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PROPERTIES

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Alameda County  
Environmental Health

16 October 2009  
Project No. 2543.05

Mr. Paresh Khatri  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

Subject: Groundwater Monitoring Report Third Quarter 2008  
Soil Vapor Sampling Report  
2855 Mandela Parkway  
Oakland, California

Dear Mr. Khatri:

As a legally authorized representative of BALCO properties, LLC, and on behalf of BALCO properties, LLC, I declare, under penalty of perjury, that the information and/or recommendations contained in the attached documents *Groundwater Monitoring Report Third Quarter 2008, 2855 Mandela Parkway, Oakland, California*, and *Soil Vapor Sampling Report, 2855 Mandela Parkway, Oakland, California*, are true and correct to the best of my knowledge.

Sincerely yours,

Mollie Gilbert  
BALCO Properties, LLC

# Treadwell & Rollo

19 November 2009  
Project No. 2543.05

Mr. Paresh Khatri  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

Subject: Soil Vapor Sampling Report  
2855 Mandela Parkway  
Oakland, California

Dear Mr. Khatri:

On behalf of BALCO properties, LLC, Treadwell and Rollo, Inc (Treadwell & Rollo) is pleased to present this Soil Vapor Sampling Report for the property located at 2855 Mandela Parkway in Oakland, California.

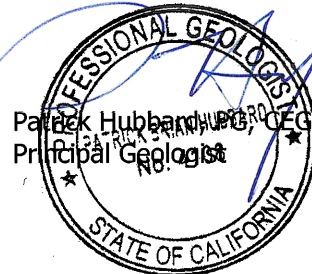
If you have any questions please call Mr. Greg Johnson at (510) 874-4500, ext. 539.

Sincerely yours,  
TREADWELL & ROLLO, INC.



Greg Johnson, REA  
Senior Project Scientist

25430504.OAK.LTR



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**SOIL VAPOR SAMPLING REPORT**  
**2855 Mandela Parkway**  
**Oakland, California**

**BALCO Properties, LLC**  
**Oakland, California**

**19 November 2009**  
**Project No. 2543.05**

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## SOIL VAPOR SAMPLING REPORT 2855 MANDELA PARKWAY Oakland, California

### 1.0 INTRODUCTION

This report presents results of soil vapor sampling conducted on the 12 and 15 October 2009 at 2855 Mandela Parkway, Oakland, California (Site) (Figure 1). Soil vapor sampling was performed by Treadwell and Rollo, Inc. (Treadwell & Rollo) on behalf of BALCO Properties, LLC. The soil vapor sampling was conducted in accordance with the *Soil Vapor Sampling Work Plan*, dated October 2008 and *Additional Purge Volume Calculations*, dated November 2008 prepared and submitted by Treadwell and Rollo and approved by Alameda County Environmental Health (ACEH). These documents were prepared in general accordance with the 2003 Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (LARWQCB) guideline presented in *Advisory – Active Soil Gas Investigations* and the 2004 DTSC and California Environmental Protection Agency (Cal EPA) guideline presented in *Interim Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*. The *Soil Vapor Sampling Work Plan* included a liquid tracer compound (isopropyl alcohol) to check for leaks in the sampling equipment. Based on a review of the results of Cal EPA vapor intrusion workshops conducted in June 2009, Treadwell & Rollo proposed to ACEH to replace isopropyl alcohol with helium. This proposed change to the procedure was approved by ACEH on 1 October 2009.

### 2.0 BACKGROUND

#### 2.1 Site Description and History

The property is located at 2855 Mandela Parkway and is bordered by Mandela Parkway and Willow Street to the east, 26th Street to the South, Wood Street to the West, and 32nd Street to the North (Figure 2). The existing building at the Site is a 143,000 square foot, single-story industrial structure underlain by a reinforced concrete slab. Several areas outside of the building are paved with asphalt and allocated for tenant parking. The building is currently used for a number of commercial activities. The building was originally constructed in 1941 and operated until approximately 1983 by International Harvester as a truck service and sales facility. A waste oil underground storage tank (UST) and a 350-gallon gasoline UST were removed from the Site in 1991. The former gasoline UST apparently leaked leaving free-phase product in the shallow soil and groundwater beneath the Site. In January 2004, a draft Interim Corrective Action Plan (ICAP) for removing free-phase gasoline from the groundwater was submitted to the ACEH. This plan was approved with stipulations by the ACEH in a letter dated February 10, 2004.

## **2.2 Site Geology**

Geologic conditions at the Site consist of approximately 2 to 8 feet (ft) of relatively sandy fill material underlain by Bay Mud to a depth of at least 24 ft below the ground surface (bgs). The clayey Bay Mud appears to include discontinuous zones of sandier soil and organic matter (peat).

The stabilized groundwater depth is affected by seasonal variations but has historically been recorded at approximately 8 to 10 ft bgs. During the most recent groundwater monitoring event in 2008, groundwater depths ranged from approximately 5 to 11 ft bgs. However, a shallower localized (i.e., discontinuous) perched water zone occurs at the interface between the fill and the Bay Mud. The shallow perched water contains only minor concentrations of dissolved total petroleum hydrocarbons as gasoline (TPHg) and TPHg constituents. Free product levels in monitoring wells vary depending upon factors including groundwater level and time between sampling events (longer time allows for increased free product within monitoring wells). Free product levels were most recently measured in monitoring wells during the Third Quarter 2008 and ranged from non-detect in TR-5 and TR-11 to 1.13 ft in TR-10. A discontinuous layer of peat occurs between 7 and 9 ft bgs. Residual gasoline appears to occur within this peat layer. Dissolved petroleum hydrocarbons are present in groundwater in the Bay Mud.

## **3.0 SAMPLE LOCATIONS**

Ten soil vapor wells were employed by Treadwell and Rollo to perform the soil vapor sampling discussed in this report.

Dedicated soil vapor wells were installed in 2001 by Treadwell & Rollo using a direct push technique. The well materials are stainless steel, 12 inches long, with a slotted screen and a steel point at the base. Teflon tubing is attached on a nipple at the top of the well and extends just below the floor grade. The wells are sealed with grout and have well boxes at the floor surface. The well screens are typically 2 to 3 ft below the top of the slab to correspond with the middle of the sandy fill material. To monitor soil vapor and the potential for vapors to enter the building through the concrete foundation, the vapor monitoring points were installed above the potential perched-water zone rather than 5 feet or deeper as recommended.

Locations of these soil vapor wells provide data to evaluate the potential vapor migration into the occupied building space. Soil vapor wells A, B, and D are particularly useful because they are located in sandy fill material immediately above free product. Soil vapor wells C, E, F, G, and H are adjacent to the

free product or dissolved phase plume beneath occupied portions of the building. Soil vapor wells I and J provide additional monitoring points north of the free product extent.

#### **4.0 DATA COLLECTION**

The following briefly outlines the soil vapor sampling protocols and sample collection methods.

##### **4.1 Soil Vapor Sampling Equipment**

Soil vapor sampling equipment consisted of:

- Two dedicated pre-evacuated 1-liter (1L) Summa canisters (canisters) with brass caps--one for purging and one for sample collection;
- A vacuum gauge;
- A dedicated sampling manifold; an explanation and illustration of the sampling manifold setup is provided in Appendix B;
- Dedicated Teflon tubing;
- Tracer gas (helium); and
- A plastic tub (shroud).

##### **4.2 Soil Vapor Sampling**

Prior to purging and sampling at each location, Quality Assurance/Quality Control (QA/QC) measures were performed. The brass caps were removed from the canisters and the initial canister vacuum checked with a vacuum gauge to ensure they were ready for use. The tag on one of the canisters was labeled "purge" and both canisters were attached to the manifold. The connections between the canisters and the manifold were checked for a tight seal by placing a brass cap on the open end of the manifold and then quickly opening and closing the valve on the purge canister for a couple of seconds to check that the needle on the manifold vacuum gauge held steady.

Upon completion of testing the connections, the brass cap was removed from the manifold, the cover was removed from the soil vapor well, and Teflon tubing was attached between the open end of the manifold and tubing exiting the soil vapor well, using a compression fitting. A shroud (plastic tub) was placed over the equipment and helium tracer gas was allowed to vaporize into the area covered by the

shroud. A helium detector was inserted into the shroud. Once the helium present in the shroud was detected at 50% of total air volume, sample collection proceeded.

The manifold "T" and purge canister valves were opened and the soil vapor well was purged of approximately three volumes (528 milliliters [ml]) of air as calculated in the *Additional Purge Volume Calculations*. The purging was conducted at the rate of 167 ml/minute, which was the calibrated maximum rate of the flow restrictor on the manifold. Upon purging completion, the purge canister and manifold "T" valves were closed to switch to sample collection. The sample canister valve was opened, and the soil vapor sample was collected. Upon completion of sample collection, the valve was closed on the sample canister and both purge and sample canisters were removed from the manifold, and the brass caps were replaced on each canister and the manifold. The tag on the sample canister was completed, the manifold was removed, and the soil vapor well cover replaced. Field forms are provided in Appendix C.

## **5.0 SOIL VAPOR ANALYSIS**

All soil vapor samples were submitted under chain-of-custody protocol to Air Toxics Ltd. of Folsom, California, a certified California laboratory. Samples were analyzed for:

- Volatile organic compounds (VOCs) using EPA Method TO-15 (Standard); and
- Helium to confirm the integrity of the sampling method.

