1000 Broadway. Suite 300
Oakland. CA 94607
Phone: 510 891 9400
Facsimile: 510 891 9004

13 May 2009
Project No. 2820.04

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Subject: Sub-Slab Vapor Investigation Report
901 Jefferson Street
Oakland, California
SLIC Case RO0002924

Dear Mr. Wickham:

As a legally authorized representative of A.F. Evans Development, Inc., and on behalf of A.F. Evans Development, Inc, I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document titled Sub-Slab Vapor Investigation Report, *901 Jefferson Street, Oakland, California, SLIC Case RO0002924*, are true and correct to the best of my knowledge.

Sincerely yours,

Art Evans
CEO
AF Evans Company

Treadwell&Rollo

12 May 2009
Project No. 2820.04

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Sub-Slab Vapor Investigation Report
901 Jefferson Street
Oakland, California
SLIC Case RO0002924

Dear Mr. Wickham:

Treadwell & Rollo, Inc. is submitting this letter report on behalf of A.F. Evans Development, Inc. (A.F. Evans) in response to requirements of the Alameda County Environmental Health (ACEH) letter of 10 March 2009. This report presents the results of the soil vapor sampling performed on 23 January 2009 at the property located at 901 Jefferson Street in Oakland, California (Site, Figure 1). This sampling was performed in general accordance with our *Work Plan for Sub-Slab Vapor Investigation, 901 Jefferson Street, Oakland, California, SLIC Case RO0002924* (*Work Plan*), dated 10 April 2009, prepared in response to the requirements of your letter dated 10 March 2009, and to the technical comments in your letter of 16 April 2009, to provide additional data about potential volatile organic compounds (VOCs) in soil vapor beneath the Site.

Background

A.F. Evans has redeveloped the Site from a parking lot to a mixed residential/commercial development, with a parking garage, a commercial space at the corner of 9th Street and Jefferson Street, common areas, and nine live-work lofts on the ground floor, with four stories of residential units above. A plan of the ground floor is provided in Figure 2. A.F. Evans completed construction at the Site in 2008. The Site is currently vacant.

The Site was historically operated as a gasoline filling station, and underground fuel storage tanks were reportedly removed in 1953. Recent environmental activities have been ongoing at the Site since 1989, and have included Phase I Environmental Site Assessments, soil and groundwater investigations, groundwater remediation, and groundwater monitoring. The results of the investigations indicated the presence of petroleum hydrocarbons in soil and groundwater. In 1994, in-situ bioremediation was performed for remediation of groundwater at the Site. On 26 December 1996, Alameda County Environmental Health (ACEH) issued a completion certificate stating that "no further action related to the underground tank release is required." The results from these historic activities have been reported elsewhere.

Since 1997, several investigations have been performed to evaluate Site soil quality for the purpose of redeveloping the Site. Elevated concentrations of lead and petroleum hydrocarbons were found in soil during these investigations. Treadwell & Rollo prepared a *Site Mitigation Plan, Proposed Residential Development, 901 Jefferson Street, Oakland, California*, dated 12 April 2006, which described actions to be taken during construction to mitigate potential environmental risks to the Site workers, future Site users, and the environment. These activities included removing soil in the upper seven feet of soil

containing lead or petroleum hydrocarbons (if encountered) that exceeded Environmental Screening Levels (ESLs)[1] for shallow soil with residential land use, established by the San Francisco Bay Regional Water Quality Control Board (RWQCB). In addition, several over-excavations and confirmation sampling events were conducted at the Site during development. Treadwell & Rollo subsequently submitted the *Site Mitigation Completion Report, 901 Jefferson Street, Oakland, California*, dated 17 March 2008, which documented the completion of these activities. ACEH issued technical comments on this report on 18 April 2008, to which Treadwell and Rollo responded on 5 June 2008. Soil vapor sampling outside the building near the approximate location for former monitoring well MW-5 was performed in January 2009, and a report submitted to ACEH dated 19 February 2009. ACEH issued technical comments on this report on 10 March 2009, including requesting a work plan for sub-slab vapor investigation inside the building. The *Work Plan* was submitted on 10 April 2009, and was approved by ACEH, with technical comments, on 16 April 2009.

