# RECEIVED

Chevron

10:37 am, Dec 16, 2009

Alameda County Environmental Health Aaron Costa Project Manager Marketing Business Unit Chevron Environmental Management Company 6111 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 543-2961 Fax (925) 543-2324 acosta@chevron.com

Alameda County Health Care Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Chevron Service Station No. 9-0917 5280 Hopyard Road Pleasanton, CA

I have reviewed the attached report dated December 15, 2009.

I agree with the conclusions and recommendations presented in the referenced report. This information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga Rovers Associates, upon who assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Aaron Costa Project Manager

Attachment: Report



5900 Hollis Street, Suite A Emeryville, California 94608 Telephone: (510) 420-0700 http://www.craworld.com

Fax: (510) 420-9170

December 15, 2009

Reference No. 060057

Mr. Jerry Wickham Alameda County Environmental Health Services (ACEH) 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Sub-slab Vapor Results Chevron Service Station 9-0917 5280 Hopyard Road Pleasanton, California Fuel Leak Case RO0000439

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) is submitting this *Sub-slab Vapor Results* report, on behalf of Chevron Environmental Management Company (Chevron), to document the installation and sampling of sub-slab vapor probes at the site referenced above. CRA performed this work according to the June 29, 2009 *Soil Vapor Sampling Report and Work Plan for Sub-Slab Vapor Probes* as approved by Alameda County Environmental Health (ACEH) in a letter dated August 20, 2009 (Attachment A). The site background, a summary of field activities and CRA's conclusions and recommendations are presented below.

#### SITE BACKGROUND

The site is an active Chevron station located at the southern corner of the intersection of Hopyard Road and Owens Drive in Pleasanton, California (Figure 1). Site facilities include a station building, car wash, four underground storage tanks (USTs) and three dispenser islands under a common canopy (Figure 2). A Shell-branded service station is located across Hopyard Road to the east of the site and has an open case with ACEH. Land use surrounding the site is primarily commercial.

A total of 5 soil borings, 9 groundwater monitoring wells, 1 extraction well and 4 soil vapor wells have been installed at the site. A summary of environmental investigations conducted to date at the site is included as Attachment A.

Equal Employment Opportunity Employer



Reference No. 060057

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# SITE GEOLOGY AND HYDROGEOLOGY

The site is located in the Dublin Sub-Basin (DSB) of the Livermore Valley Groundwater Basin. Soils in this sub-basin consist mainly of Holocene age valley-fill deposits with a surficial clay layer cap up to 40 feet thick. Alluvial fan and stream deposits consisting of unconsolidated sand, gravel, silt and clay have been encountered below the clay cap in this sub-basin.

The upper, unconfined groundwater in the DSB generally flows southward. Aquifers in the DSB are generally flat lying, but there is a drop in groundwater elevation of approximately 50 feet across the Parks Fault (Evaluation of Groundwater Resources: Livermore and Sunol Valleys, Department of the Water Resources Bulletin Number 118-2, June 1974). The Parks Fault trends east-northeast approximately 1 mile south of the site (Pacific Environmental Group, Inc., *Soil and Groundwater Investigation*, dated August 11, 1997).

Based on historic and recent boring logs, sediments observed immediately beneath the site consist of interbedded clay, silty clay, clayey silt, sandy silt and silt to the maximum explored depth of 60 feet below grade (fbg). Groundwater depth ranges between approximately 5 and 10 fbg and flows generally southward at a gradient of 0.004 to 0.009.

# SUB-SLAB VAPOR PROBE INSTALLATION

CRA installed two sub-slab vapor probes (SSVP-1 and SSVP-2) inside the onsite building to determine if a complete pathway exists for the migration of soil vapor into indoor air (Figure 2).

*Installation and Sampling Dates:* CRA installed the sub-slab probes on November 22, 2009 and collected soil vapor samples on November 25, 2009.

*Drilling Company:* CRA contacted Vapor Tech Services of Berkeley, California (C-57 #916085) to install the sub-slab probes.