## **6.0 RESULTS**

To provide a context to evaluate the results, vapor sampling concentrations were compared to Table E-2 of the Environmental Screening Levels (ESLs) established by the San Francisco Regional Water Quality Control Board (SFRWQCB). This table lists residential and commercial ESLs related to shallow soil vapor.

Of the BTEX compounds, toluene was detected in seven of the eleven vapor samples at concentrations ranging from 5.7 micrograms per meter-cubed ( $\mu\text{g}/\text{m}^3$ ) in the sample from vapor point J (VP-J) to 9.4  $\mu\text{g}/\text{m}^3$  in the sample from VP-D. None of the samples exceeded the commercial ESL for toluene. Xylenes in the form of m,p-xylene were detected in seven of the eleven vapor samples at concentrations ranging from 5.2  $\mu\text{g}/\text{m}^3$  in the sample from VP-J to 8.5  $\mu\text{g}/\text{m}^3$  in the sample from VP-G. None of the samples exceeded the commercial ESL for Xylenes. Benzene, ethylbenzene and MTBE were not detected in any of



the vapor samples. Fifteen other VOCs were detected in soil vapor samples. However, none of the VOCs detected were above commercial or residential ESLs.

To maintain QA/QC, a duplicate sample (VP-D Dup) was collected from location VP-D to check the precision of the results by calculating the Relative Percentage Difference (RPD). RPDs are calculated for two samples by subtracting the sample concentration from the duplicate concentration and then dividing this result by the average of the two concentrations. A control limit of 50 percent or less was used for the RPDs to determine whether project data quality objectives were met. RPDs from samples with detections ranged from 6% to 27%. As a result, the detected VOC concentrations in the duplicate sample were reflective of sample VP-D. The laboratory QA/QC results reported on the laboratory reports (Appendix A) were within acceptable parameters.

Numerous connections were needed between the sampling manifold and Summa canisters and the sampling manifold, tubing and soil vapor point. Due to potential for surrounding air to enter the sampling train at these points, helium was used to detect leaks, which would be apparent based on the presence of helium in the samples. Helium was not detected above the laboratory reporting limit in any of the soil vapor samples, indicating no leaks occurred at the connections and confirmation of the validity of the sample results. Helium was not analyzed in the sample from VP-B due to an instrument issue at the chemical laboratory wherein vapor from the instrument was introduced to the Summa canister during the helium analysis, which negates the ability of the laboratory to report an ASTM D-1946 helium result. This occurred after the TO-15 analysis had been run on the sample, so there was no effect to the concentrations for that sample.

As described above, approximately 2 to 8 ft of relatively sandy fill material is underlain by Bay Mud to a depth of at least 24 ft bgs. The soil vapor sampling points are located within the fill material. The clayey Bay Mud includes discontinuous zones of sandier soil and organic matter (peat). The groundwater has historically been recorded at approximately 8 to 10 ft bgs. During the most recent groundwater monitoring event in 2008, groundwater depths ranged from approximately 5 to 11 ft bgs. Treadwell & Rollo reviewed historical soil and groundwater data and cross-sections which indicate that free product and related dissolved petroleum hydrocarbons appear to occur in the clayey Bay Mud and interbedded peats and sands below the fill material.

Results of soil vapor sampling are presented in Table 1.

## **7.0 CONCLUSIONS**

The results of vapor sampling indicated the presence of the BTEX compounds toluene and m,p-xylene and 15 additional VOC compounds. Benzene, ethylbenzene and MTBE were not detected above laboratory reporting limits. The levels of all the detected compounds were very low and well below commercial and residential ESLs.

Based on these results and historical data, the free product and related dissolved petroleum hydrocarbons appear to have limited connection to the soil vapors in the fill material.

## REFERENCES

Alameda County Department of Environmental Health (email), 2009, *2855 Mandela Parkway*, dated October 1.

California Environmental Protection Agency, 2009. *Vapor Intrusion Workshops - Revisions to the Advisory - Active Soil Gas Investigations*, June.

Department of Toxic Substances Control/California Environmental Protection Agency (DTSC/Cal EPA), 2004, *Interim Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*, dated December 15 (Revised February 7, 2005).

Department of Toxic Substances Control/Los Angeles Regional Water Quality Control Board, 2003, *Advisory – Active Soil Gas Investigations*, dated January 28.

Treadwell and Rollo, Inc, 2008, *Soil Vapor Sampling Work Plan*, dated October 9.

Treadwell and Rollo, Inc, 2008, *Additional Purge Volume Calculations*, dated November 7.

**TABLES**

TABLE 1  
Summary of Air Data  
Mandela Parkway Project  
Oakland, California

Sample Name	Sample Date	Acetone	Benzene	Carbon Disulfide	Chloroform	Ethanol	Ethyl-benzene	Freon 11	Hexane	Cyclohexane	Methyl Ethyl Ketone	2-Propanol	Tetrahydrofuran	Tetrachloroethene	2,2,4-Trimethylpentane	1,1,1-Trichloroethane	1,2,4-Trimethylbenzene	Toluene	4-Ethyltoluene	m,p-xylene	MTBE	Other VOCs	Helium %
ug/m <sup>3</sup>																							
VP-A	10/9/2009	22	<4.2	79	ND	ND	<5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.3	ND	7.6	<4.8	ND	<0.13
VP-B	10/9/2009	21	<3.9	ND	ND	ND	<5.4	ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	8.2	ND	6.6	<4.4	ND	NA
VP-C	10/9/2009	ND	<39	ND	ND	ND	<54	ND	110	220	ND	ND	ND	ND	1,600	ND	ND	ND	ND	ND	<44	ND	<0.12
VP-D	10/9/2009	21	<3.4	ND	6.7	ND	<4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.8	9.4	5.8	6.9	<3.9	ND	<0.25
VP-D Dup	10/9/2009	16	<4.0	4	7.8	ND	<5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.2	7.6	7.1	6.3	<4.6	ND	<0.13
VP-E	10/9/2009	ND	<4.0	ND	ND	ND	<5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<4.6	ND	<0.13
VP-F	10/9/2009	ND	<4.0	ND	ND	ND	<5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<4.6	ND	<0.26
VP-G	10/9/2009	33	<4.2	ND	ND	ND	<5.7	ND	ND	ND	5.7	13	4.1	ND	ND	ND	8.4	9.1	7.3	8.5	<4.8	ND	<0.13
VP-H	10/9/2009	24	<4.0	ND	ND	130	<5.4	ND	ND	ND	5.7	14	8.1	9.7	ND	8.6	7.4	16	ND	6.8	<4.5	ND	<0.12
VP-I	10/9/2009	60	<4.2	ND	ND	16	<5.7	ND	ND	ND	12	16	ND	ND	ND	40	7.9	7.3	7	6.6	<4.8	ND	<0.13
VP-J	10/9/2009	11	<3.8	ND	ND	ND	<5.2	11	ND	ND	ND	ND	ND	ND	ND	60	ND	5.7	ND	5.2	<4.3	ND	<0.12
Residential ESL		660,000	84	--	460	--	980	--	--	--	1,000,000	--	--	410	--	460,000	--	63,000	--	21,000	9,400	--	--
Commercial ESL		1,800,000	280	--	1,500	--	3,300	--	--	--	2,900,000	--	--	1,400	--	1,300,000	--	180,000	--	58,000	31,000	--	--

Notes:

ESL = Environmental Screening Level. 2007, Table E-2, Shallow Soil Gas Screening Levels, San Francisco Regional Water Quality Control Board, November.

ESL for xylenes is for total xylenes

MTBE = Methyl-Tert-Butyl-Ether

ug/m<sup>3</sup> = Micrograms per cubic meter. All results and ESLs are expressed in ug/m<sup>3</sup> except for helium which is reported as a percentage of the sample total.

<4.2 = Below specified laboratory reporting limits.

ND = Not detected above the laboratory reporting limit. Reporting limits vary.