Soil Vapor Sampling Field Activities

On 23 April 2009, Treadwell & Rollo mobilized to the Site to collect the sub-slab soil vapor samples. Soil vapor samples were collected in three live/work lofts using a hand operated hammer drill contracted from TEG Northern California Inc. (TEG), of Rancho Cordova, California. After completion of sampling, all three borings were filled with neat cement grout.

Soil vapor samples were collected at three locations (SSV-1, SSV-2, and SSV-3) in the northeastern corner of the building (Figure 2). These locations are in the vicinity of former monitoring well MW-5. Sample locations were in the kitchen area of each of the three live/work lofts. Soil vapor samples were collected at approximately three to four inches below the base of the foundation from a dedicated soil vapor sampling probe advanced to the sampling depth by hand. As soon as the vapor sampling probe was advanced to the desired depth, approximately four inches of sand was placed around the probe from the base of the probe to the base of the concrete slab, and bentonite chips were placed from the top of the sand to approximately two inches above the top of the floor. The bentonite was hydrated with a small amount of water to create a vapor seal around the hole, and the sampling train was capped and allowed to equilibrate for a minimum of 20 minutes.

After allowing the sub-slab vapor time to equilibrate, the sampling manifold was connected, and a vacuum test was performed to check for leaks. The test consisted of placing a vacuum on the sampling train using a syringe, and a pressure gauge in the sampling train was observed for five minutes. At all three sampling points, the pressure remained steady during the test, indicating that no leaks were present in the sampling train. Per guidance issued by the California Department of Toxic Substances Control (DTSC)/Los Angeles Regional Water Quality Control Board (LARWQCB)[2], prior to collecting vapor samples, three purge volumes were extracted from the sampling point. After purging, and prior to collection of the sample, a shroud was placed over the surface opening and sampling manifold, and helium gas was released into the shroud. A portable helium detector was used to monitor helium levels in the shroud, which were maintained at concentrations of 50% or greater during sample collection.

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[1] RWQCB, 2008, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, November 2007, revised May 2008.

[2] DTSC/LARWQCB, 2003, *Advisory – Active Soil Gas Investigations,* 28 January 2003.

Sub-slab vapor samples for off-site analysis were collected in accordance with the protocols outlined in the *Advisory – Active Soil Gas Investigations*. The collection time for each one-liter summa was approximately 5 minutes. All three samples were collected in laboratory supplied one-liter summa canisters and submitted to Air Toxics Ltd., a California state-certified laboratory located in Folsom, California, for analyses for TPHg and benzene, ethylbenzene, toluene and xylenes (BTEX) by EPA Method TO-15A, and for helium by ASTM D-1946.

Sub-Slab Vapor Sampling Results

A total of three soil vapor samples were analyzed for TPH-g and BTEX compounds. The analytical results are summarized on Table 1, and the laboratory reports, with chain-of-custody documentation, are provided as Attachment A. Detected compounds included benzene, toluene, ethyl benzene and xylenes, as well as the group of compounds represented by TPH-g. All reported concentrations were below the ESLs for residential exposure in shallow soil vapor.

In addition, all three vapor samples were analyzed for helium. Helium was not detected at or above the laboratory reporting limits in any of the three samples. The absence of helium indicates that the vapor sampled was from below the slab and was not diluted by surface air short-circuiting to the vapor probe.

Summary

To address ACEH's concern regarding the potential for sub-slab vapor intrusion at the Site, which was based on the benzene concentration reported in groundwater in well MW-5 in 1996, we have performed a sub-slab vapor investigation in accordance with our 10 April 2009 *Work Plan for Sub-Slab Vapor Investigation, 901 Jefferson Street, Oakland, California, SLIC Case RO0002924*, which you approved in your letter dated 16 April 2009. The investigation did not detect BTEX compounds or TPH-g above the residential ESLs in any of the locations sampled.

As we have previously stated, no intrusion of soil vapors into the residential parts of the Site are expected, because of the nature of the foundation (concrete slab and moisture barrier), the air movement in the parking garage, and the excavation and replacement of the soil under the building. Based on the chemical concentrations in soil vapor under the building slab we conclude there is no significant risk to future Site users because of indoor vapor intrusion.

We hope this letter answers your questions. Based on the provided information, Treadwell & Rollo asks on behalf of A.F. Evans that the ACEH approve this report and issue a determination of "No Further Action" for SLIC Case RO0002924.

We appreciate the opportunity to work with you on this project. If you have any questions or require additional information, please contact Grover Buhr at (510) 874-4500, extension 529.

