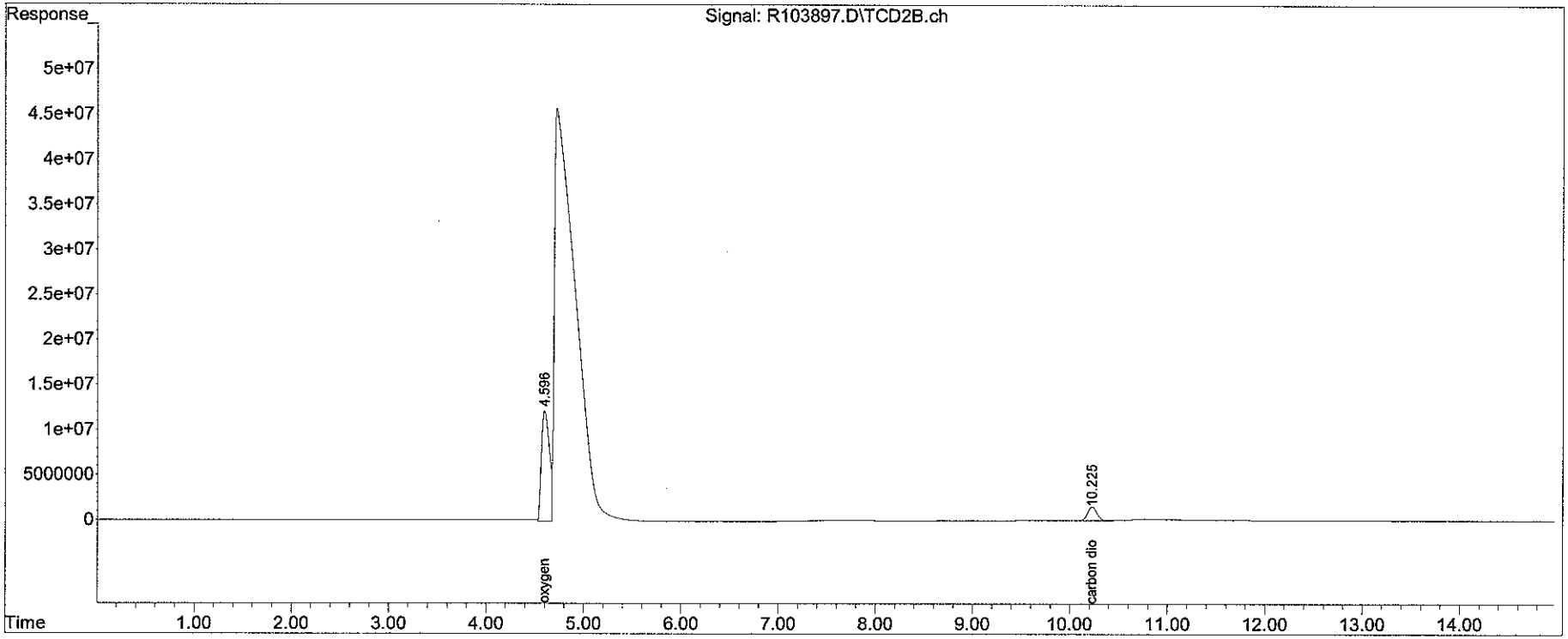


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103897.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 1:28 pm
Operator : airlab10:RY
Sample : L1015430-03D,4,0.6150,1
Misc : WG436611,ICAL5222
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 14:07:59 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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)

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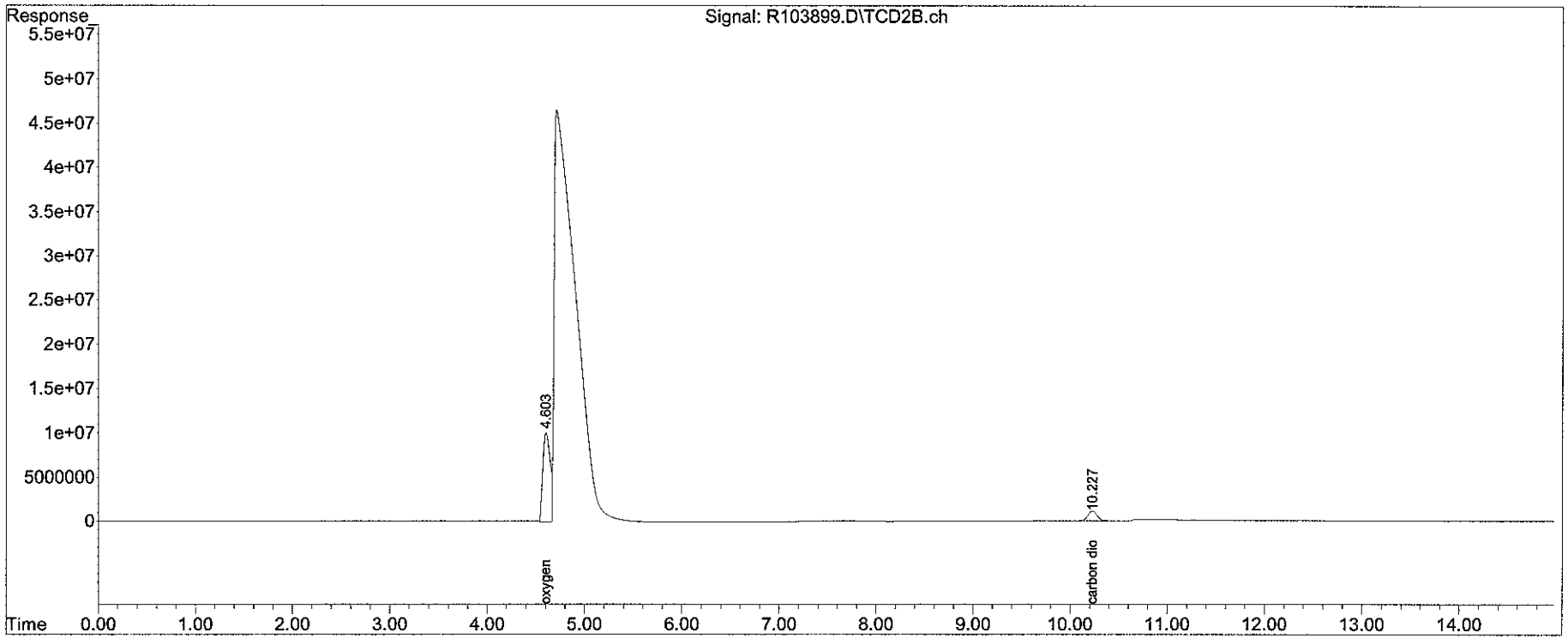
Acq On : 9 Oct 2010 2:09 pm
Operator : airlab10:RY
Sample : L1015430-04D,4,0.4750,1
Misc : WG436611,ICAL5222
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 14:54:49 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