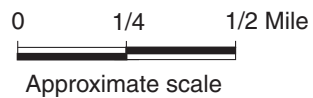
NA = Not Analyzed

-- = No ESL provided

**FIGURES**



Base map: The Thomas Guide  
Alameda County  
2002



**2855 MANDELA PARKWAY**  
Oakland, California

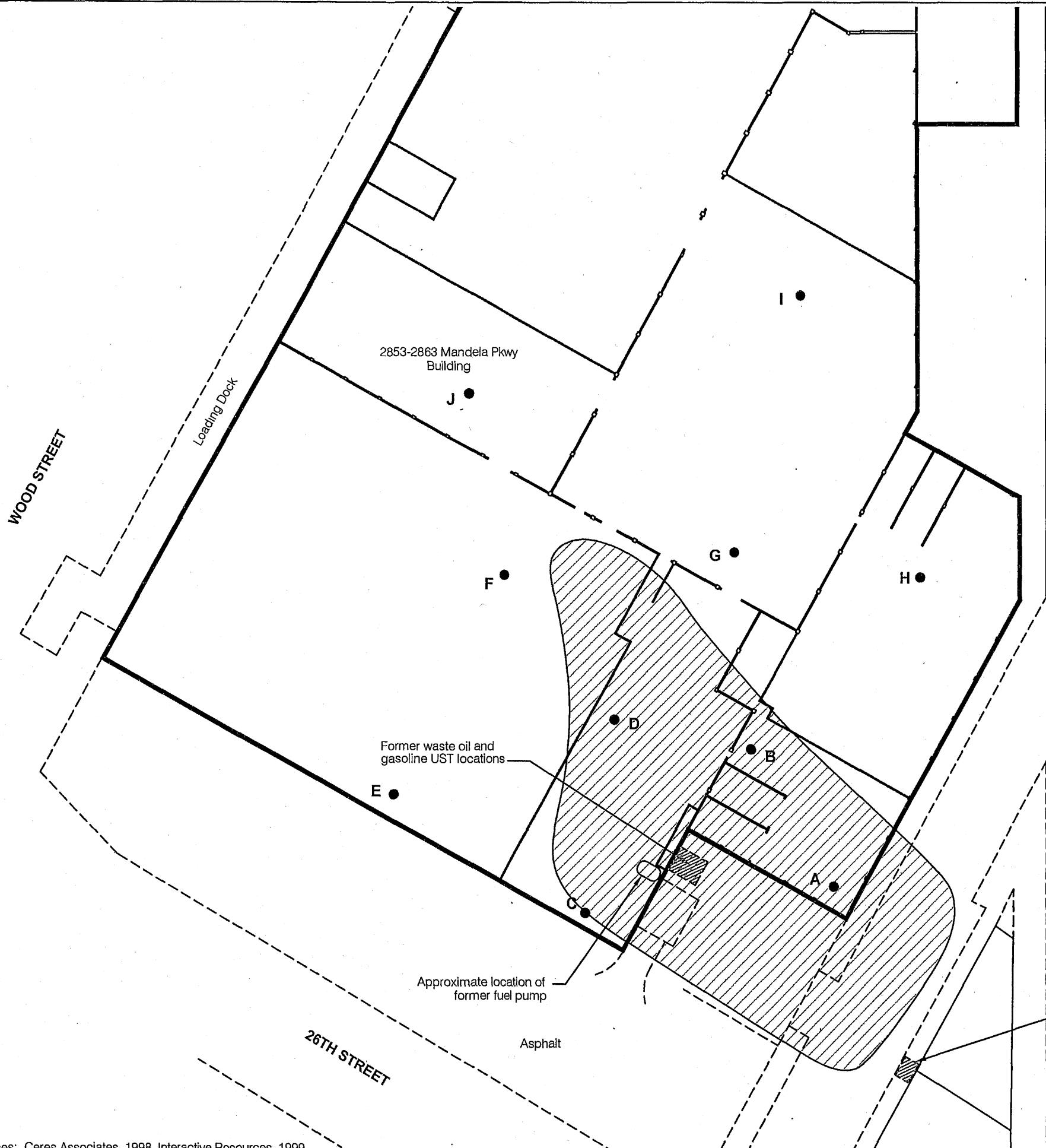
**SITE LOCATION MAP**

**Treadwell & Rolo**


Date 10/06/08

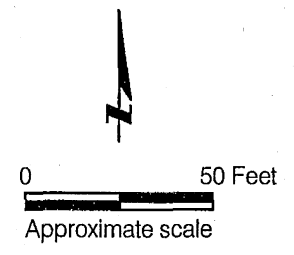
Project No. 2543.05

Figure 1



EXPLANATION

- G ● Soil vapor sampling point
-  Free product extent as of 12/1999 based on:
  - 1 - direct observation of product
  - 2 - benzene >2000 µg/L



<b>2855 MANDELA PARKWAY PROPERTY</b> Oakland, California		
<b>SITE PLAN SHOWING SOIL VAPOR SAMPLING LOCATIONS</b>		
Date 09/30/08	Project No. 2543.05	Figure 2
<b>Treadwell&amp;Rollo</b>		

254301 PLANNED SAMPLING LOCATIONS V3.DWG.

References: Ceres Associates, 1998. Interactive Resources, 1999.



**APPENDIX A**  
**Laboratory Reports**

10/27/2009  
Mr. Louis Arighi  
Treadwell & Rollo  
501 14th St.  
3rd Floor  
Oakland CA 94612

Project Name: Mandela Parkway  
Project #: 2543.05  
Workorder #: 0910314A

Dear Mr. Louis Arighi

The following report includes the data for the above referenced project for sample(s) received on 10/13/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 0910314A**

Work Order Summary

<b>CLIENT:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612	<b>BILL TO:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612
<b>PHONE:</b>	510-874-4500	<b>P.O. #</b>	
<b>FAX:</b>	510-874-4507	<b>PROJECT #</b>	2543.05 Mandela Parkway
<b>DATE RECEIVED:</b>	10/13/2009	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/27/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-B-9OCT2009	Modified TO-15	5.5 "Hg	15 psi
01AA	VP-B-9OCT2009 Lab Duplicate	Modified TO-15	5.5 "Hg	15 psi
02A	VP-A-9OCT2009	Modified TO-15	7.0 "Hg	15 psi
03A	VP-F-9OCT2009	Modified TO-15	6.0 "Hg	15 psi
04A	VP-J-9OCT2009	Modified TO-15	4.5 "Hg	15 psi
05A	VP-I-9OCT2009	Modified TO-15	7.0 "Hg	15 psi
06A	VP-C-9OCT2009	Modified TO-15	5.5 "Hg	15 psi
07A	VP-D-DUP9OCT2009	Modified TO-15	6.0 "Hg	15 psi
08A	VP-D-9OCT2009	Modified TO-15	2.0 "Hg	15 psi
09A	VP-E-9OCT2009	Modified TO-15	6.0 "Hg	15 psi
10A	VP-G-9OCT2009	Modified TO-15	7.0 "Hg	15 psi
11A	Lab Blank	Modified TO-15	NA	NA
11B	Lab Blank	Modified TO-15	NA	NA
12A	CCV	Modified TO-15	NA	NA
12B	CCV	Modified TO-15	NA	NA
13A	LCS	Modified TO-15	NA	NA
13B	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 10/27/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified TO-15  
Treadwell & Rollo  
Workorder# 0910314A**

Ten 1 Liter Summa Canister samples were received on October 13, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	<= 30% Difference	<= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VP-B-9OCT2009**

**Lab ID#: 0910314A-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	4.9	9.0	12	21
2-Butanone (Methyl Ethyl Ketone)	1.2	1.4	3.6	4.2
Toluene	1.2	2.2	4.6	8.2
m,p-Xylene	1.2	1.5	5.4	6.6

**Client Sample ID: VP-B-9OCT2009 Lab Duplicate**

**Lab ID#: 0910314A-01AA**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	4.9	9.0	12	22
2-Butanone (Methyl Ethyl Ketone)	1.2	1.5	3.6	4.5
Toluene	1.2	2.2	4.6	8.2
m,p-Xylene	1.2	1.6	5.4	7.0

**Client Sample ID: VP-A-9OCT2009**

**Lab ID#: 0910314A-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	5.3	9.2	12	22
Carbon Disulfide	1.3	25	4.1	79
Toluene	1.3	1.9	5.0	7.3
m,p-Xylene	1.3	1.8	5.7	7.6

**Client Sample ID: VP-F-9OCT2009**

**Lab ID#: 0910314A-03A**

No Detections Were Found.

**Client Sample ID: VP-J-9OCT2009**

**Lab ID#: 0910314A-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 11	1.2	1.9	6.7	11
Acetone	4.8	4.8	11	11
1,1,1-Trichloroethane	1.2	11	6.5	60

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VP-J-9OCT2009**

**Lab ID#: 0910314A-04A**

Toluene	1.2	1.5	4.5	5.7
m,p-Xylene	1.2	1.2	5.2	5.2

**Client Sample ID: VP-I-9OCT2009**

**Lab ID#: 0910314A-05A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Ethanol	5.3	8.4	9.9	16
Acetone	5.3	25	12	60
2-Propanol	5.3	6.6	13	16
2-Butanone (Methyl Ethyl Ketone)	1.3	4.1	3.9	12
1,1,1-Trichloroethane	1.3	7.4	7.2	40
Toluene	1.3	1.9	5.0	7.3
m,p-Xylene	1.3	1.5	5.7	6.6
4-Ethyltoluene	1.3	1.4	6.5	7.0
1,2,4-Trimethylbenzene	1.3	1.6	6.5	7.9

**Client Sample ID: VP-C-9OCT2009**

**Lab ID#: 0910314A-06A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Hexane	12	30	44	110
Cyclohexane	12	64	42	220
2,2,4-Trimethylpentane	12	340	58	1600

**Client Sample ID: VP-D-DUP9OCT2009**

**Lab ID#: 0910314A-07A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	5.1	6.9	12	16
Carbon Disulfide	1.3	1.3	3.9	4.0
Chloroform	1.3	1.6	6.2	7.8
Toluene	1.3	2.0	4.8	7.6
m,p-Xylene	1.3	1.4	5.5	6.3
4-Ethyltoluene	1.3	1.4	6.2	7.1
1,2,4-Trimethylbenzene	1.3	1.5	6.2	7.2

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VP-D-9OCT2009**

**Lab ID#: 0910314A-08A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	4.3	9.0	10	21
Chloroform	1.1	1.4	5.3	6.7
Toluene	1.1	2.5	4.1	9.4
m,p-Xylene	1.1	1.6	4.7	6.9
4-Ethyltoluene	1.1	1.2	5.3	5.8
1,2,4-Trimethylbenzene	1.1	1.2	5.3	5.8

**Client Sample ID: VP-E-9OCT2009**

**Lab ID#: 0910314A-09A**

No Detections Were Found.