Sincerely yours,
TREADWELL & ROLLO, INC.

Louis M. Arighi, PG
Senior Staff Geologist

Grover S. Buhr, PG
Senior Associate Geologist

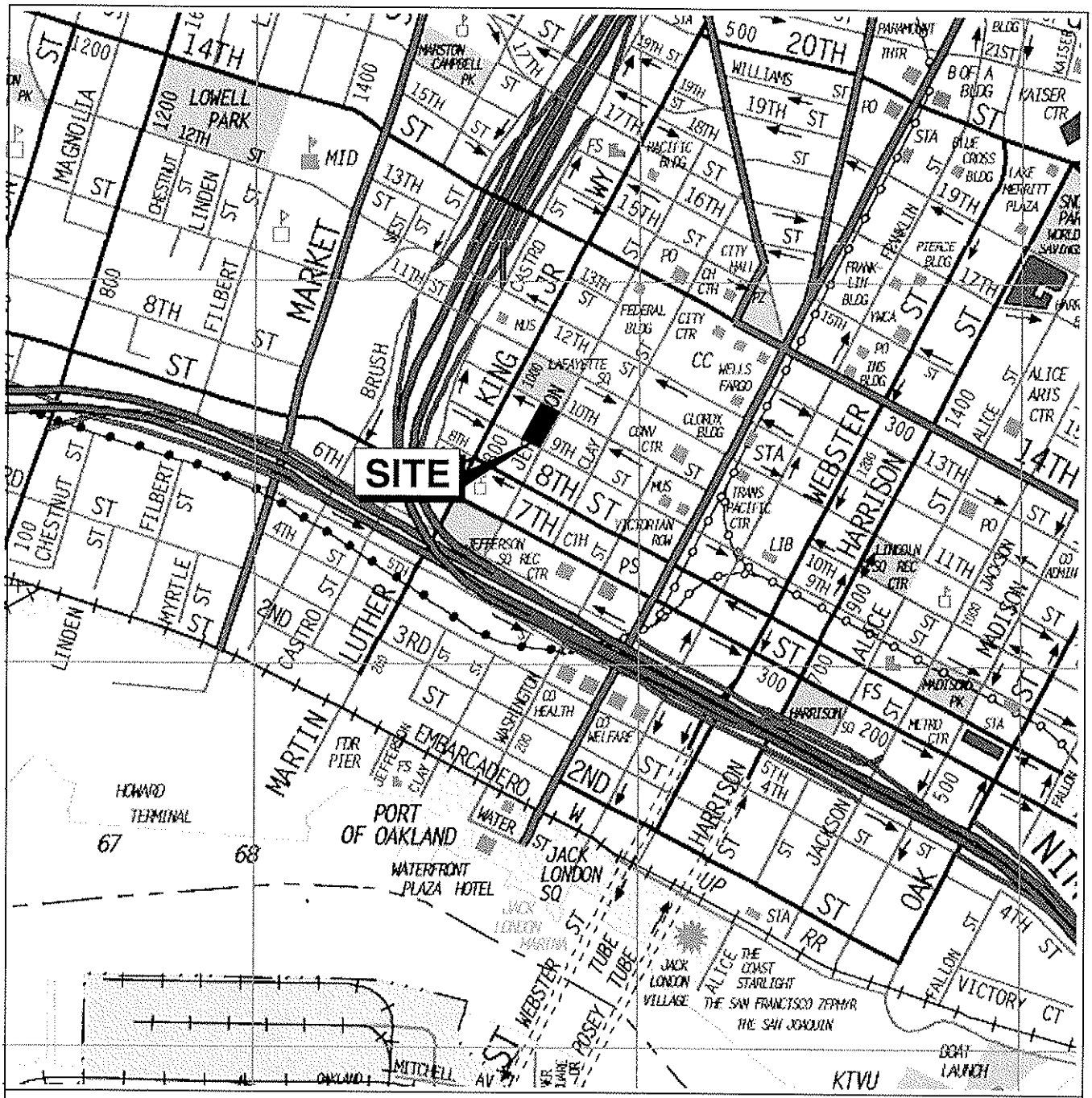
PROFESSIONAL GEOLOGIST
GROVER BUHR
No. 5596
STATE OF CALIFORNIA

28200412.OAK

cc. Anye Spivey, A.F. Evans

Figures
Table

Attachment A Certified Chemical Analytical Results and Chain-of-Custody Record (On CD-ROM)