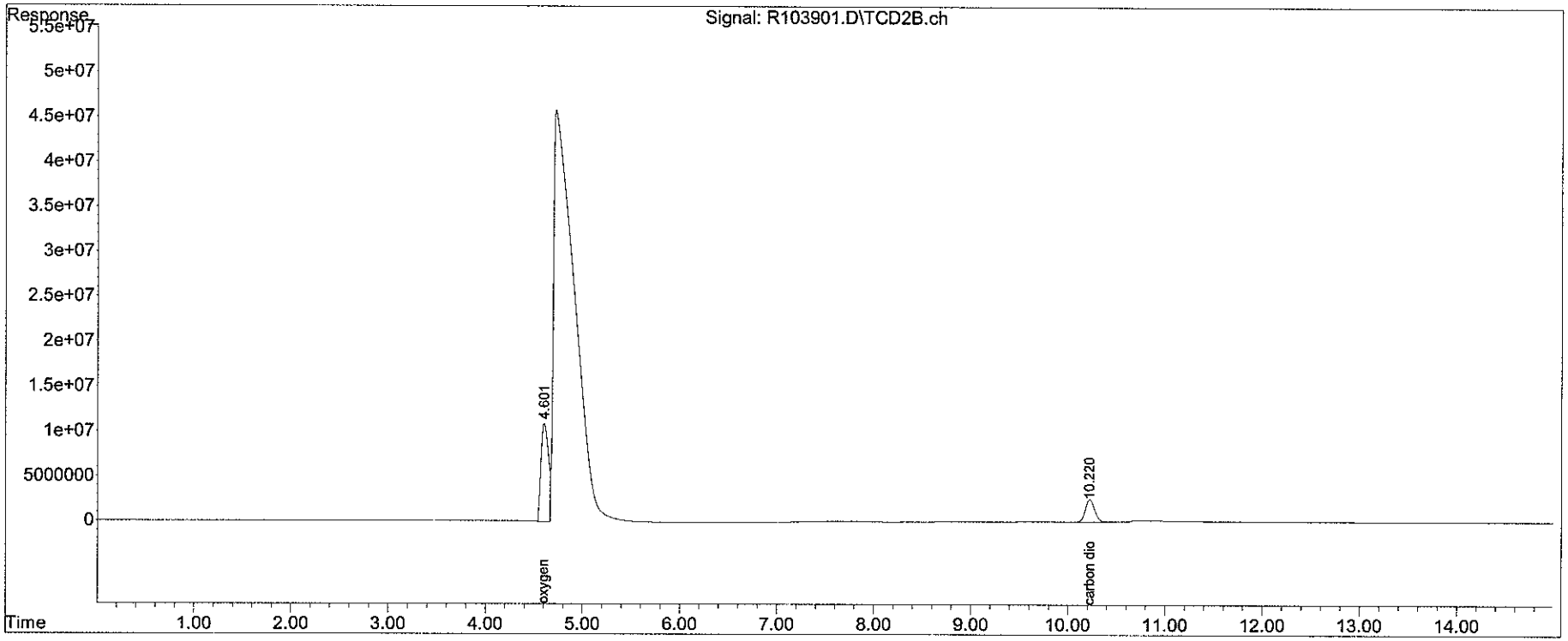


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103901.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 2:50 pm
Operator : airlab10:RY
Sample : L1015430-05D,4,0.5800,1
Misc : WG436611,ICAL5222
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 15:22:10 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

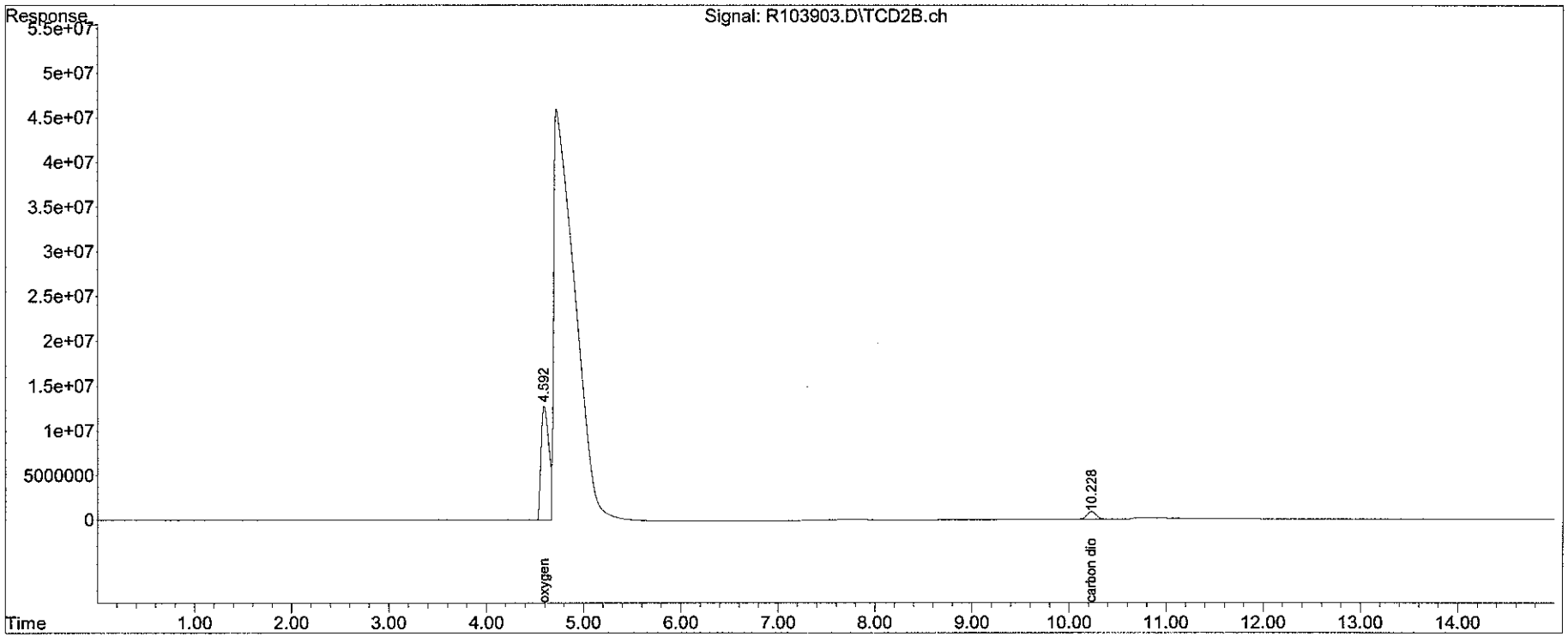


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103903.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 3:31 pm
Operator : airlab10:RY
Sample : L1015430-06D,4,0.5850,1
Misc : WG436611,ICAL5222
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 15:49:27 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

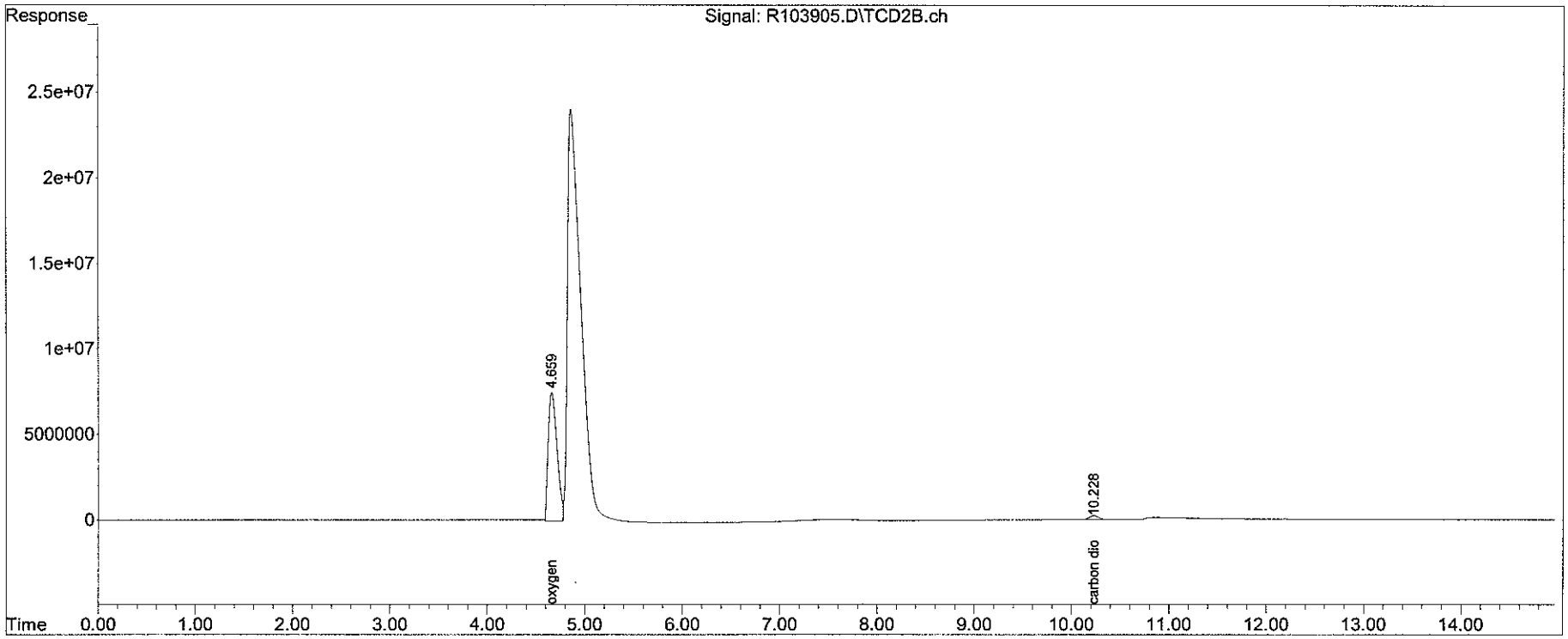


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103905.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 4:12 pm
Operator : airlab10:RY
Sample : L1015430-07D,4,0.3709,1
Misc : WG436611,ICAL5222
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 16:28:15 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