**Client Sample ID: VP-G-9OCT2009**

**Lab ID#: 0910314A-10A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	5.3	14	12	33
2-Propanol	5.3	5.5	13	13
2-Butanone (Methyl Ethyl Ketone)	1.3	1.9	3.9	5.7
Tetrahydrofuran	1.3	1.4	3.9	4.1
Toluene	1.3	2.4	5.0	9.1
m,p-Xylene	1.3	2.0	5.7	8.5
4-Ethyltoluene	1.3	1.5	6.5	7.3
1,2,4-Trimethylbenzene	1.3	1.7	6.5	8.4



Client Sample ID: VP-B-9OCT2009

Lab ID#: 0910314A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x102116	Date of Collection:	10/9/09 1:10:00 PM
Dil. Factor:	2.47	Date of Analysis:	10/21/09 05:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	9.0	12	21
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.4	3.6	4.2
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	2.2	4.6	8.2
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected

Client Sample ID: VP-B-9OCT2009

Lab ID#: 0910314A-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102116</b>	<b>Date of Collection:</b> 10/9/09 1:10:00 PM
<b>Dil. Factor:</b>	<b>2.47</b>	<b>Date of Analysis:</b> 10/21/09 05:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	1.5	5.4	6.6
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: VP-B-9OCT2009 Lab Duplicate

Lab ID#: 0910314A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x102118	Date of Collection:	10/9/09 1:10:00 PM
Dil. Factor:	2.47	Date of Analysis:	10/21/09 07:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	9.0	12	22
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.5	3.6	4.5
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	2.2	4.6	8.2
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected

Client Sample ID: VP-B-9OCT2009 Lab Duplicate

Lab ID#: 0910314A-01AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102118</b>	<b>Date of Collection:</b> 10/9/09 1:10:00 PM
<b>Dil. Factor:</b>	<b>2.47</b>	<b>Date of Analysis:</b> 10/21/09 07:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	1.6	5.4	7.0
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: VP-A-9OCT2009

Lab ID#: 0910314A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x102117	Date of Collection:	10/9/09 12:46:00 PM
Dil. Factor:	2.64	Date of Analysis:	10/21/09 06:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.5	Not Detected
Freon 114	1.3	Not Detected	9.2	Not Detected
Chloromethane	5.3	Not Detected	11	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	2.9	Not Detected
Bromomethane	1.3	Not Detected	5.1	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.4	Not Detected
Ethanol	5.3	Not Detected	9.9	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Acetone	5.3	9.2	12	22
2-Propanol	5.3	Not Detected	13	Not Detected
Carbon Disulfide	1.3	25	4.1	79
3-Chloropropene	5.3	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Hexane	1.3	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.9	Not Detected
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Cyclohexane	1.3	Not Detected	4.5	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Heptane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.1	Not Detected
1,4-Dioxane	5.3	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	8.8	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.4	Not Detected
Toluene	1.3	1.9	5.0	7.3
trans-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected

Client Sample ID: VP-A-9OCT2009

Lab ID#: 0910314A-02A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102117</b>	<b>Date of Collection:</b> 10/9/09 12:46:00 PM
<b>Dil. Factor:</b>	<b>2.64</b>	<b>Date of Analysis:</b> 10/21/09 06:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
2-Hexanone	5.3	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected
m,p-Xylene	1.3	1.8	5.7	7.6
o-Xylene	1.3	Not Detected	5.7	Not Detected
Styrene	1.3	Not Detected	5.6	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.5	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.1	Not Detected
Propylbenzene	1.3	Not Detected	6.5	Not Detected
4-Ethyltoluene	1.3	Not Detected	6.5	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.8	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,2,4-Trichlorobenzene	5.3	Not Detected	39	Not Detected
Hexachlorobutadiene	5.3	Not Detected	56	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	83	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: VP-F-9OCT2009

Lab ID#: 0910314A-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102119</b>	<b>Date of Collection:</b> 10/9/09 11:11:00 AM
<b>Dil. Factor:</b>	<b>2.53</b>	<b>Date of Analysis:</b> 10/21/09 08:01 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected	10	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	Not Detected	12	Not Detected
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected

Client Sample ID: VP-F-9OCT2009

Lab ID#: 0910314A-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102119</b>	<b>Date of Collection:</b>	<b>10/9/09 11:11:00 AM</b>
<b>Dil. Factor:</b>	<b>2.53</b>	<b>Date of Analysis:</b>	<b>10/21/09 08:01 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	Not Detected	8.6	Not Detected
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
4-Ethyltoluene	1.3	Not Detected	6.2	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

**Container Type: 1 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	80	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: VP-J-9OCT2009

Lab ID#: 0910314A-04A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>x102120</b>	<b>Date of Collection:</b> 10/9/09 11:57:00 AM
<b>Dil. Factor:</b>	<b>2.38</b>	<b>Date of Analysis:</b> 10/21/09 08:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.3	Not Detected
Chloromethane	4.8	Not Detected	9.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.6	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	1.9	6.7	11
Ethanol	4.8	Not Detected	9.0	Not Detected
Freon 113	1.2	Not Detected	9.1	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	4.8	4.8	11	11
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.7	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.1	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	11	6.5	60
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.5	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	1.2	1.5	4.5	5.7
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected

Client Sample ID: VP-J-9OCT2009

Lab ID#: 0910314A-04A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102120</b>	<b>Date of Collection:</b> 10/9/09 11:57:00 AM
<b>Dil. Factor:</b>	<b>2.38</b>	<b>Date of Analysis:</b> 10/21/09 08:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
2-Hexanone	4.8	Not Detected	19	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.1	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	1.2	5.2	5.2
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	35	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	77	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: VP-I-9OCT2009

Lab ID#: 0910314A-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102121</b>	<b>Date of Collection:</b> 10/9/09 2:40:00 PM
<b>Dil. Factor:</b>	<b>2.64</b>	<b>Date of Analysis:</b> 10/21/09 09:15 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.3	Not Detected	6.5	Not Detected
Freon 114	1.3	Not Detected	9.2	Not Detected
Chloromethane	5.3	Not Detected	11	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	2.9	Not Detected
Bromomethane	1.3	Not Detected	5.1	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.4	Not Detected
Ethanol	5.3	8.4	9.9	16
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Acetone	5.3	25	12	60
2-Propanol	5.3	6.6	13	16
Carbon Disulfide	1.3	Not Detected	4.1	Not Detected
3-Chloropropene	5.3	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Hexane	1.3	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	4.1	3.9	12
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.9	Not Detected
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	7.4	7.2	40
Cyclohexane	1.3	Not Detected	4.5	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Heptane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.1	Not Detected
1,4-Dioxane	5.3	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	8.8	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.4	Not Detected
Toluene	1.3	1.9	5.0	7.3
trans-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected

Client Sample ID: VP-I-9OCT2009

Lab ID#: 0910314A-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102121</b>	<b>Date of Collection:</b> 10/9/09 2:40:00 PM
<b>Dil. Factor:</b>	<b>2.64</b>	<b>Date of Analysis:</b> 10/21/09 09:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
2-Hexanone	5.3	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected
m,p-Xylene	1.3	1.5	5.7	6.6
o-Xylene	1.3	Not Detected	5.7	Not Detected
Styrene	1.3	Not Detected	5.6	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.5	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.1	Not Detected
Propylbenzene	1.3	Not Detected	6.5	Not Detected
4-Ethyltoluene	1.3	1.4	6.5	7.0
1,3,5-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,2,4-Trimethylbenzene	1.3	1.6	6.5	7.9
1,3-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.8	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,2,4-Trichlorobenzene	5.3	Not Detected	39	Not Detected
Hexachlorobutadiene	5.3	Not Detected	56	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: VP-C-9OCT2009

Lab ID#: 0910314A-06A

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102625</b>	<b>Date of Collection: 10/9/09 4:03:00 PM</b>
<b>Dil. Factor:</b>	<b>2.47</b>	<b>Date of Analysis: 10/26/09 09:07 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	12	Not Detected	61	Not Detected
Freon 114	12	Not Detected	86	Not Detected
Chloromethane	49	Not Detected	100	Not Detected
Vinyl Chloride	12	Not Detected	32	Not Detected
1,3-Butadiene	12	Not Detected	27	Not Detected
Bromomethane	12	Not Detected	48	Not Detected
Chloroethane	12	Not Detected	32	Not Detected
Freon 11	12	Not Detected	69	Not Detected
Ethanol	49	Not Detected	93	Not Detected
Freon 113	12	Not Detected	95	Not Detected
1,1-Dichloroethene	12	Not Detected	49	Not Detected
Acetone	49	Not Detected	120	Not Detected
2-Propanol	49	Not Detected	120	Not Detected
Carbon Disulfide	12	Not Detected	38	Not Detected
3-Chloropropene	49	Not Detected	150	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Methyl tert-butyl ether	12	Not Detected	44	Not Detected
trans-1,2-Dichloroethene	12	Not Detected	49	Not Detected
Hexane	12	30	44	110
1,1-Dichloroethane	12	Not Detected	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	12	Not Detected	36	Not Detected
cis-1,2-Dichloroethene	12	Not Detected	49	Not Detected
Tetrahydrofuran	12	Not Detected	36	Not Detected
Chloroform	12	Not Detected	60	Not Detected
1,1,1-Trichloroethane	12	Not Detected	67	Not Detected
Cyclohexane	12	64	42	220
Carbon Tetrachloride	12	Not Detected	78	Not Detected
2,2,4-Trimethylpentane	12	340	58	1600
Benzene	12	Not Detected	39	Not Detected
1,2-Dichloroethane	12	Not Detected	50	Not Detected
Heptane	12	Not Detected	51	Not Detected
Trichloroethene	12	Not Detected	66	Not Detected
1,2-Dichloropropane	12	Not Detected	57	Not Detected
1,4-Dioxane	49	Not Detected	180	Not Detected
Bromodichloromethane	12	Not Detected	83	Not Detected
cis-1,3-Dichloropropene	12	Not Detected	56	Not Detected
4-Methyl-2-pentanone	12	Not Detected	50	Not Detected
Toluene	12	Not Detected	46	Not Detected
trans-1,3-Dichloropropene	12	Not Detected	56	Not Detected