Base map: The Thomas Guide
Alameda County
1999

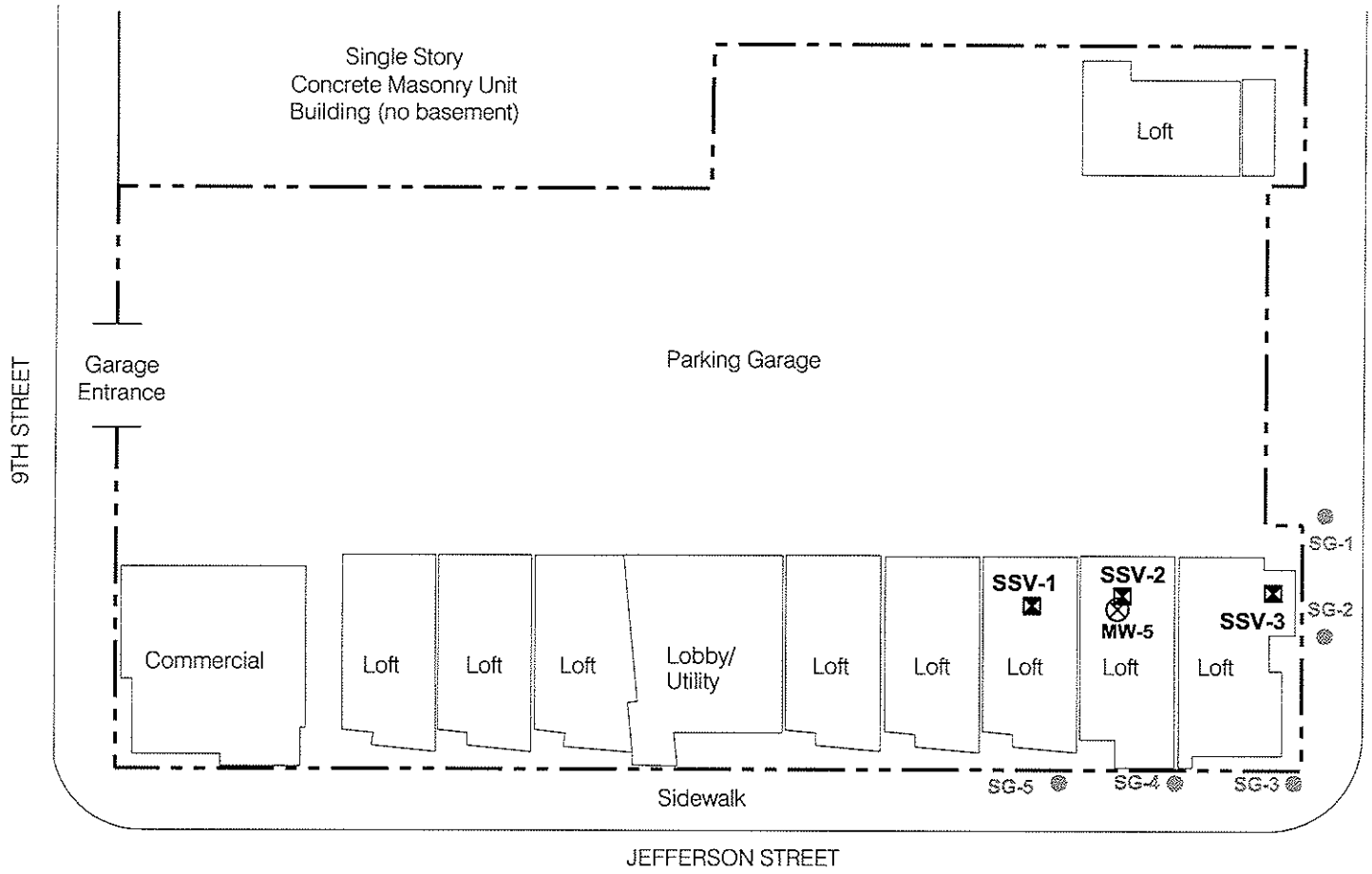
No scale

901 JEFFERSON STREET
Oakland, California

SITE LOCATION MAP

Treadwell&Rollo

Date 04/30/09	Project No. 2820.04	Figure 1



EXPLANATION

- Proposed sub-slab vapor sampling location
- Approximate location of former groundwater monitoring well
- Soil vapor sample by Treadwell & Rollo, Inc., January 2009
- Site boundary