*Personnel:* Ian Hull supervised the sub-slab probe installations and collected soil vapor samples under the supervision of California Professional Geologist Brandon S. Wilken (P.G. #7564)

*Sub-Slab Vapor Probe Locations:* All work was conducted according to the California Environmental Protection Agency Department of Toxic Substance Control's (DTSC) December 2004 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor* 



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*Air* (*Revised February* 2005). Prior to drilling, utilities entering the building were identified and marked, and any internal locations where utilities penetrate the slab (e.g. furnace, water heater, circuit breaker box, and water or sewer lines) were determined. Locations where utilities penetrated the slab were avoided. Convenience store facilities restricted placement of the sub-slab vapor probes. SSVP-1 was installed near the center of the building's foundation. SSVP-2 was installed near the cashier counter (Figure 2).

*Sub-Slab Probe Installation:* Installation of the probes was based on the U.S. Environmental Protection Agency's *Standard Operating Procedure (SOP) for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO 15 to Support Vapor Intrusion Investigations (Draft)*. A rotary hammer drill was used to create a 2-inch diameter and 1-inch deep "outer" hole that partially penetrated the slab. A small portable vacuum cleaner was used to remove cuttings from the hole. Removal of cuttings in this manner in the non-penetrated slab does not compromise soil vapor samples because of lack of pneumatic communication between sub-slab material and the vacuum cleaner.

The rotary hammer drill was then used to create a smaller diameter "inner" hole through the remainder of the slab into sub-slab material. Drilling into sub-slab material created an open cavity for the probes, which prevented obstructions of the probe by sub-slab material.

Sub-slab vapor probes were constructed using stainless-steel tubing and stainless-steel compression fittings. Stainless-steel materials were used to ensure that construction materials were not a source of volatile organic compounds. Each sub-slab vapor probe was set in the hole. The top of the probe was completed flush with the slab and has recessed stainless steel plugs to prevent interference with day to day use of the building. Quick drying Portland cement slurry was pushed into the annular space between the probe and outside of the "outer" hole. The cement was allowed to cure for at least 48 hours prior to sampling.

# SUB-SLAB VAPOR AND AMBIENT AIR SAMPLING

CRA collected vapor samples from the two sub-slab vapor probes (SSVP-1 and SSVP-2), from indoor air and from outdoor ambient air.

*Local Atmospheric Conditions:* Local temperature during sampling was approximately 45 degrees Fahrenheit (outside) and 70 degrees Fahrenheit (in convenience store). Clear skies, dry ground and slight breezes were observed during the sampling event.



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*Ambient Air and Sub-Slab Vapor Sampling:* Ambient air and sub-slab vapor samples were collected on November 25, 2009, using 1-liter Summa<sup>™</sup> canisters with flow controllers connected to the sub-slab vapor probes using new Teflon<sup>™</sup> tubing and stainless-steel Swagelok<sup>™</sup> pressure fittings. The 1-liter Summa<sup>™</sup> canisters were set with a maximum flow rate of 167 milliliters per minute. While sampling, the vacuum of the Summa<sup>™</sup> canister was used to draw the soil vapor through the flow controller until a negative pressure of approximately 5 inches of mercury was observed on the vacuum gauge. Ambient air samples were collected in the breathing zone above sub-slab vapor probe SSVP-2 (indoor air) and outside the station convenience store (outdoor air). These samples were collected prior to collection of sub-slab vapor samples. After sampling, the Summa<sup>™</sup> canisters were packaged and sent to Air Toxics Ltd. in Fresno, California under chain-of-custody for analysis.

*Leak Testing:* In accordance with the DTSC's *Advisory Active Soil Gas Investigations* guidance document, dated January 28, 2003, leak testing using laboratory grade helium was performed during sampling of the sub-slab probes. A shroud was used to surround the sampling equipment and the surface of the sub-slab vapor probe. A field helium meter was used to maintain a concentration of approximately 80 percent helium inside the shroud during sampling. Helium was reported in two of the samples, with a maximum reported amount of 1.9 percent volume in SSVP-2. Due to the low percentage of helium, and therefore low amount of ambient air that could potentially enter the samples, the samples are considered valid.