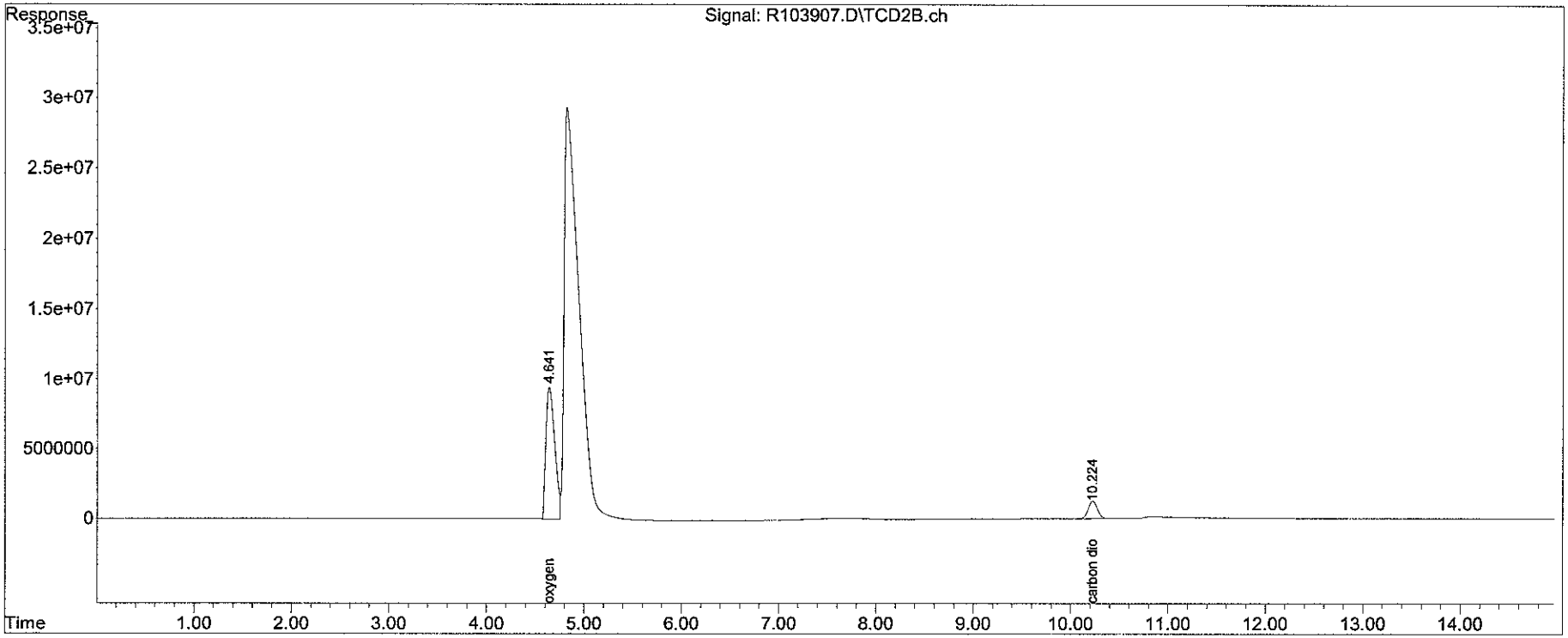


Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\airlab10\101009FG\
Data File : R103907.D
Signal(s) : TCD2B.ch
Acq On : 9 Oct 2010 4:53 pm
Operator : airlab10:RY
Sample : L1015430-08D,4,0.4977,1
Misc : WG436611,ICAL5222
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 17:13:33 2010
Quant Method : O:\Forensics\Data\airlab10\101009FG\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 :

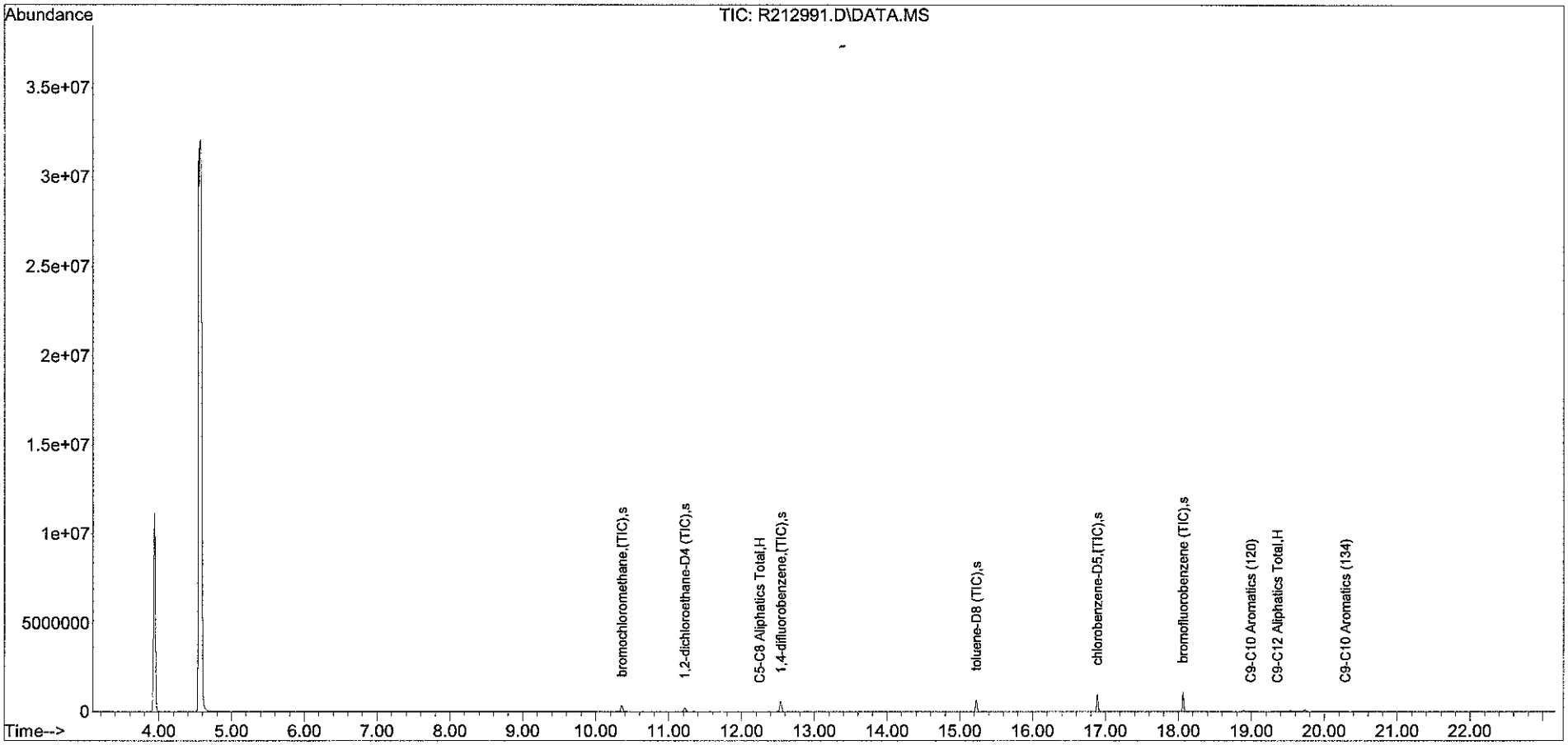


APH

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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212991.D
Acq On : 6 Oct 2010 5:20 pm
Operator : AIRPIANO2:aj
Sample : l1015430-01d,3,50,250
Misc : wg436066,ical5208
ALS Vial : 9 Sample Multiplier: 1