Client Sample ID: VP-C-9OCT2009

Lab ID#: 0910314A-06A

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102625</b>	<b>Date of Collection: 10/9/09 4:03:00 PM</b>
<b>Dil. Factor:</b>	<b>2.47</b>	<b>Date of Analysis: 10/26/09 09:07 PM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	12	Not Detected	67	Not Detected
Tetrachloroethene	12	Not Detected	84	Not Detected
2-Hexanone	49	Not Detected	200	Not Detected
Dibromochloromethane	12	Not Detected	100	Not Detected
1,2-Dibromoethane (EDB)	12	Not Detected	95	Not Detected
Chlorobenzene	12	Not Detected	57	Not Detected
Ethyl Benzene	12	Not Detected	54	Not Detected
m,p-Xylene	12	Not Detected	54	Not Detected
o-Xylene	12	Not Detected	54	Not Detected
Styrene	12	Not Detected	53	Not Detected
Bromoform	12	Not Detected	130	Not Detected
Cumene	12	Not Detected	61	Not Detected
1,1,2,2-Tetrachloroethane	12	Not Detected	85	Not Detected
Propylbenzene	12	Not Detected	61	Not Detected
4-Ethyltoluene	12	Not Detected	61	Not Detected
1,3,5-Trimethylbenzene	12	Not Detected	61	Not Detected
1,2,4-Trimethylbenzene	12	Not Detected	61	Not Detected
1,3-Dichlorobenzene	12	Not Detected	74	Not Detected
1,4-Dichlorobenzene	12	Not Detected	74	Not Detected
alpha-Chlorotoluene	12	Not Detected	64	Not Detected
1,2-Dichlorobenzene	12	Not Detected	74	Not Detected
1,2,4-Trichlorobenzene	49	Not Detected	370	Not Detected
Hexachlorobutadiene	49	Not Detected UJ	530	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: VP-D-DUP9OCT2009

Lab ID#: 0910314A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x102122	Date of Collection:	10/9/09 3:47:00 PM
Dil. Factor:	2.53	Date of Analysis:	10/21/09 10:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected	10	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	6.9	12	16
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	1.3	3.9	4.0
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	1.6	6.2	7.8
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	2.0	4.8	7.6
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected

Client Sample ID: VP-D-DUP9OCT2009

Lab ID#: 0910314A-07A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102122</b>	<b>Date of Collection:</b> 10/9/09 3:47:00 PM
<b>Dil. Factor:</b>	<b>2.53</b>	<b>Date of Analysis:</b> 10/21/09 10:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	Not Detected	8.6	Not Detected
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	1.4	5.5	6.3
o-Xylene	1.3	Not Detected	5.5	Not Detected
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
4-Ethyltoluene	1.3	1.4	6.2	7.1
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	1.5	6.2	7.2
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: VP-D-9OCT2009

Lab ID#: 0910314A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x102123	Date of Collection:	10/9/09 3:47:00 PM
Dil. Factor:	2.16	Date of Analysis:	10/21/09 11:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.6	Not Detected
Chloromethane	4.3	Not Detected	8.9	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	1.1	Not Detected	6.1	Not Detected
Ethanol	4.3	Not Detected	8.1	Not Detected
Freon 113	1.1	Not Detected	8.3	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Acetone	4.3	9.0	10	21
2-Propanol	4.3	Not Detected	11	Not Detected
Carbon Disulfide	1.1	Not Detected	3.4	Not Detected
3-Chloropropene	4.3	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.9	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	1.4	5.3	6.7
1,1,1-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.8	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.8	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.0	Not Detected
1,4-Dioxane	4.3	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.2	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.4	Not Detected
Toluene	1.1	2.5	4.1	9.4
trans-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected

Client Sample ID: VP-D-9OCT2009

Lab ID#: 0910314A-08A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102123</b>	<b>Date of Collection:</b> 10/9/09 3:47:00 PM
<b>Dil. Factor:</b>	<b>2.16</b>	<b>Date of Analysis:</b> 10/21/09 11:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Tetrachloroethene	1.1	Not Detected	7.3	Not Detected
2-Hexanone	4.3	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.2	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.3	Not Detected
Chlorobenzene	1.1	Not Detected	5.0	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
m,p-Xylene	1.1	1.6	4.7	6.9
o-Xylene	1.1	Not Detected	4.7	Not Detected
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.3	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.4	Not Detected
Propylbenzene	1.1	Not Detected	5.3	Not Detected
4-Ethyltoluene	1.1	1.2	5.3	5.8
1,3,5-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,2,4-Trimethylbenzene	1.1	1.2	5.3	5.8
1,3-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.6	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	46	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: VP-E-9OCT2009

Lab ID#: 0910314A-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102124</b>	<b>Date of Collection:</b> 10/9/09 10:40:00 AM
<b>Dil. Factor:</b>	<b>2.53</b>	<b>Date of Analysis:</b> 10/21/09 11:46 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected	10	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	Not Detected	12	Not Detected
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected

Client Sample ID: VP-E-9OCT2009

Lab ID#: 0910314A-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102124</b>	<b>Date of Collection:</b> 10/9/09 10:40:00 AM
<b>Dil. Factor:</b>	<b>2.53</b>	<b>Date of Analysis:</b> 10/21/09 11:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	Not Detected	8.6	Not Detected
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
4-Ethyltoluene	1.3	Not Detected	6.2	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	81	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: VP-G-9OCT2009

Lab ID#: 0910314A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x102125	Date of Collection:	10/9/09 2:08:00 PM
Dil. Factor:	2.64	Date of Analysis:	10/22/09 12:22 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.5	Not Detected
Freon 114	1.3	Not Detected	9.2	Not Detected
Chloromethane	5.3	Not Detected	11	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	2.9	Not Detected
Bromomethane	1.3	Not Detected	5.1	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.4	Not Detected
Ethanol	5.3	Not Detected	9.9	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Acetone	5.3	14	12	33
2-Propanol	5.3	5.5	13	13
Carbon Disulfide	1.3	Not Detected	4.1	Not Detected
3-Chloropropene	5.3	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Hexane	1.3	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	1.9	3.9	5.7
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Tetrahydrofuran	1.3	1.4	3.9	4.1
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Cyclohexane	1.3	Not Detected	4.5	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Heptane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.1	Not Detected
1,4-Dioxane	5.3	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	8.8	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.4	Not Detected
Toluene	1.3	2.4	5.0	9.1
trans-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected

Client Sample ID: VP-G-9OCT2009

Lab ID#: 0910314A-10A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102125</b>	<b>Date of Collection:</b> 10/9/09 2:08:00 PM
<b>Dil. Factor:</b>	<b>2.64</b>	<b>Date of Analysis:</b> 10/22/09 12:22 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
2-Hexanone	5.3	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected
m,p-Xylene	1.3	2.0	5.7	8.5
o-Xylene	1.3	Not Detected	5.7	Not Detected
Styrene	1.3	Not Detected	5.6	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.5	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.1	Not Detected
Propylbenzene	1.3	Not Detected	6.5	Not Detected
4-Ethyltoluene	1.3	1.5	6.5	7.3
1,3,5-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,2,4-Trimethylbenzene	1.3	1.7	6.5	8.4
1,3-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.8	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,2,4-Trichlorobenzene	5.3	Not Detected	39	Not Detected
Hexachlorobutadiene	5.3	Not Detected	56	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	80	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: Lab Blank

Lab ID#: 0910314A-11A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102107</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/21/09 11:00 AM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 0910314A-11A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102107</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/21/09 11:00 AM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	97	70-130



Client Sample ID: Lab Blank

Lab ID#: 0910314A-11B

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102610</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 01:00 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	20	Not Detected	38	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	20	Not Detected	49	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	5.0	Not Detected	20	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 0910314A-11B

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102610</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 01:00 PM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected UJ	210	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	81	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: CCV