*Vapor Chemical Analysis:* Vapor samples were analyzed for the following:

- Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes and methyl tert butyl ether, and naphthalene by EPA Method TO-15 (GC/MS)
- Oxygen (O<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrogen (N<sub>2</sub>), and helium by ASTM D-1946 (GC/TCD)

Vapor analytical results are presented in Table 1. Laboratory analytical reports are included as Appendix C.

# SUB-SLAB SOIL VAPOR RESULTS

Sub-slab probes SSVP-1 and SSVP-2 only had detections of TPHg at 140 micrograms per meter cubed ( $\mu$ g/m<sup>3</sup>) and 6,700  $\mu$ g/m<sup>3</sup>, respectively. No benzene or other constituents were detected.



Reference No. 060057

# **INDOOR AIR RESULTS**

Indoor air had hydrocarbon detections of 250  $\mu$ g/m<sup>3</sup> TPHg, 11  $\mu$ g/m<sup>3</sup> toluene and 5.9  $\mu$ g/m<sup>3</sup> xylenes. No benzene was detected.

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# **OUTDOOR AIR RESULTS**

Outdoor ambient air results had maximum hydrocarbon concentrations of 290  $\mu$ g/m<sup>3</sup>, 7.8  $\mu$ g/m<sup>3</sup> toluene and 8.1  $\mu$ g/m<sup>3</sup> xylenes. No benzene was detected. A field duplicate was taken in this location.

# <u>COMPARISON OF SUB-SLAB VAPOR RESULTS WITH INDOOR AIR AND</u> <u>OUTSIDE AMBIENT AIR RESULTS</u>

Elevated concentrations of TPHg were detected in sub-slab vapors, but there is no indication that sub-slab vapors are entering the building. Indoor and outdoor air results are comparable. TPHg was detected in indoor air at equivalent concentrations to outdoor air. Additionally, toluene and xylenes were detected in indoor and outdoor air at similar concentrations, although neither of these constituents was detected in the sub-slab vapors. This demonstrates that indoor air concentrations are from the air exchange with outdoor air, not from sub-slab vapors.

Based on the sub-slab vapor, indoor and outdoor ambient air results, there is not a complete pathway for vapor intrusion from the subsurface into the onsite building. Therefore, onsite workers are not at risk from vapor intrusion.



Reference No. 060057

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If you have any questions or comments, please contact Ms. Charlotte Evans at (510) 420-3351 or Mr. Aaron Costa at (925) 543-2961.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Nang

Branch Stilk



Brandon S. Wilken, P.G. # 7564

Charlotte Evans

CE/doh/12

Enc.

Figure 1Site Vicinity MapFigure 2Site Plan

Table 1Cumulative Soil Vapor Analytical Results

- Attachment A Regulatory Correspondence
- Attachment B Summary of Previous Environmental Work
- Attachment C Laboratory Analytical Reports
- cc: Mr. Aaron Costa, Chevron Environmental Management Company Lamorinda Development and Investment C&H Development Company

FIGURES



# **Chevron Service Station 9-0917**

5280 Hopyard Road Pleasanton, California



Vicinity Map



60057-2009(010)GN-WA002 NOV 18/2009

TABLE

# TABLE 1

# CUMULATIVE SOIL VAPOR ANALYTICAL DATA **CHEVRON STATION 9-0917** 5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