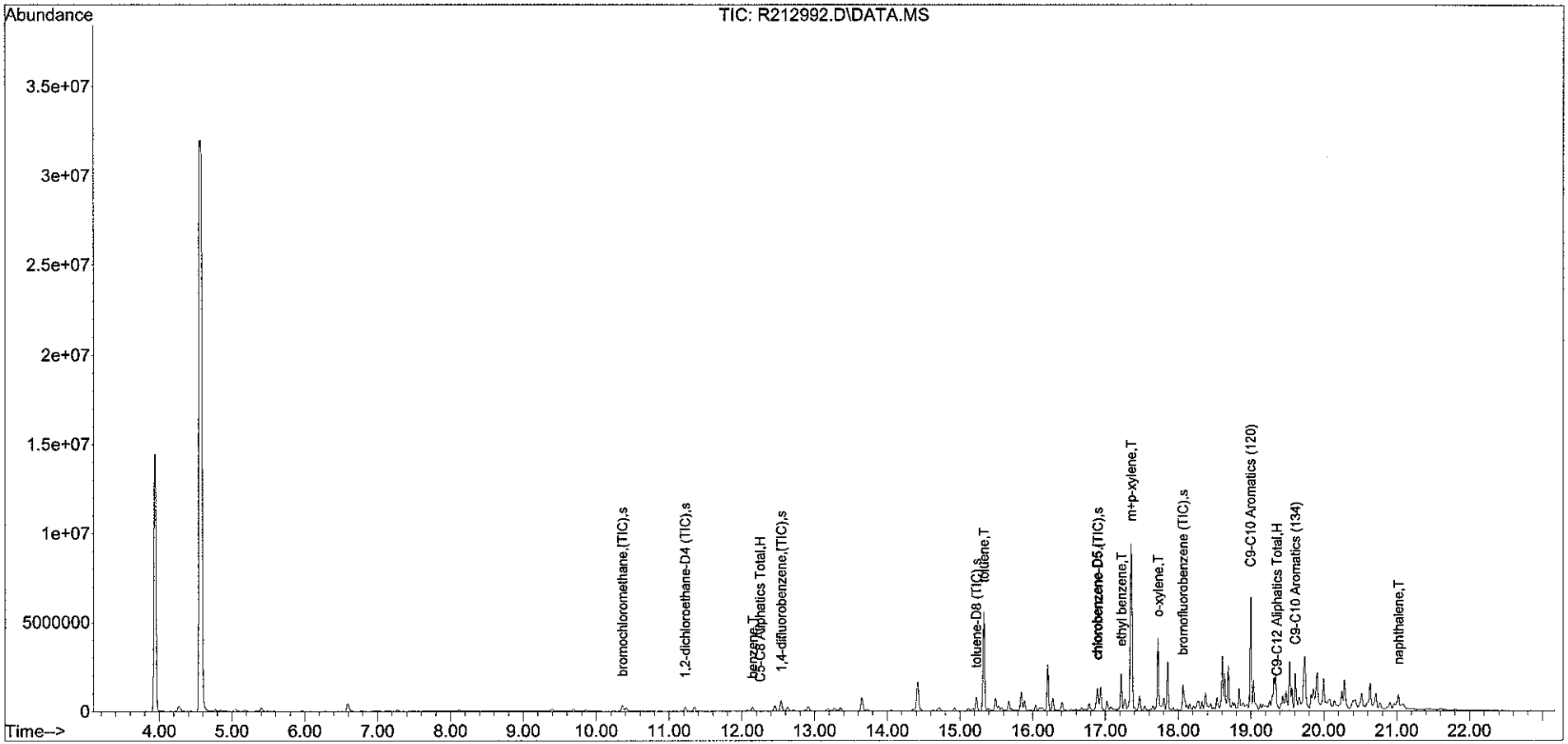
Quant Time: Oct 07 09:04:56 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212992.D
Acq On : 6 Oct 2010 5:56 pm
Operator : AIRPIANO2:aj
Sample : l1015430-02d,3,125,250
Misc : wg436066,ical5208
ALS Vial : 10 Sample Multiplier: 1

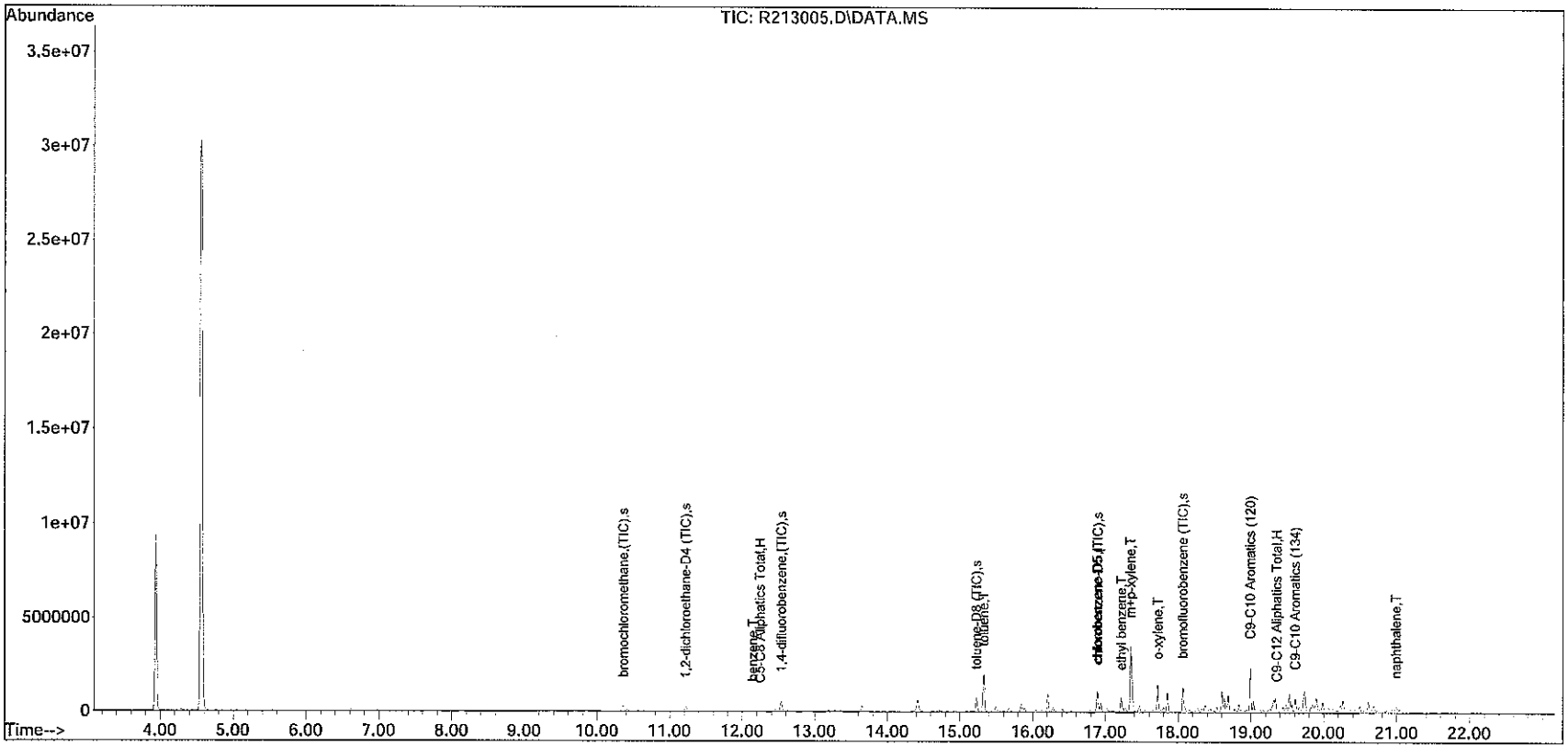
Quant Time: Oct 07 09:06:16 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R213005.D
Acq On : 7 Oct 2010 2:02 am
Operator : AIRPIANO2:aj
Sample : l1015430-02d2,3,50,250
Misc : wg436066,ical5208
ALS Vial : 10 Sample Multiplier: 1