Lab ID#: 0910314A-12A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102102</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/21/09 07:42 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Freon 12	122
Freon 114	123
Chloromethane	113
Vinyl Chloride	112
1,3-Butadiene	117
Bromomethane	115
Chloroethane	114
Freon 11	110
Ethanol	94
Freon 113	118
1,1-Dichloroethene	107
Acetone	107
2-Propanol	98
Carbon Disulfide	111
3-Chloropropene	109
Methylene Chloride	103
Methyl tert-butyl ether	121
trans-1,2-Dichloroethene	110
Hexane	106
1,1-Dichloroethane	108
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	107
Tetrahydrofuran	104
Chloroform	101
1,1,1-Trichloroethane	106
Cyclohexane	110
Carbon Tetrachloride	110
2,2,4-Trimethylpentane	106
Benzene	116
1,2-Dichloroethane	113
Heptane	122
Trichloroethene	113
1,2-Dichloropropane	116
1,4-Dioxane	115
Bromodichloromethane	111
cis-1,3-Dichloropropene	116
4-Methyl-2-pentanone	122
Toluene	119
trans-1,3-Dichloropropene	115

Client Sample ID: CCV

Lab ID#: 0910314A-12A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102102</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/21/09 07:42 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	113
Tetrachloroethene	128
2-Hexanone	113
Dibromochloromethane	124
1,2-Dibromoethane (EDB)	115
Chlorobenzene	118
Ethyl Benzene	117
m,p-Xylene	120
o-Xylene	121
Styrene	127
Bromoform	128
Cumene	118
1,1,1,2-Tetrachloroethane	106
Propylbenzene	113
4-Ethyltoluene	127
1,3,5-Trimethylbenzene	100
1,2,4-Trimethylbenzene	104
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	114
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	111
1,2,4-Trichlorobenzene	98
Hexachlorobutadiene	99

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV

Lab ID#: 0910314A-12B

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102607</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 11:17 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Freon 12	88
Freon 114	99
Chloromethane	93
Vinyl Chloride	95
1,3-Butadiene	94
Bromomethane	98
Chloroethane	111
Freon 11	82
Ethanol	98
Freon 113	96
1,1-Dichloroethene	90
Acetone	94
2-Propanol	94
Carbon Disulfide	98
3-Chloropropene	104
Methylene Chloride	91
Methyl tert-butyl ether	117
trans-1,2-Dichloroethene	100
Hexane	97
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	92
Tetrahydrofuran	93
Chloroform	89
1,1,1-Trichloroethane	84
Cyclohexane	97
Carbon Tetrachloride	85
2,2,4-Trimethylpentane	96
Benzene	102
1,2-Dichloroethane	86
Heptane	100
Trichloroethene	94
1,2-Dichloropropane	98
1,4-Dioxane	100
Bromodichloromethane	90
cis-1,3-Dichloropropene	97
4-Methyl-2-pentanone	97
Toluene	97
trans-1,3-Dichloropropene	95

Client Sample ID: CCV

Lab ID#: 0910314A-12B

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102607</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 11:17 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	99
Tetrachloroethene	94
2-Hexanone	97
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	98
Chlorobenzene	99
Ethyl Benzene	101
m,p-Xylene	101
o-Xylene	102
Styrene	105
Bromoform	95
Cumene	96
1,1,2,2-Tetrachloroethane	97
Propylbenzene	96
4-Ethyltoluene	92
1,3,5-Trimethylbenzene	89
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	88
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	90
1,2-Dichlorobenzene	88
1,2,4-Trichlorobenzene	74
Hexachlorobutadiene	69 Q

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	81	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 0910314A-13A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102103</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/21/09 08:19 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Freon 12	82
Freon 114	96
Chloromethane	88
Vinyl Chloride	89
1,3-Butadiene	93
Bromomethane	93
Chloroethane	98
Freon 11	91
Ethanol	62
Freon 113	116
1,1-Dichloroethene	98
Acetone	99
2-Propanol	93
Carbon Disulfide	99
3-Chloropropene	99
Methylene Chloride	98
Methyl tert-butyl ether	110
trans-1,2-Dichloroethene	99
Hexane	102
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	102
Tetrahydrofuran	99
Chloroform	95
1,1,1-Trichloroethane	97
Cyclohexane	102
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	98
Benzene	104
1,2-Dichloroethane	96
Heptane	110
Trichloroethene	101
1,2-Dichloropropane	103
1,4-Dioxane	130
Bromodichloromethane	100
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	124
Toluene	112
trans-1,3-Dichloropropene	105

Client Sample ID: LCS

Lab ID#: 0910314A-13A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>x102103</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/21/09 08:19 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	107
Tetrachloroethene	120
2-Hexanone	134
Dibromochloromethane	113
1,2-Dibromoethane (EDB)	103
Chlorobenzene	107
Ethyl Benzene	105
m,p-Xylene	108
o-Xylene	107
Styrene	111
Bromoform	116
Cumene	107
1,1,1,2-Tetrachloroethane	92
Propylbenzene	102
4-Ethyltoluene	114
1,3,5-Trimethylbenzene	88
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	106
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	88
Hexachlorobutadiene	83

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	81	70-130
4-Bromofluorobenzene	101	70-130



Client Sample ID: LCS

Lab ID#: 0910314A-13B

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102608</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 11:49 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Freon 12	96
Freon 114	103
Chloromethane	99
Vinyl Chloride	100
1,3-Butadiene	96
Bromomethane	104
Chloroethane	117
Freon 11	86
Ethanol	75
Freon 113	113
1,1-Dichloroethene	105
Acetone	100
2-Propanol	107
Carbon Disulfide	104
3-Chloropropene	112
Methylene Chloride	104
Methyl tert-butyl ether	125
trans-1,2-Dichloroethene	105
Hexane	103
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	96
Tetrahydrofuran	98
Chloroform	96
1,1,1-Trichloroethane	91
Cyclohexane	103
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	103
Benzene	107
1,2-Dichloroethane	91
Heptane	105
Trichloroethene	99
1,2-Dichloropropane	101
1,4-Dioxane	104
Bromodichloromethane	95
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	103
Toluene	107
trans-1,3-Dichloropropene	98

Client Sample ID: LCS

Lab ID#: 0910314A-13B

**MODIFIED EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>b102608</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 11:49 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	104
Tetrachloroethene	101
2-Hexanone	102
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	99
Chlorobenzene	102
Ethyl Benzene	105
m,p-Xylene	103
o-Xylene	105
Styrene	107
Bromoform	98
Cumene	103
1,1,2,2-Tetrachloroethane	98
Propylbenzene	99
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	92
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	93
1,4-Dichlorobenzene	92
alpha-Chlorotoluene	92
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	75
Hexachlorobutadiene	65 Q

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	81	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	94	70-130

10/28/2009  
Mr. Louis Arighi  
Treadwell & Rollo  
501 14th St.  
3rd Floor  
Oakland CA 94612

Project Name: Mandela Parkway  
Project #: 2543.05  
Workorder #: 0910314B

Dear Mr. Louis Arighi

The following report includes the data for the above referenced project for sample(s) received on 10/13/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 0910314B**

Work Order Summary

<b>CLIENT:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612	<b>BILL TO:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612
<b>PHONE:</b>	510-874-4500	<b>P.O. #</b>	
<b>FAX:</b>	510-874-4507	<b>PROJECT #</b>	2543.05 Mandela Parkway
<b>DATE RECEIVED:</b>	10/13/2009	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/28/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A(cancelled)	VP-B-9OCT2009	Modified ASTM D-1946	5.5 "Hg	15 psi
02A	VP-A-9OCT2009	Modified ASTM D-1946	7.0 "Hg	15 psi
03A	VP-F-9OCT2009	Modified ASTM D-1946	6.0 "Hg	15 psi
04A	VP-J-9OCT2009	Modified ASTM D-1946	4.5 "Hg	15 psi
05A	VP-I-9OCT2009	Modified ASTM D-1946	7.0 "Hg	15 psi
06A	VP-C-9OCT2009	Modified ASTM D-1946	5.5 "Hg	15 psi
07A	VP-D-DUP9OCT2009	Modified ASTM D-1946	6.0 "Hg	15 psi
08A	VP-D-9OCT2009	Modified ASTM D-1946	2.0 "Hg	15 psi
09A	VP-E-9OCT2009	Modified ASTM D-1946	6.0 "Hg	15 psi
10A	VP-G-9OCT2009	Modified ASTM D-1946	7.0 "Hg	15 psi
11A	Lab Blank	Modified ASTM D-1946	NA	NA
11B	Lab Blank	Modified ASTM D-1946	NA	NA
12A	LCS	Modified ASTM D-1946	NA	NA
12B	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 10/28/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified ASTM D-1946  
Treadwell & Rollo  
Workorder# 0910314B**

Ten 1 Liter Summa Canister samples were received on October 13, 2009. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 X$ 's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Sample VP-B-9OCT2009 could not be reported due to a laboratory error which compromised the

sample.

### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VP-A-9OCT2009**

**Lab ID#: 0910314B-02A**

No Detections Were Found.

**Client Sample ID: VP-F-9OCT2009**

**Lab ID#: 0910314B-03A**

No Detections Were Found.

**Client Sample ID: VP-J-9OCT2009**

**Lab ID#: 0910314B-04A**

No Detections Were Found.

**Client Sample ID: VP-I-9OCT2009**

**Lab ID#: 0910314B-05A**

No Detections Were Found.

**Client Sample ID: VP-C-9OCT2009**

**Lab ID#: 0910314B-06A**

No Detections Were Found.

**Client Sample ID: VP-D-DUP9OCT2009**

**Lab ID#: 0910314B-07A**

No Detections Were Found.