		Depth	TPHg (by TO-3)	TPHg (by TO-15)	Benzene	Toluene	Ethyl- benzene	Total Xylenes <sup>1</sup>	MTBE	Napthalene	Helium	Oxygen	Methane	CO <sub>2</sub>	$N_2$	Hydorgen Sulfide <sup>3</sup>	Carbonyl Sulfide	Thiophene
Sample ID	Date	(fbg)	•	Report	ted in mic	rograms p	per cubic n	neter (µg/m	1 <sup>3</sup> )			— Repo	rted in % V	olume –		Rep	ported in $ppbv^4$ —	
ESLs - Shallow So	il Gas (C/I) <sup>2</sup>		29,000	29,000	280	180,000	580,000	58,000	31,000	240								
2009 Sub-Slab Va	2009 Sub-Slab Vapor Sampling																	
SSVP-1	11/25/09			140	<3.9	<4.6	<5.2	<5.2	<4.4	<25	0.25	20	< 0.00024	0.66	79			
SSVP-2	11/25/09			6,700	<3.9	<4.6	<5.2	<5.2	<4.4	<25	1.9	20	0.00061	0.39	78			
IA-1	11/25/09			250	<3.5	11	<4.8	5.9	<4.0	<23	<0.11	20	0.00026	0.080	80			
IA-1	LAB DUPL	LICATE									<0.11	20	0.00026	0.080	80			
OA-1	11/25/09			290	<3.5	7.6	<4.8	4.9	<4.0	<23	<0.11	22	0.00028	0.064	78			
OA-1 DUP	11/25/09			180	<3.9	7.8	<5.2	8.1	<4.4	<25	<0.12	21	0.00027	0.057	79			
OA-1	LAB DUPL	LICATE																
2009 CRA Additio	onal Assessm	ient - Are	ea of Planned	Station Buil	ding Expa	insion												
SB6	10/29/09	6		<970	<38	<45	<52	<52	<43	<250	<0.12	20	< 0.00024	2.0				
SB6	10/29/09	6									<0.11	20	<0.00023	2.0				
SB8	10/29/09	6		130,000,000	23,000	<4,500	<5,200	<5,200	<4,300	<25,000	<0.12	6.6	38	11				
SB8	10/29/09	6									<0.12	6.1	40	12				
SB8 DUP	10/29/09	6		120,000,000	22,000	<4,500	<5,200	<5,200	<4,300	<25,000	< 0.12	6.8	38	11				
SB8 DUP	10/29/09	6									1.8	6.6	37	11				
SB9	10/29/09	6		260,000	190	120	500	71	<43	420	<0.12	21	0.054	0.32				
SB9	10/29/09	6									<0.12	21	0.054	0.31				
2009 Soil Vapor P	robe Installa	tion																
VP1	02/02/09	6 - 6.5	120,000,000		960,000	5,400	470,000	84,000	<4,500	<26,000	0.35	5.0	34	5.9				
VP1 DUPLICATE	02/02/09	6 - 6.5	120,000,000		750,000	<4,600	320,000	54,000	<4,400	<26,000	0.34	4.9	33	5.8				
VP1 RESAMPLE	02/02/09	6 - 6.5	200,000,000		840,000	<4,600	400,000	87,000	<4,400	<26,000	< 0.12	2.9	57	6.7				
VP1	05/14/09	6 - 6.5	190,000,000	140,000,000	1,500,000	<13,000	98,000	55,000	<12,000	<70,000	< 0.34	1.4	26	12	57	6.1	15	8.0
VP1 DUPLICATE	05/14/09	6 - 6.5	200,000,000	160,000,000	1,500,000	<12,000	95,000	59,000	<12,000	<69,000	< 0.33	0.96	26	12	58			
VP1 RESAMPLE	05/14/09	6 - 6.5	120,000,000	110,000,000	980,000	<8,400	180,000	66,000	<8,000	<47,000	<0.22	11	23	7.5	56			
VP2	02/02/09	6 - 6.5	36,000		280	89	150	180	<6.8	<40	< 0.44	6.5	0.012	6.3				
VP2	LAB DUPL	LICATE	36,000		280	91	160	190	<14	<79								