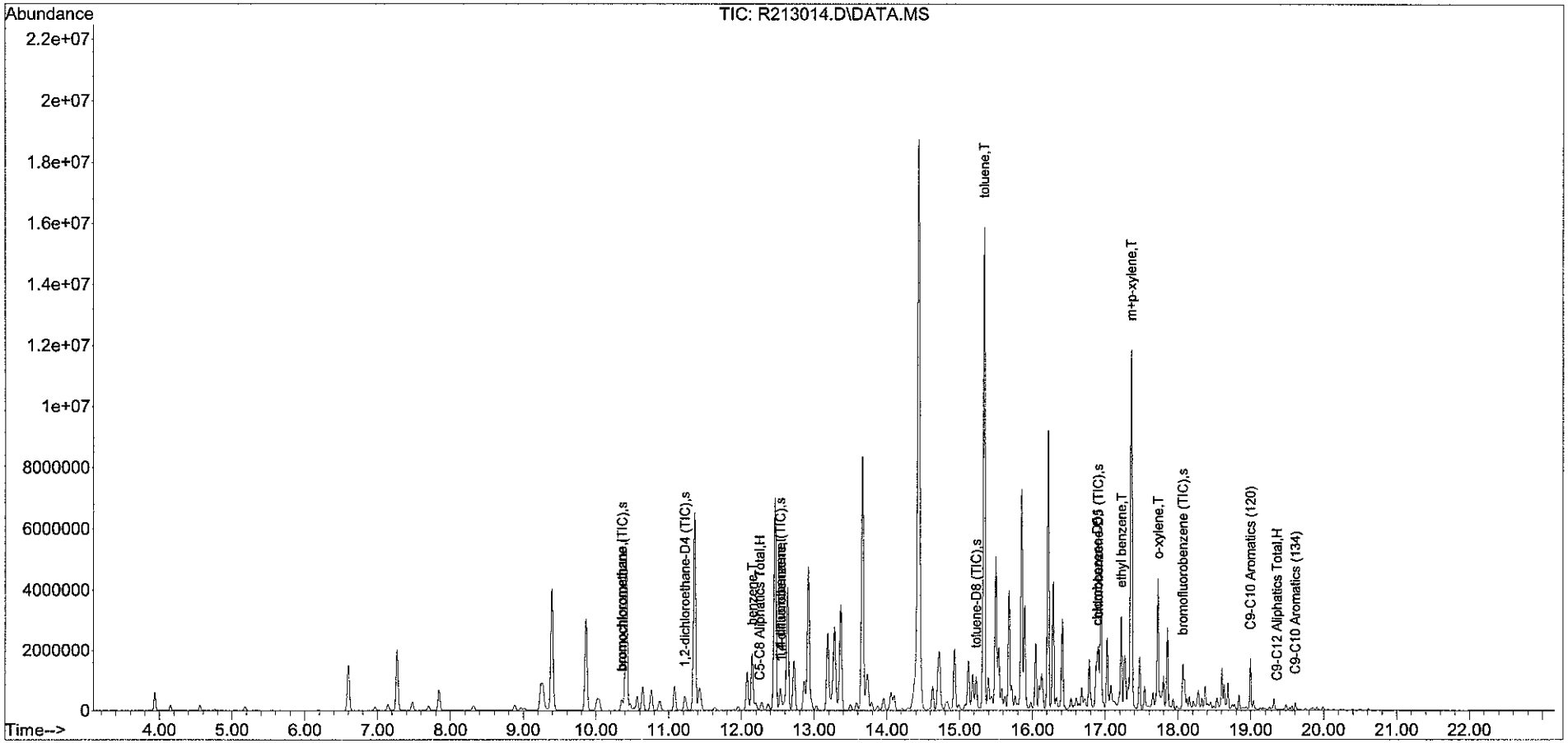
Quant Time: Oct 07 09:28:20 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R213014.D
Acq On : 7 Oct 2010 9:41 am
Operator : AIRPIANO2:aj
Sample : l1015430-03,3,0.3836,250
Misc : wg436065,ical5215
ALS Vial : 16 Sample Multiplier: 1

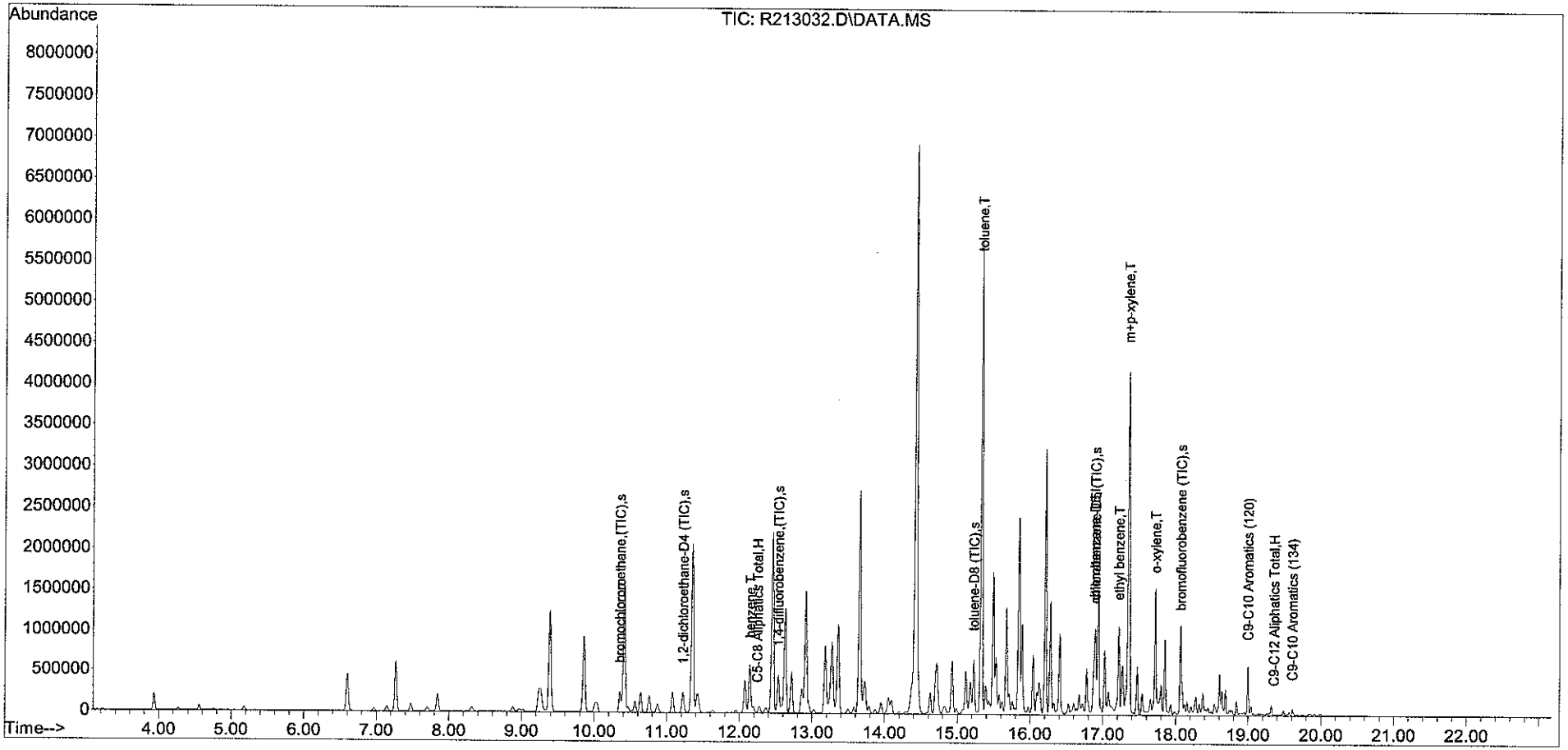
Quant Time: Oct 07 10:30:19 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101007A\
Data File : R213032.D
Acq On : 7 Oct 2010 10:02 pm
Operator : AIRPIANO2:aj
Sample : l1015430-03d,3,0.1534,250
Misc : wg436066,ical5208
ALS Vial : 16 Sample Multiplier: 1