**Client Sample ID: VP-D-9OCT2009**

**Lab ID#: 0910314B-08A**

No Detections Were Found.

**Client Sample ID: VP-E-9OCT2009**

**Lab ID#: 0910314B-09A**

No Detections Were Found.

**Client Sample ID: VP-G-9OCT2009**

**Lab ID#: 0910314B-10A**

No Detections Were Found.



Client Sample ID: VP-A-9OCT2009

Lab ID#: 0910314B-02A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102506b	Date of Collection:	10/9/09 12:46:00 PM
Dil. Factor:	2.64	Date of Analysis:	10/25/09 10:13 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister





Client Sample ID: VP-F-9OCT2009

Lab ID#: 0910314B-03A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102615	Date of Collection: 10/9/09 11:11:00 AM
Dil. Factor:	5.27	Date of Analysis: 10/26/09 11:33 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.26	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-J-9OCT2009

Lab ID#: 0910314B-04A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102508b	Date of Collection: 10/9/09 11:57:00 AM
Dil. Factor:	2.38	Date of Analysis: 10/25/09 11:16 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-I-9OCT2009

Lab ID#: 0910314B-05A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102509b	Date of Collection:	10/9/09 2:40:00 PM
Dil. Factor:	2.64	Date of Analysis:	10/25/09 11:45 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-C-9OCT2009

Lab ID#: 0910314B-06A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102510b	Date of Collection: 10/9/09 4:03:00 PM
Dil. Factor:	2.47	Date of Analysis: 10/25/09 12:06 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-D-DUP9OCT2009

Lab ID#: 0910314B-07A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102511b	Date of Collection:	10/9/09 3:47:00 PM
Dil. Factor:	2.53	Date of Analysis:	10/25/09 12:28 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-D-9OCT2009

Lab ID#: 0910314B-08A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102617	Date of Collection:	10/9/09 3:47:00 PM
Dil. Factor:	5.08	Date of Analysis:	10/26/09 12:18 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.25	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-E-9OCT2009

Lab ID#: 0910314B-09A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102513b	Date of Collection: 10/9/09 10:40:00 AM
Dil. Factor:	2.53	Date of Analysis: 10/25/09 01:24 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: VP-G-9OCT2009

Lab ID#: 0910314B-10A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102514b	Date of Collection: 10/9/09 2:08:00 PM
Dil. Factor:	2.64	Date of Analysis: 10/25/09 01:51 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister





Client Sample ID: Lab Blank

Lab ID#: 0910314B-11A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102502b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/25/09 07:47 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 0910314B-11B

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/26/09 07:36 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



**Client Sample ID: LCS**

**Lab ID#: 0910314B-12A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9102523b</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/25/09 06:35 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Helium	102

**Container Type: NA - Not Applicable**

**Client Sample ID: LCS**

**Lab ID#: 0910314B-12B**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9102618</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 12:30 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Helium	104

**Container Type: NA - Not Applicable**

10/29/2009  
Mr. Louis Arighi  
Treadwell & Rollo  
501 14th St.  
3rd Floor  
Oakland CA 94612

Project Name: Mandela Parkway  
Project #: 2543.05  
Workorder #: 0910391A

Dear Mr. Louis Arighi

The following report includes the data for the above referenced project for sample(s) received on 10/16/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 0910391A**

Work Order Summary

<b>CLIENT:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612	<b>BILL TO:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612
<b>PHONE:</b>	510-874-4500	<b>P.O. #</b>	
<b>FAX:</b>	510-874-4507	<b>PROJECT #</b>	2543.05 Mandela Parkway
<b>DATE RECEIVED:</b>	10/16/2009	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/29/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-H-15OCT09	Modified TO-15	5.8 "Hg	15 psi
02A	Lab Blank	Modified TO-15	NA	NA
03A	CCV	Modified TO-15	NA	NA
04A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 10/29/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified TO-15  
Treadwell & Rollo  
Workorder# 0910391A**

One 1 Liter Summa Canister sample was received on October 16, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	<= 30% Difference	<= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: VP-H-15OCT09

Lab ID#: 0910391A-01A

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Ethanol	5.0	70	9.4	130
Acetone	5.0	10	12	24
2-Propanol	5.0	5.9	12	14
2-Butanone (Methyl Ethyl Ketone)	1.2	1.9	3.7	5.7
Tetrahydrofuran	1.2	2.8	3.7	8.1
1,1,1-Trichloroethane	1.2	1.6	6.8	8.6
Toluene	1.2	4.3	4.7	16
Tetrachloroethene	1.2	1.4	8.5	9.7
m,p-Xylene	1.2	1.6	5.4	6.8
1,2,4-Trimethylbenzene	1.2	1.5	6.1	7.4

Client Sample ID: VP-H-15OCT09

Lab ID#: 0910391A-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102817</b>	<b>Date of Collection:</b> 10/15/09 1:27:00 PM
<b>Dil. Factor:</b>	<b>2.50</b>	<b>Date of Analysis:</b> 10/28/09 03:38 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.2	Not Detected	6.2	Not Detected
Freon 114	1.2	Not Detected	8.7	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.8	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.3	Not Detected
Freon 11	1.2	Not Detected	7.0	Not Detected
Ethanol	5.0	70	9.4	130
Freon 113	1.2	Not Detected	9.6	Not Detected
1,1-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Acetone	5.0	10	12	24
2-Propanol	5.0	5.9	12	14
Carbon Disulfide	1.2	Not Detected	3.9	Not Detected
3-Chloropropene	5.0	Not Detected	16	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.5	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.9	3.7	5.7
cis-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.2	2.8	3.7	8.1
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	1.6	6.8	8.6
Cyclohexane	1.2	Not Detected	4.3	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.9	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.7	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.8	Not Detected
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.4	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.1	Not Detected
Toluene	1.2	4.3	4.7	16
trans-1,3-Dichloropropene	1.2	Not Detected	5.7	Not Detected

Client Sample ID: VP-H-15OCT09

Lab ID#: 0910391A-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102817</b>	<b>Date of Collection:</b> 10/15/09 1:27:00 PM
<b>Dil. Factor:</b>	<b>2.50</b>	<b>Date of Analysis:</b> 10/28/09 03:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	1.4	8.5	9.7
2-Hexanone	5.0	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.6	Not Detected
Chlorobenzene	1.2	Not Detected	5.8	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	1.6	5.4	6.8
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.6	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	1.5	6.1	7.4
1,3-Dichlorobenzene	1.2	Not Detected	7.5	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.5	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.5	Not Detected
1,2,4-Trichlorobenzene	5.0	Not Detected	37	Not Detected
Hexachlorobutadiene	5.0	Not Detected	53	Not Detected

**Container Type: 1 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: Lab Blank

Lab ID#: 0910391A-02A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102810</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 10/28/09 11:04 AM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 0910391A-02A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102810</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/28/09 11:04 AM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: CCV

Lab ID#: 0910391A-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102809</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/28/09 10:29 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Freon 12	112
Freon 114	117
Chloromethane	105
Vinyl Chloride	111
1,3-Butadiene	116
Bromomethane	120
Chloroethane	111
Freon 11	111
Ethanol	88
Freon 113	123
1,1-Dichloroethene	122
Acetone	114
2-Propanol	113
Carbon Disulfide	111
3-Chloropropene	109
Methylene Chloride	125
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	113
Hexane	112
1,1-Dichloroethane	116
2-Butanone (Methyl Ethyl Ketone)	116
cis-1,2-Dichloroethene	111
Tetrahydrofuran	113
Chloroform	115
1,1,1-Trichloroethane	114
Cyclohexane	108
Carbon Tetrachloride	116
2,2,4-Trimethylpentane	116
Benzene	99
1,2-Dichloroethane	121
Heptane	115
Trichloroethene	115
1,2-Dichloropropane	111
1,4-Dioxane	111
Bromodichloromethane	119
cis-1,3-Dichloropropene	117
4-Methyl-2-pentanone	118
Toluene	118
trans-1,3-Dichloropropene	124

Client Sample ID: CCV

Lab ID#: 0910391A-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102809</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/28/09 10:29 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	115
Tetrachloroethene	115
2-Hexanone	124
Dibromochloromethane	120
1,2-Dibromoethane (EDB)	115
Chlorobenzene	114
Ethyl Benzene	115
m,p-Xylene	116
o-Xylene	116
Styrene	122
Bromoform	120
Cumene	122
1,1,2,2-Tetrachloroethane	114
Propylbenzene	124
4-Ethyltoluene	124
1,3,5-Trimethylbenzene	115
1,2,4-Trimethylbenzene	118
1,3-Dichlorobenzene	114
1,4-Dichlorobenzene	111
alpha-Chlorotoluene	138 Q
1,2-Dichlorobenzene	111
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	104