#### TABLE 1

# CUMULATIVE SOIL VAPOR ANALYTICAL DATA **CHEVRON STATION 9-0917** 5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (fbg)	TPHg (by TO-3) ◀	TPHg (by TO-15) ——Repor	Benzene rted in mic	Toluene crograms j	Ethyl- benzene ver cubic n	Total Xylenes <sup>1</sup> neter (µg/n	MTBE n <sup>3</sup> )	Napthalene ►	Helium	Oxygen — Repor	Methane rted in % V	CO 2 olume –	$N_2$	Hydorgen Sulfide <sup>3</sup>	Carbonyl Sulfide ported in ppbv <sup>4</sup> —	Thiophene ►
ESLs - Shallow	Soil Gas (C/I) <sup>2</sup>		29,000	29,000	280	180,000	580,000	58,000	31,000	240								
VP2	05/14/09	6 - 6.5	17,000	13,000	150	400	54	490	23	82J	<0.22	1.4	0.0051	20	78			
VP4	02/02/09	5 - 5.5	4,700		26	24	120	88	<4.2	<24	<0.12	9.3	0.00030	8.1				
VP4	05/14/09	5 - 5.5	1,800	1,100	9	<4.5	<5.2	10	<4.3	<25UJ	<0.12	5.9	0.00037	11	83			
VP5	02/02/09	5 - 5.5	890,000		230	350	<50	110	<41	<240	<0.12	1.7	5.2	2.2				
VP5	LAB DUPL	LICATE									<0.12	1.7	5.2	2.2				
VP5	05/14/09	5 - 5.5	1,100,000	1,200,000	1,400	<530	<610	<610	<510	<3,000	<0.11	1.4	6.0	4.7	88	1300	<4.0	<4.0

#### Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method TO-3 or EPA Method TO-15, as noted

Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE) by EPA Method TO-15

Helium, oxygen, methane and carbon dioxide (CO<sub>2</sub>) by modified ASTM D-1946

Hydoren sulfide, Carbonyl sulfide and thiophene by ASTM D-5504

fbg = Feet below grade

<X = Not detected above method detection limit x

-- = not analyzed or not applicable

1 = Highest xylene, either m,p-xylene or o-xylene, concentration reported

2 = Environmental Screening Levels (ESLs) for shallow soil gas in commercial/industrial land from Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater prepared by the California Regional Water Quality Control Board, San Fra

3 = A full suite of mercaptans were run by ASTM D-5504. Only detected compounds are reported

4 = Results reported in parts-per-billion by volume (ppbv) only

J = Estimated value due to bias in the CCV

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

**Bold** = Concentration exceeds applicable ESL

# ATTACHMENT A

# REGULATORY CORRESPONDENCE

# ALAMEDA COUNTY HEALTH CARE SERVICES



DAVID J KEARS, Agency Director

AGENCY



Subject Fuel Leak Case No RO0000439 and Geotracker Global ID T0600100345, Chevron #9-0917, 5280 Hopyard Road, Pleasanton, CA 94566

Dear Mr Costa

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "*Soil Vapor Sampling Report and Work Plan for Sub-Slab Vapor Probes*," dated June 29, 2009 (Report) The Report presents the results from re-sampling of four soil vapor probes Elevated concentrations of petroleum hydrocarbons and methane continue to be detected in soil vapor samples from the site Based on the results of re-sampling, the Report proposes the installation and sampling of two sub-slab vapor probes within the station building

The proposed scope of work is acceptable and may be implemented as proposed. We request that you perform the proposed work and send us the reports requested below. As discussed previously in ACEH correspondence dated July 23, 2009, groundwater monitoring may be suspended during the ongoing evaluation of the potential for vapor intrusion.

#### TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention Jerry Wickham), according to the following schedule

• December 17, 2009 - Sub-Slab Installation and Soil Vapor Sampling Report

These reports are being requested pursuant to California Health and Safety Code Section 25296 10 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request

Mr Aaron Costa Lamorinda Development and Investment C&H Development RO0000439 August 20, 2009 Page 2

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions" Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format) Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic\_reporting)

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge " This letter must be signed by an officer or legally authorized representative of your company Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835 1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification Please ensure all that all technical reports submitted for this fuel leak case meet this requirement

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup

Mr Aaron Costa Lamorinda Development and Investment C&H Development RO0000439 August 20, 2009 Page 3

#### AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions California Health and Safety Code, Section 25299 76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry wickham@acgov org

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297 Senior Hazardous Materials Specialist

Enclosure ACEH Electronic Report Upload (ftp) Instructions

cc Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street Pleasanton, CA 94566

Bill Hurtido, Accor North America, 4001 International Parkway, Carrollton, TX 75007

Charlotte Evans, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608

Donna Drogos, ACEH Jerry Wickham, ACEH

Geotracker, File

Alemeda County Environmental Cleanup	ISSUE DATE July 5, 2005		
Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	REVISION DATE March 27, 2009		
	PREVIOUS REVISIONS December 16, 2005, October 31, 2005		
SECTION Miscellaneous Administrative Topics & Procedures	SUBJECT Electronic Report Upload (ftp) Instructions		

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

### REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a single portable document format (PDF)
  with no password protection (Please do not submit reports as attachments to electronic mail)
- It is preferable that reports be converted to PDF format from their original format, (e g, Microsoft Word) rather than scanned
- Signature pages and perjury statements must be included and have either original or electronic signature
- Do not password protect the document Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password Documents with password protection will not be accepted
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor
- Reports must be named and saved using the following naming convention

RO# Report Name\_Year-Month-Date (e g , RO#5555\_WorkPlan\_2005-06-14)

#### Additional Recommendations

 A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format These are for use by assigned Caseworker only

#### Submission Instructions

- 1) Obtain User Name and Password
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site
    - i) Send an e-mail to <u>dehloptoxic@acgov org</u>
      - Or
    - II) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh
  - b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to ftp //alcoftp1 acgov org
    - (i) Note Netscape and Firefox browsers will not open the FTP site
  - b) Click on File, then on Login As
  - c) Enter your User Name and Password (Note Both are Case Sensitive)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to <u>dehloptoxic@acgov org</u> notify us that you have placed a report on our ftp site
  - b) Copy your Caseworker on the e-mail Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov org (e g , firstname lastname@acgov org)
  - c) The subject line of the e-mail must start with the RO# followed by Report Upload (e g, Subject RO1234 Report Upload) If site is a new case without an RO# use the street address instead
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site

# ATTACHMENT B

# SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

# SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

**1989** *Monitoring Well Installation:* In August 1989, Groundwater Technology, Inc. (GTI) installed onsite groundwater monitoring wells MW-1 through MW-3. No total petroleum hydrocarbons as gasoline (TPHg) or benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in soil. Only 6 micrograms per liter ( $\mu$ g/L) ethylbenzene was detected in groundwater, no other fuel hydrocarbons were detected. Details of this investigation can be found in GTI's *Site Assessment Report*, dated August, 1989.

**1991** *Monitoring Well Destruction and Well Installation:* In July 1991, GTI destroyed wells MW-1 through MW-3 and installed groundwater monitoring wells MW-4 through MW-6. TPHg was detected at up to 3 milligrams per kilogram (mg/kg) in well MW-5, but the chromatogram was not consistent with a gasoline standard pattern. In particular, a set of peaks are present both before and after the gasoline hydrocarbon range, indicating a suite of hydrocarbons both lighter and heavier than normal gasoline-range hydrocarbons. No benzene, ethylbenzene or xylenes were detected; toluene was detected at a maximum concentration of 0.022 mg/kg. Groundwater was encountered in the well borings at a depth of approximately 13 fbg. Maximum TPHg and benzene concentrations were detected in groundwater in well MW-5 at 12,000 micrograms per liter ( $\mu$ g/L) and 4,000  $\mu$ g/L, respectively. Details of this investigation can be found in GTI's *Well Installation Report*, November 14, 1991.