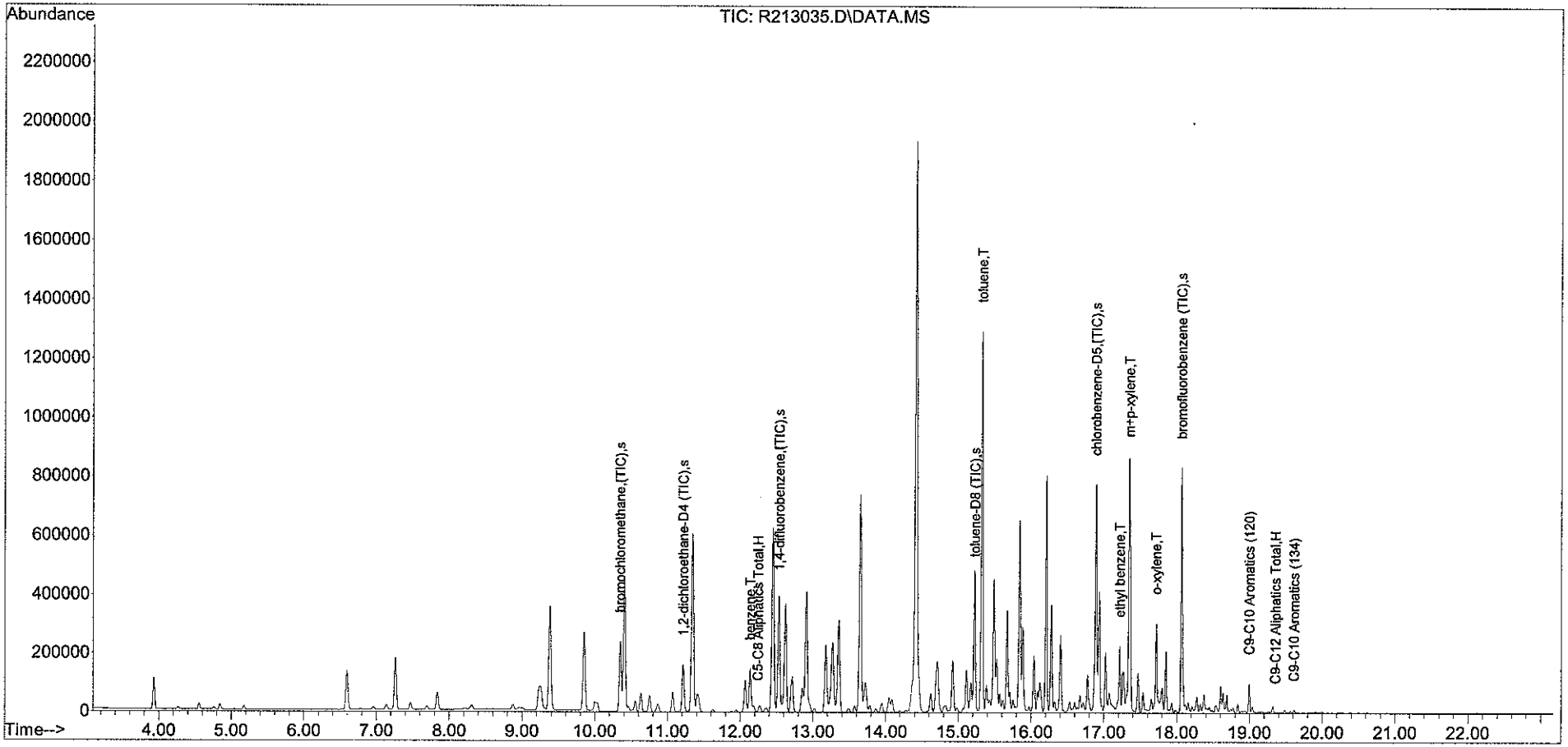
Quant Time: Oct 08 12:27:10 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101007A\
Data File : R213035.D
Acq On : 8 Oct 2010 6:40 am
Operator : AIRPIANO2:aj
Sample : l1015430-03d2,3,0.0767,250
Misc : wg436066,ical5208
ALS Vial : 16 Sample Multiplier: 1

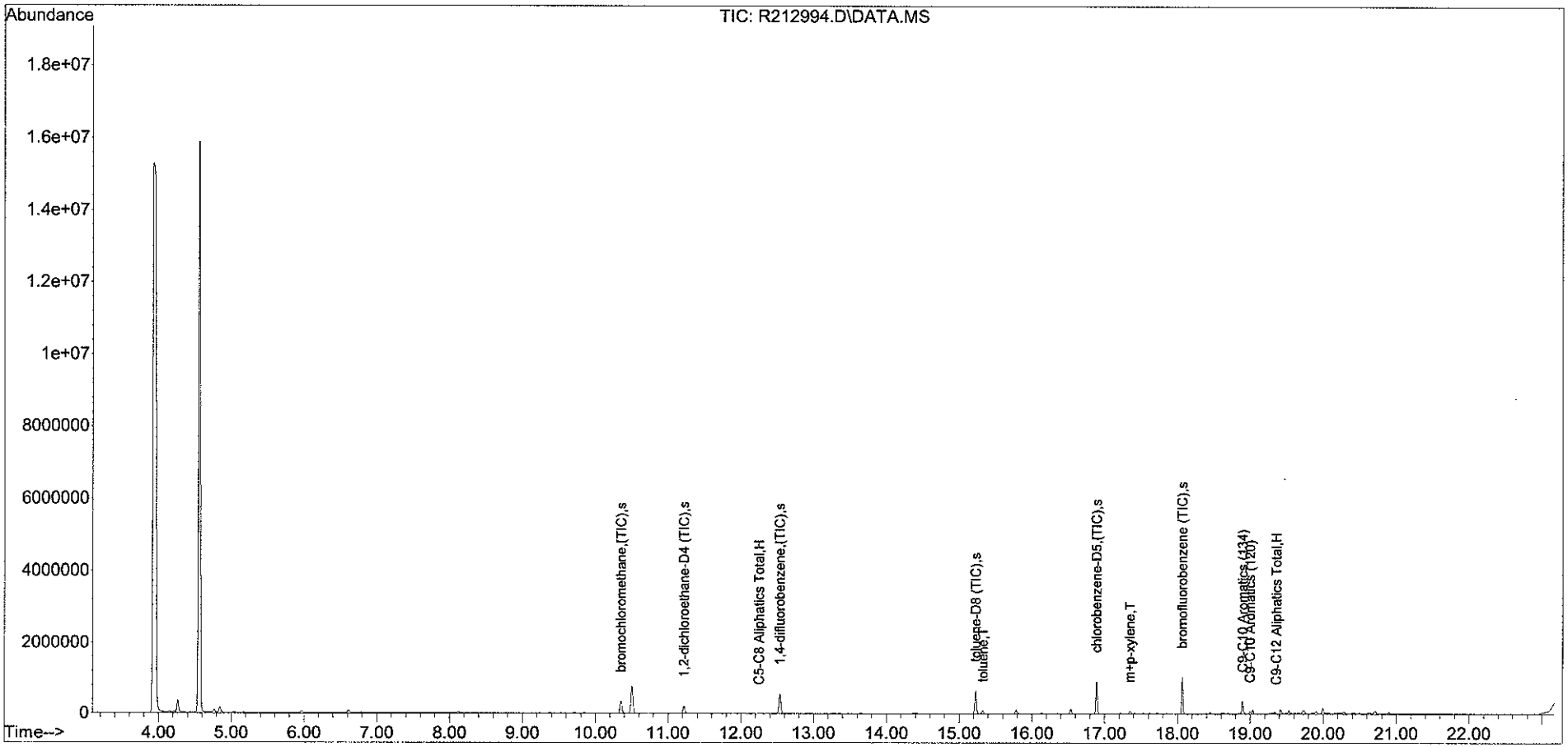
Quant Time: Oct 08 12:30:44 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101007A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212994.D
Acq On : 6 Oct 2010 7:13 pm
Operator : AIRPIANO2:aj
Sample : l1015430-04,3,250,250
Misc : wg436066,ical5208
ALS Vial : 11 Sample Multiplier: 1