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 0910391A-04A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102806</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/28/09 08:31 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Freon 12	117
Freon 114	121
Chloromethane	112
Vinyl Chloride	115
1,3-Butadiene	121
Bromomethane	117
Chloroethane	112
Freon 11	117
Ethanol	92
Freon 113	124
1,1-Dichloroethene	124
Acetone	116
2-Propanol	119
Carbon Disulfide	113
3-Chloropropene	110
Methylene Chloride	132 Q
Methyl tert-butyl ether	107
trans-1,2-Dichloroethene	112
Hexane	114
1,1-Dichloroethane	119
2-Butanone (Methyl Ethyl Ketone)	119
cis-1,2-Dichloroethene	114
Tetrahydrofuran	118
Chloroform	118
1,1,1-Trichloroethane	119
Cyclohexane	111
Carbon Tetrachloride	121
2,2,4-Trimethylpentane	118
Benzene	99
1,2-Dichloroethane	127
Heptane	116
Trichloroethene	116
1,2-Dichloropropane	115
1,4-Dioxane	110
Bromodichloromethane	120
cis-1,3-Dichloropropene	118
4-Methyl-2-pentanone	120
Toluene	118
trans-1,3-Dichloropropene	123



Client Sample ID: LCS

Lab ID#: 0910391A-04A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>d102806</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/28/09 08:31 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	117
Tetrachloroethene	114
2-Hexanone	126
Dibromochloromethane	123
1,2-Dibromoethane (EDB)	116
Chlorobenzene	114
Ethyl Benzene	117
m,p-Xylene	119
o-Xylene	118
Styrene	123
Bromoform	124
Cumene	126
1,1,2,2-Tetrachloroethane	116
Propylbenzene	126
4-Ethyltoluene	113
1,3,5-Trimethylbenzene	120
1,2,4-Trimethylbenzene	121
1,3-Dichlorobenzene	113
1,4-Dichlorobenzene	112
alpha-Chlorotoluene	140 Q
1,2-Dichlorobenzene	112
1,2,4-Trichlorobenzene	107
Hexachlorobutadiene	106

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	95	70-130

10/27/2009  
Mr. Louis Arighi  
Treadwell & Rollo  
501 14th St.  
3rd Floor  
Oakland CA 94612

Project Name: Mandela Parkway  
Project #: 2543.05  
Workorder #: 0910391B

Dear Mr. Louis Arighi

The following report includes the data for the above referenced project for sample(s) received on 10/16/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 0910391B**

Work Order Summary

<b>CLIENT:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612	<b>BILL TO:</b>	Mr. Louis Arighi Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612
<b>PHONE:</b>	510-874-4500	<b>P.O. #</b>	
<b>FAX:</b>	510-874-4507	<b>PROJECT #</b>	2543.05 Mandela Parkway
<b>DATE RECEIVED:</b>	10/16/2009	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/27/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-H-15OCT09	Modified ASTM D-1946	5.8 "Hg	15 psi
02A	Lab Blank	Modified ASTM D-1946	NA	NA
03A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 10/27/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified ASTM D-1946  
Treadwell & Rollo  
Workorder# 0910391B**

One 1 Liter Summa Canister sample was received on October 16, 2009. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 X$ 's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VP-H-15OCT09**

**Lab ID#: 0910391B-01A**

No Detections Were Found.



Client Sample ID: VP-H-15OCT09

Lab ID#: 0910391B-01A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102612	Date of Collection: 10/15/09 1:27:00 PM
Dil. Factor:	2.50	Date of Analysis: 10/26/09 10:23 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: Lab Blank

Lab ID#: 0910391B-02A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9102602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/26/09 07:36 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



**Client Sample ID: LCS**

**Lab ID#: 0910391B-03A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9102618</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/26/09 12:30 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Helium	104

**Container Type: NA - Not Applicable**

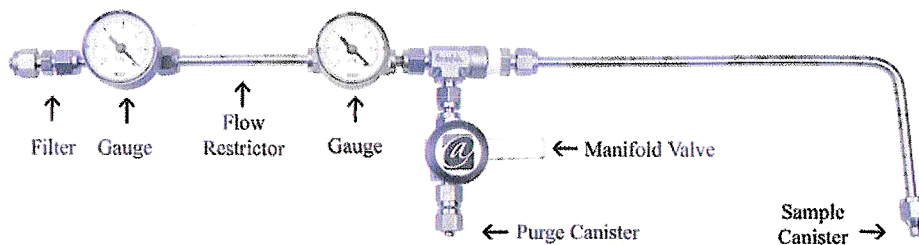
**APPENDIX B**  
**Air Toxics Vapor Sampling Manifold Setup**

### 5.3.1 Collecting Soil Gas Samples with Sampling Manifolds

Air Toxics provides soil gas sampling manifolds in order to facilitate meeting the numerous quality control guidelines for collecting soil gas data. Two of the most critical aspects of soil gas sampling are purging the lines and preventing leaks. The manifold setup allows for automatic leak-checking of the canister sample train without the application of a leak check compound to the canister fittings. When the purge can is opened and closed, it creates a vacuum within the canister lines and fittings. If this vacuum is maintained, the train is considered leak-free. Because there is only one connection – the probe tubing to sample train – the chance for leaks is greatly reduced.

The manifold's in line gauge system used with a purge canister enables the sampler to determine the appropriate purge volume. Typically, purge volumes of 3 to 5 times the volume of the train tubing are used, and once the purge volume is calculated the lines can be purged by opening the purge canister valve and monitoring the decrease in vacuum. This decrease in vacuum is proportional to the volume purged through the lines. There is a suggested flow rate of between 100 and 200 milliliters per minute, a step thought to prevent ambient air intrusion as a result of taking the sample too quickly. Our manifold has a "built-in" flow restrictor; a frit of stainless steel tubing between the two gauges that is calibrated to 167 milliliters per minute.

The first gauge, located prior to the flow restrictor, is a vacuum gauge that informs the sampler if sufficient vapor is being collected from the soil or if the substrate is too compacted. Because this is not a flow meter but a measure of pressure/vacuum, the gauge should read at zero if there is sufficient flow from the soil. If the gauge begins to read a vacuum, then the flow is being restricted. The second gauge, in line after the flow controller and prior to the purge canister, is a vacuum gauge that indicates to the sampler whether or not the canister is filling properly at the expected rate. This setup enables the sampler to evaluate the lithologic conditions at the site and determine if a valid soil gas sample is being taken. Finally, when duplicate samples are required, the manifold can be used as a duplicate sampling "T" by simply replacing the purge canister with another sample canister.



**APPENDIX C  
Field Forms**

Project: Mandela Parkway  
Subject: FIELD INVESTIGATION DAILY REPORT  
Field Engineer: Louis Arighi  
Time: \_\_\_\_\_  
Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Project No: 2543.05  
Date: 10/9/09  
To: GET  
Weather: Partly cloudy,  
mild.

1000 Arrived on-site. Start at MacArthur Co.  
Set up on VP-E. Purge using 6-L summa, sample with  
1-L summa. Purge time  $\approx$  3.5 min. Sample canister reads  
-30 inHg. Fill shroud with 50% + helium. Collect  
sample  $\approx$  5.5 min, end pressure -7 inHg @ 1040

1045 set up on VP-F. Same procedure. Purge time  $\approx$  3.5 min.  
Sample canister = -30 inHg. Collect sample  $\approx$  5.0 min, end pressure  
 $\approx$  6 inHg @ 1111

1130 Set up on VP-J. Same procedure. Purge time  $\approx$  3.5 min  
Sample canister = -30 inHg. Collect sample  $\approx$  5.5 min, end pressure  
-6.0 inHg @ 1157

1220 Set up on VP-A. Same procedure. Purge time  $\approx$  3.5 min  
Sample canister = -30 inHg. Collect sample  $\approx$  6 min, end pressure  
-8 inHg @ 1246

1250 Set up on VP-B. Same procedure. Purge time  $\approx$  3.5 min  
Sample canister = -30 inHg. Collect sample  $\approx$  5.5 min, end pressure  
-7 inHg @ 1310

1340 Set up on VP-G. Same procedure. Purge time  $\approx$  3.5 min  
Sample canister = -30 inHg. Collect sample  $\approx$  5.5 min, end pressure  
-7.5 inHg @ 1408

1420 Set up on VP-F. Same procedure. Purge time  $\approx$  3.5 min  
Sample canister = -30 inHg. Collect sample  $\approx$  6.0 min, end pressure  
-8 inHg @ 1440

1510 Set up on VP-D. Same procedure. Purge time  $\approx$  3.5 min  
Sample canister and duplicate canister = -30 inHg. Collect  
samples simultaneously  $\approx$  12 min, end pressure -6 inHg @ 1547

1550 Setup on VP-C. Same procedure. Purge time  $\approx$  3.5 min  
sample canister = -30 inHg. Collect sample  $\approx$  6.0 min, end pressure -8 inHg @ 160

Attachments: \_\_\_\_\_

Initials \_\_\_\_\_

Project: Mandela Parkway Project No: 2543.05  
Subject: FIELD INVESTIGATION DAILY REPORT Date: 10/15/2009  
Field Engineer: Anna Rose S. Estandarte To: GEJ  
Time: \_\_\_\_\_ Weather: Sunny  
Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

- 1240 Arrived on site. Set up on VP-H. Check sample canister (IL) for vacuum. It's vacuum reads -30 in Hg.
- 1301 Purge VP-H using 6-L Summa canister. Purge time  $\approx$  3.5 min. Initial vacuum read -20 in Hg. Perform leak test at the manifold. Manifold pass - the
- 1320 Fill shroud w/ 50% (+) of helium and started sampling.
- 1327 Collect sample. vacuum left -7.  
canister 1445

Attachments: ccCs dated 10/9 & 10/15  
Fed Ex receipt dated 10/9 & 10/15  
Air gas delivery order slip

Initials AR