1991 UST Replacement and Soil Excavation: In June 1991, Blaine Tech Services, Inc. observed the underground storage tank (UST) system removal and soil excavation, and collected soil and groundwater samples for chemical analyses. Five fiberglass USTs consisting of three 10,000-gallon gasoline, one 10,000-gallon diesel, and one 500-gallon used-oil UST were removed and replaced with four 12,000-gallon double-walled fiberglass gasoline USTs. TPHg and benzene were detected in soil samples collected from the bottom of the UST excavation at maximum concentrations of 70 mg/kg and 0.64 mg/kg, respectively, at depths of 9.5 fbg to 10 fbg. TPHg and benzene were detected in over-excavation soil samples collected from beneath the fuel product piping at concentrations of 440 mg/kg and 1.1 mg/kg, respectively, at 7 fbg. Total petroleum hydrocarbons as diesel (TPHd) was detected at a maximum concentration of 8.0 mg/kg from 10 fbg in the product piping area. Over-excavation of UST and product piping areas extended to maximum depths of approximately 10 fbg. Concentrations of 24,000  $\mu$ g/L TPHg and 1,000  $\mu$ g/L benzene were detected in a groundwater sample collected from the UST excavation. Depth to water in the excavation was measured at approximately 10 fbg. Approximately 90 cubic yards of soil, not including pea gravel, were removed during UST removal and over-excavation, and approximately 70 cubic yards of soil were removed during product line removal and over-excavation. The probable hydrocarbon source area, based on reported soil and grab-groundwater samples, is the former dispenser

island and associated northeastern product lines. Details of this investigation can be found in Gettler-Ryan's (G-R) *Site Conceptual Model and Closure Request*, dated January 25, 2002.

**1997** *Monitoring Well Installation:* On May 5, 1997, Pacific Environmental Group, Inc. (PEG) installed offsite groundwater monitoring wells MW-7 through MW-9 to define the extent of petroleum hydrocarbons and methyl tertiary-butyl ether (MTBE) in groundwater south of the source area. No TPHg, BTEX or MTBE was detected in any soil samples. Selected soil samples were sent to Cooper Testing Facilities for physical analysis for moisture, density, porosity, specific gravity, and organic content. Details of this investigation can be found in PEG's *Soil and Groundwater Investigation*, dated August 11, 1997.

*March* 1999 *Enhanced Bioremediation:* On March 26, 1999, G-R installed oxygen releasing compound (ORC) socks in wells MW-5 and MW-6 to increase the dissolved oxygen concentrations in groundwater to enhance biodegradation of the hydrocarbon plume. ORC in this application had an estimated time release of approximately six months. A significant decrease in dissolved hydrocarbon concentrations was observed in wells MW-5 and MW-6 after installation of the ORC. A significant decrease in dissolved oxygen (DO) concentrations in wells MW-5 and MW-6 was reported from samples collected from June 19, 2000 to September 18, 2000, suggesting that the ORC socks were spent. During the next five quarters DO concentrations stabilized around 3.6 milligrams per liter (mg/L) and 4.3 mg/L in wells MW-5 and MW-6, respectively. A second significant decrease in DO was reported in samples collected from September 7, 2001 to December 5, 2001. Per the request of ACEHS, G-R removed the ORC socks in wells MW-5 and MW-5 and MW-6 during the monitoring and sampling event on September 7, 2001.

**2006** *Subsurface Investigation:* In February 2006, Cambria Environmental Technology, Inc. (Cambria) advanced five soil borings. Two of the borings were advanced to deeper groundwater bearing zones using a Cone Penetration Technology (CPT) direct push drill rig. TPHg was only detected in soil samples from boring GP-1, at concentrations ranging from 7.9 mg/kg at 7 fbg to 110 mg/kg at 5 fbg. Benzene was detected only in soil boring GP-1 at concentrations ranging from 0.003 mg/kg at 7 fbg to 0.09 mg/kg at 10 fbg. MTBE was detected only in soil boring GP-2 at 10 fbg at a concentration of 0.006 mg/kg. The highest TPHg concentrations detected in grab-groundwater samples were 2,400 µg/L at 8 fbg from GP-1 and 110 µg/L at 28 fbg in GP-2. Benzene was only detected in samples from GP-1 at concentrations of 2 µg/L (8 fbg) and 0.7 µg/L (36 fbg), respectively. MTBE detections were 19 µg/L in GP-1 at 36 fbg and 22 µg/L in GP-2 at 28 fbg. No TPHg, benzene or MTBE were detected in grab-groundwater samples from GP-5, with the exception of 1 µg/L MTBE in GP-5. Details of this investigation can be found in Cambria's *Subsurface Investigation Report*, dated March 29, 2006.