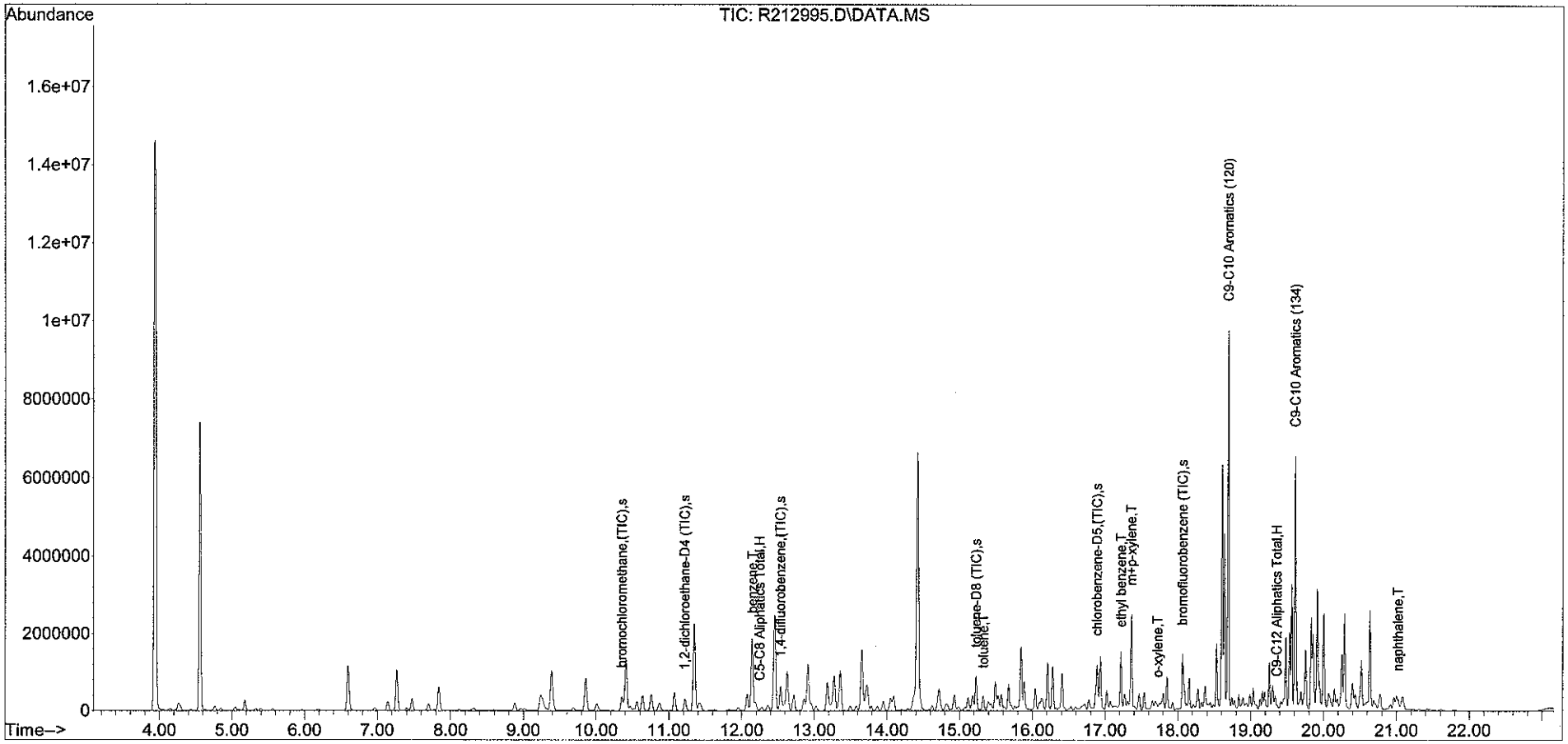
Quant Time: Oct 07 09:18:43 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212995.D
Acq On : 6 Oct 2010 7:50 pm
Operator : AIRPIANO2:aj
Sample : l1015430-05d,3,50,250
Misc : wg436066,ical5208
ALS Vial : 12 Sample Multiplier: 1

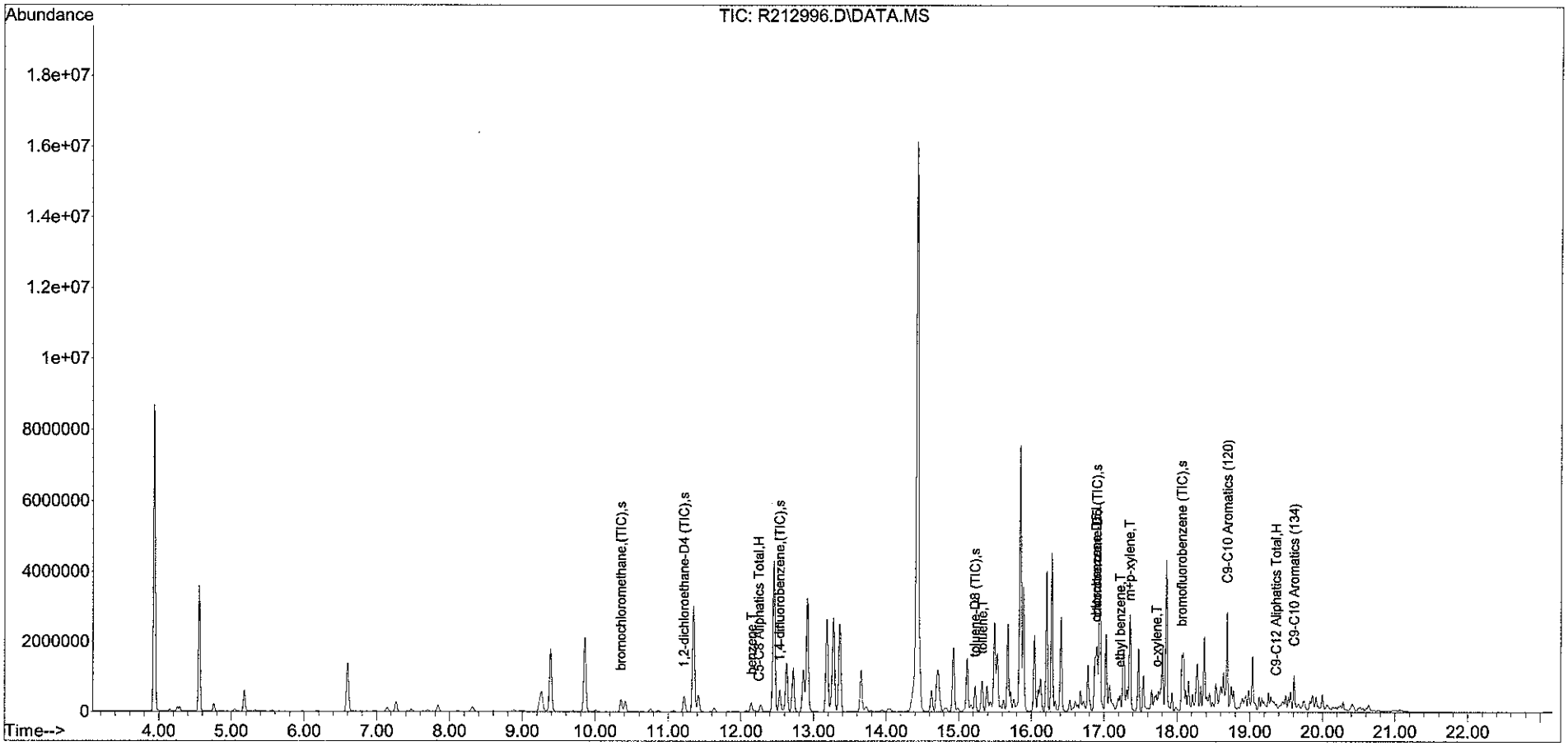
Quant Time: Oct 07 09:24:13 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212996.D
Acq On : 6 Oct 2010 8:27 pm
Operator : AIRPIANO2:aj
Sample : l1015430-06d,3,50,250
Misc : wg436066,ical5208
ALS Vial : 13 Sample Multiplier: 1