0 30 Feet

Approximate scale

901 JEFFERSON STREET
Oakland, California

PROPOSED SUB-SLAB VAPOR SAMPLING LOCATIONS

Date 04/09/09	Project No. 2820.04	Figure 1

Treadwell&Rollo

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Treadwell&Rollo

Table 1.
SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS
901 JEFFERSON STREET
Oakland, California

Sample ID	Purge Volumes	Sample Depth (feet below slab base)	VOCs						Tracer gas
			Benzene (ug/m^3)	Toluene (ug/m^3)	Ethyl Benzene (ug/m^3)	m,p-xylenes (ug/m^3)	o-Xylene (ug/m^3)	TPHg (ug/m^3)	Helium (%)
SSV-1	3	0.3	12	410	110	590	190	2700	< 0.12
SSV-2	3	0.3	11	420	120	670	220	3100	< 0.11
SSV-3	3	0.3	16	480	140	730	230	3600	< 0.11
ESL-R			84	63,000	980	21,000	21,000	10,000	

Notes:
VOCs - Volatile organic compounds
TPHg - Total petroleum hydrocarbons as gasoline
ug/m^3 - micrograms per cubic meter
< 0.12 - Not detected at or above the laboratory reporting limit of 0.12%
ESL-R - Environmental Screening Level for soil vapor, residential land use

ESL values cited from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* by the San Francisco Bay Regional Water Quality Control Board (2007, revised May 2008) Table E-2, *Shallow Soil Gas Screening Levels*

ATTACHMENT A

AN ENVIRONMENTAL ANALYTICAL LABORATORY

5/7/2009

Mr. Grover Buhr
Treadwell & Rollo
501 14th St.
3rd Floor
Oakland CA 94612

Project Name: 901 Jefferson
Project #: 2820.04
Workorder #: 0904564A

Dear Mr. Grover Buhr

The following report includes the data for the above referenced project for sample(s) received on 4/24/2009 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 you 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 #: 0904564A

Work Order Summary

CLIENT:	Mr. Grover Buhr Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612	**BILL TO:**	Mr. Grover Buhr Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612
PHONE:	510-874-4500 X529	**P.O. #**	2820.04
FAX:	510-874-4507	**PROJECT #**	2820.04 901 Jefferson
DATE RECEIVED:	04/24/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	05/07/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SSV-1	Modified TO-15	3.6 "Hg	15.0 psi
02A	SSV-2	Modified TO-15	3.0 "Hg	15.0 psi
03A	SSV-3	Modified TO-15	3.4 "Hg	15.0 psi
03AA	SSV-3 Lab Duplicate	Modified TO-15	3.4 "Hg	15.0 psi
04A	Lab Blank	Modified TO-15	NA	NA
04B	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
05B	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06B	LCS	Modified TO-15	NA	NA

CERTIFIED BY: Linda J. Fruman DATE: 05/07/09

Laboratory Director

Certfication 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: 07/01/08, Expiration date: 06/30/09
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 0904564A

Three 1 Liter Summa Canister samples were received on April 24, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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.

Requirement	***TO-15***	***ATL Modifications***
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

There were no analytical discrepancies.

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: SSV-1

Lab ID#: 0904564A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	3.7	3.7	12
Toluene	1.2	110	4.3	410
Ethyl Benzene	1.2	24	5.0	110
m,p-Xylene	1.2	140	5.0	590
o-Xylene	1.2	43	5.0	190
TPH ref. to Gasoline (MW=100)	23	660	94	2700

Client Sample ID: SSV-2

Lab ID#: 0904564A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	3.4	3.6	11
Toluene	1.1	110	4.2	420
Ethyl Benzene	1.1	29	4.9	120
m,p-Xylene	1.1	160	4.9	670
o-Xylene	1.1	50	4.9	220
TPH ref. to Gasoline (MW=100)	22	750	92	3100

Client Sample ID: SSV-3

Lab ID#: 0904564A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	4.9	3.6	16
Toluene	1.1	130	4.3	480
Ethyl Benzene	1.1	32	4.9	140
m,p-Xylene	1.1	170	5.0	730
o-Xylene	1.1	54	5.0	230
TPH ref. to Gasoline (MW=100)	23	870	93	3600

Client Sample ID: SSV-3 Lab Duplicate

Lab ID#: 0904564A-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	4.7	3.6	15
Toluene	1.1	130	4.3	480

Air Toxics LTD.