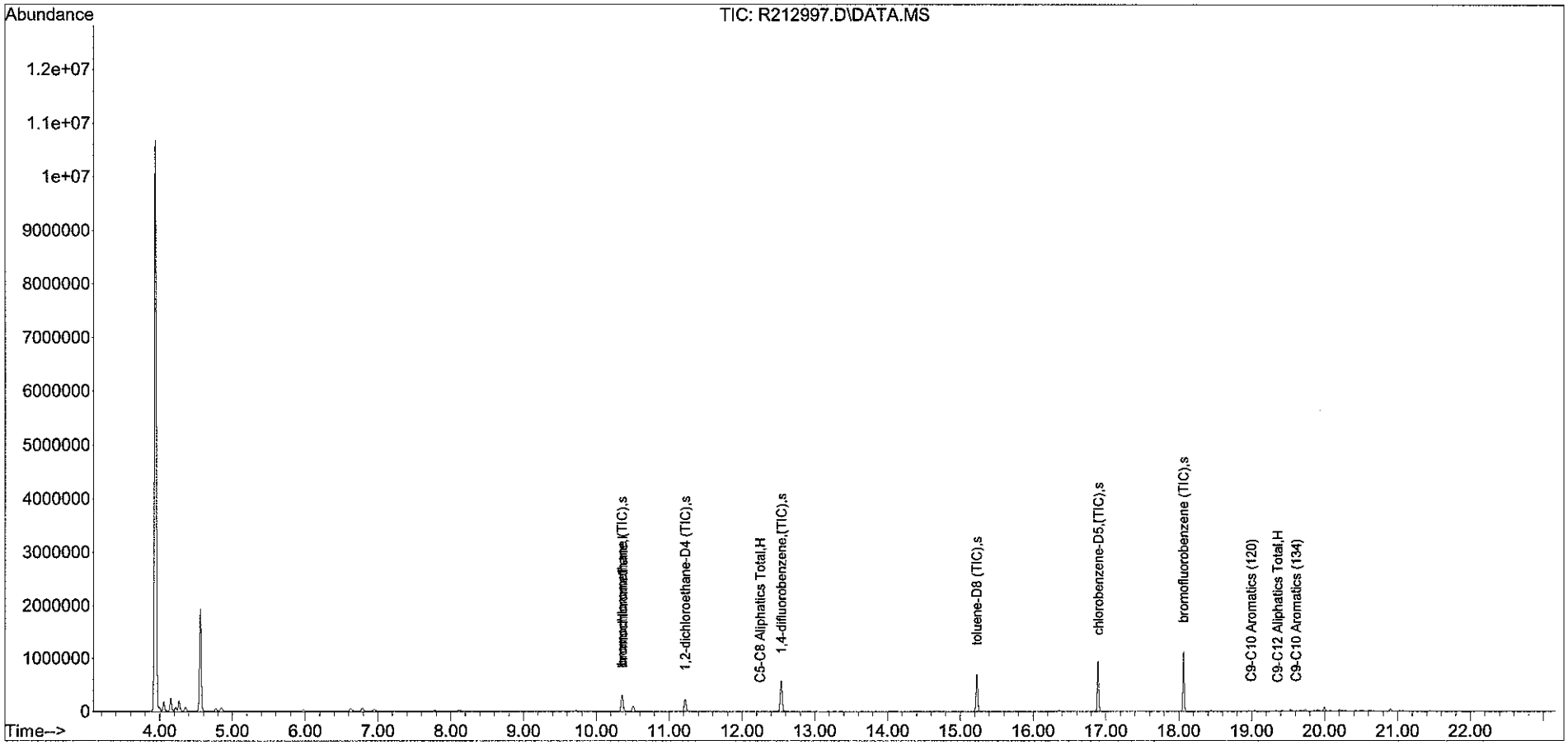
Quant Time: Oct 07 09:25:30 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212997.D
Acq On : 6 Oct 2010 9:04 pm
Operator : AIRPIANO2:aj
Sample : l1015430-07,3,250,250
Misc : wg436066,ical5208
ALS Vial : 14 Sample Multiplier: 1

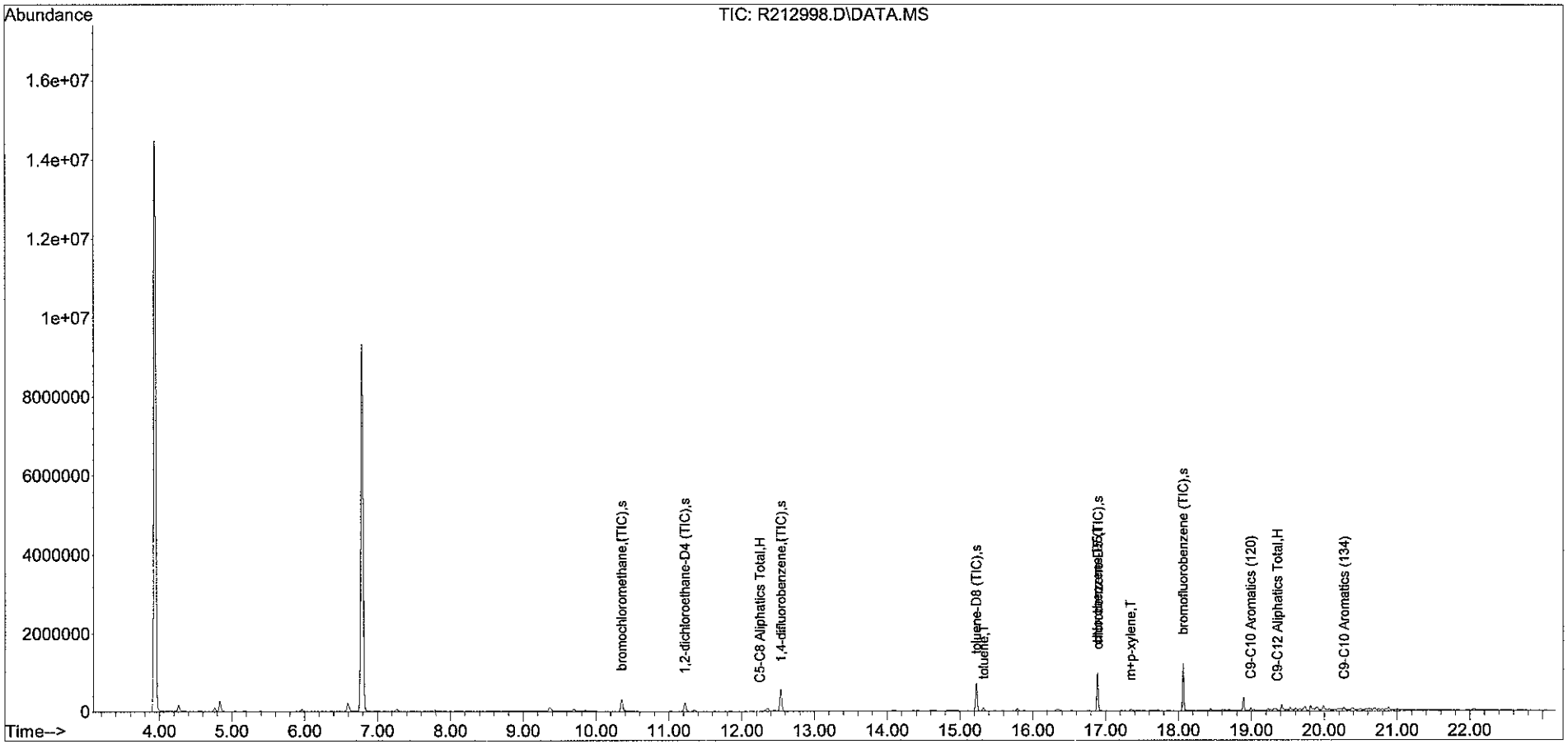
Quant Time: Oct 07 09:26:06 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



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

Data Path : O:\Forensics\Data\AIR2\2010\101006A\
Data File : R212998.D
Acq On : 6 Oct 2010 9:40 pm
Operator : AIRPIANO2:aj
Sample : l1015430-08d,3,125,250
Misc : wg436066,ical5208
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 07 09:26:46 2010
Quant Method : O:\Forensics\Data\AIR2\2010\101006A\APH100729.M
Quant Title : APH Analysis
QLast Update : Thu Jul 29 12:11:57 2010
Response via : Initial Calibration



ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 67945
CLIENT: HEL
PROJECT: HAI 388-10

COOLER NUMBER: 72
NUMBER OF COOLERS: 1
DATE RECEIVED: 10/4/10

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 10/4/10

1. Cooler received by(initials): IA — Date Received:
2. Circle one: Hand delivered (If so, skip 3) — Shipped
3. Did cooler come with a shipping slip? Y (N/A)

3a. Enter carrier name and airbill number here: —

4. Were custody seals on the outside of cooler? Y (N)
How many & where: — Seal Date: — Seal Name: —
5. Did the custody seals arrive unbroken and intact upon arrival? Y (N/A)
6. COC#: —

7. Were Custody papers filled out properly (ink,signed, etc)?	(Y)	N
8. Were custody papers sealed in a plastic bag?	(Y)	N
9. Did you sign the COC in the appropriate place?	(Y)	N
10. Was the project identifiable from the COC papers?	(Y)	N
11. Was enough ice used to chill the cooler?	(Y)	N

Temp. of cooler: 4°C

B. Log-In: Date samples were logged in: 10/4/10 By: JSB

12. Type of packing in cooler (bubble wrap, popcorn)	(Y)	N
13. Were all bottles sealed in separate plastic bags?	(Y)	N
14. Did all bottles arrive unbroken and were labels in good condition?	(Y)	N
15. Were all bottle labels complete(ID,Date,time,etc.)	(Y)	N
16. Did all bottle labels agree with custody papers?	(Y)	N
17. Were the correct containers used for the tests indicated:	(Y)	N
18. Were samples received at the correct pH?	Y	(N/A)
19. Was sufficient amount of sample sent for the tests indicated?	(Y)	N
20. Were bubbles absent in VOA samples?	Y	(N)

If NO, List Sample ID's and Lab #s: MW-85, MW-4, MW-14 all had 1 vial w/ bubble less than pea sized → MW-115 labeled last
MW-13 had 2 vials w/ less than pea size bubbles labeled last

21. Laboratory labeling verified by (initials): AP Date: 10/4/10