Laboratory Services Since 1989

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

Client Sample ID: SSV-3 Lab Duplicate

Lab ID#: 0904564A-03AA

Ethyl Benzene	1.1	32	4.9	140
m,p-Xylene	1.1	170	5.0	740
o-Xylene	1.1	54	5.0	240
TPH ref. to Gasoline (MW=100)	23	910	93	3700

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-1

Lab ID#: 0904564A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050512**	**Date of Collection: 4/23/09 12:30:00 PM**	
Dil. Factor:	**2.30**	**Date of Analysis: 5/5/09 01:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	3.7	3.7	12
Toluene	1.2	110	4.3	410
Ethyl Benzene	1.2	24	5.0	110
m,p-Xylene	1.2	140	5.0	590
o-Xylene	1.2	43	5.0	190
TPH ref. to Gasoline (MW=100)	23	660	94	2700

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-2

Lab ID#: 0904564A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050513**	**Date of Collection: 4/23/09 11:30:00 AM**	
Dil. Factor:	**2.24**	**Date of Analysis: 5/5/09 02:30 PM**	

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Benzene	1.1	3.4	3.6	11
Toluene	1.1	110	4.2	420
Ethyl Benzene	1.1	29	4.9	120
m,p-Xylene	1.1	160	4.9	670
o-Xylene	1.1	50	4.9	220
TPH ref. to Gasoline (MW=100)	22	750	92	3100

Container Type: 1 Liter Summa Canister

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-3

Lab ID#: 0904564A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050410**	**Date of Collection: 4/23/09 10:20:00 AM**	
Dil. Factor:	**2.28**	**Date of Analysis: 5/4/09 01:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	4.9	3.6	16
Toluene	1.1	130	4.3	480
Ethyl Benzene	1.1	32	4.9	140
m,p-Xylene	1.1	170	5.0	730
o-Xylene	1.1	54	5.0	230
TPH ref. to Gasoline (MW=100)	23	870	93	3600

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-3 Lab Duplicate

Lab ID#: 0904564A-03AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050411**	**Date of Collection:**	**4/23/09 10:20:00 AM**
Dil. Factor:	**2.28**	**Date of Analysis:**	**5/4/09 01:55 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	4.7	3.6	15
Toluene	1.1	130	4.3	480
Ethyl Benzene	1.1	32	4.9	140
m,p-Xylene	1.1	170	5.0	740
o-Xylene	1.1	54	5.0	240
TPH ref. to Gasoline (MW=100)	23	910	93	3700

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0904564A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050405**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/4/09 09:05 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	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
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0904564A-04B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050508**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/5/09 10:22 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	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
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0904564A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/4/09 06:27 AM**	

Compound	**%Recovery**
Benzene	97
Toluene	100
Ethyl Benzene	102
m,p-Xylene	104
o-Xylene	108
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0904564A-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/5/09 07:04 AM**	

Compound	**%Recovery**
Benzene	109
Toluene	114
Ethyl Benzene	110
m,p-Xylene	114
o-Xylene	116
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0904564A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/4/09 07:07 AM**	

Compound	**%Recovery**
Benzene	98
Toluene	107
Ethyl Benzene	98
m,p-Xylene	102
o-Xylene	105
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0904564A-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7050503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/5/09 06:25 AM**	

Compound	**%Recovery**
Benzene	103
Toluene	111
Ethyl Benzene	98
m,p-Xylene	102
o-Xylene	106
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Grover Buhr GSbuhr@treadwell-rollo.com
Collected by: (Print and Sign) Louis Arighi
Company Treadwell & Rollo Email larighi@treadwell-rollo.com
Address 501 14th St, 3rd Flr City Oakland State CA Zip 94612
Phone 510-874-4500 Fax 510-874-4507

Project Info:
P.O. # 2820.04
Project # 2820.04
Projec: Name 901 Jefferson

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	SSV-1	3300	4/23/09	1230	BTEX, TPH-g by TO-15 & He (1946)	-30	-5		
02A	SSV-2	3184	↓	1130	BTEX, TPH-g by TO-15 / He by 1946	-30	-5		
03A	SSV-3	3189	↓	1020	BTEX, TPH-g by TO-15 / He by 1946	-30	-5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Louis M. Arighi	4/23/09 / 1500	Monica Groppen ATL	4/24/09 910
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		MA	Good	Yes No (None)	0904564

Form 1295 (rev.11)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

5/4/2009
Mr. Grover Buhr
Treadwell & Rollo
501 14th St.
3rd Floor
Oakland CA 94612

Project Name: 901 Jefferson
Project #: 2820.04
Workorder #: 0904564B

Dear Mr. Grover Buhr

The following report includes the data for the above referenced project for sample(s) received on 4/24/2009 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 you 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 #: 0904564B

Work Order Summary

CLIENT:	Mr. Grover Buhr Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612	**BILL TO:**	Mr. Grover Buhr Treadwell & Rollo 501 14th St. 3rd Floor Oakland, CA 94612
PHONE:	510-874-4500 X529	**P.O. #**	2820.04
FAX:	510-874-4507	**PROJECT #**	2820.04 901 Jefferson
DATE RECEIVED:	04/24/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	05/04/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SSV-1	Modified ASTM D-1946	3.6 "Hg	15.0 psi
02A	SSV-2	Modified ASTM D-1946	3.0 "Hg	15.0 psi
03A	SSV-3	Modified ASTM D-1946	3.4 "Hg	15.0 psi
03AA	SSV-3 Lab Duplicate	Modified ASTM D-1946	3.4 "Hg	15.0 psi
04A	Lab Blank	Modified ASTM D-1946	NA	NA
05A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Linda D. Fruman DATE: 05/04/09

Laboratory Director

Certfication 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: 07/01/08, Expiration date: 06/30/09
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 0904564B

Three 1 Liter Summa Canister samples were received on April 24, 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.

Requirement	***ASTM D-1946***	***ATL Modifications***
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 >/= 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: SSV-1

Lab ID#: 0904564B-01A

No Detections Were Found.

Client Sample ID: SSV-2

Lab ID#: 0904564B-02A

No Detections Were Found.

Client Sample ID: SSV-3

Lab ID#: 0904564B-03A

No Detections Were Found.

Client Sample ID: SSV-3 Lab Duplicate

Lab ID#: 0904564B-03AA

No Detections Were Found.

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-1

Lab ID#: 0904564B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9050123b**	**Date of Collection: 4/23/09 12:30:00 PM**	
Dil. Factor:	**2.30**	**Date of Analysis: 5/1/09 05:03 PM**	

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

Container Type: 1 Liter Summa Canister

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-2

Lab ID#: 0904564B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9050124b**	**Date of Collection:**	**4/23/09 11:30:00 AM**
Dil. Factor:	**2.24**	**Date of Analysis:**	**5/1/09 05:25 PM**

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-3

Lab ID#: 0904564B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9050125b**	**Date of Collection: 4/23/09 10:20:00 AM**	
Dil. Factor:	**2.28**	**Date of Analysis: 5/1/09 05:47 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: SSV-3 Lab Duplicate

Lab ID#: 0904564B-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9050126b**	**Date of Collection: 4/23/09 10:20:00 AM**	
Dil. Factor:	**2.28**	**Date of Analysis: 5/1/09 06:10 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0904564B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9050103b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/1/09 08:31 AM**	

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

Container Type: NA - Not Applicable

Air Toxics LTD.

Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0904564B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9050129b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/1/09 07:15 PM**	

Compound	**%Recovery**
Helium	103

Container Type: NA - Not Applicable

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Grover Buhr GSbuhr@treadwell-rollo.com
Collected by: (Print and Sign) Louis Arighi
Company Treadwell & Rollo Email larighi@treadwell-rollo.com
Address 501 14th St, 3rd Flr City Oakland State CA Zip 94612
Phone 510-874-4500 Fax 510-874-4507

Project Info:
P.O. # 2820.04
Project # 2820.04
Projec: Name 901 Jefferson

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	SSV-1	3300	4/23/09	1230	BTEX, TPH-g by TO-15 & He (1946)	-30	-5		
02A	SSV-2	3184	↓	1130	BTEX, TPH-g by TO-15 / He by 1946	-30	-5		
03A	SSV-3	3189	↓	1020	BTEX, TPH-g by TO-15 / He by 1946	-30	-5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Louis M. Arighi	4/23/09 / 1500	Monica Groppen ATL	4/24/09 910
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		MA	Good	Yes No (None)	0904564

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