**2006** *Well Installation:* In August 2006, Cambria installed remediation well IW-1. TPHg and benzene were detected at maximum concentrations of 880 mg/kg at 15.5 fbg and 0.35 mg/kg at 20 fbg, respectively. No MTBE was detected in soil. Details of this investigation can be found in Cambria's Subsurface Investigation Report, dated September 26, 2006.

**2007** *Groundwater Batch Extraction:* Cambria performed batch groundwater extraction from well IW-1. The calculated TPHg mass removed was 0.0051 pounds. Review of the boring log and physical soil data indicate the majority of soil encountered beneath the site has high clay content and low permeability, therefore it yielded little hydrocarbon mass through groundwater extraction. Details of this investigation can be found in Cambria's *Groundwater Batch Extraction Results*, dated March 12, 2007.

**2009** *Soil Vapor Probe Installations*: Conestoga-Rovers & Associates (CRA) installed four soil vapor probes onsite to evaluate the potential for a vapor intrusion pathway onsite from soil gas to indoor air. TPHg in soil was only detected in VP1 at 100 mg/kg. Benzene was detected in all four soil samples, ranging in concentration from 0.0007 mg/kg in VP2 and VP4 to 1.2 mg/kg in VP1. No toluene, ethylbenzene, xylenes or MTBE were detected above environmental screening levels (ESLs)<sup>1</sup> in any soil sample. Probe VP1 had hydrocarbon concentrations above ESLs<sup>2</sup> with maximum concentrations of 200,000,000 micrograms per meter cubed ( $\mu$ g/m<sup>3</sup>) TPHg, 960,000  $\mu$ g/m<sup>3</sup> benzene, and 87,000  $\mu$ g/m<sup>3</sup> xylenes. No toluene, ethylbenzene, or MTBE was detected above shallow soil vapor ESLs. Elevated methane concentrations were detected in samples from VP1 and VP5, with a maximum concentration of 57 percent. Both VP1 and VP5 are adjacent to sewer lines that exit the station building. Details of this investigation can be found in CRA's *Soil Vapor Probe Installation and Sampling Report*, dated April 19, 2009.

**2009** *Soil Vapor Sampling:* On May 14, 2009 CRA collected another set of samples from vapor points VP1, VP2, VP4 and VP5. Probe VP1 had hydrocarbon concentrations above  $ESLs^2$  with maximum concentrations of 200,000,000 micrograms per meter cubed ( $\mu$ g/m<sup>3</sup>) TPHg, 1,500,000  $\mu$ g/m<sup>3</sup> benzene, and 66,000  $\mu$ g/m<sup>3</sup> xylenes. No toluene, ethylbenzene, or MTBE was detected above shallow soil vapor ESLs. Elevated methane concentrations were again detected in samples from probes VP1 and VP5, with concentrations ranging up to 26 percent. Methane concentrations have decreased in probe VP1, but remained stable in probe VP5. Hydrogen

<sup>&</sup>lt;sup>1</sup> Environmental Screening Levels (ESLs) for shallow soils (≤3m) where groundwater is current or potential source of drinking water for commercial/industrial land use from the 2007 Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater by the California Regional Water Quality Control Board, San Francisco Bay Region Interim Final November 2007, revised May 2008, Table A.

<sup>&</sup>lt;sup>2</sup> Environmental Screening Levels (ESLs) soil gas (Vapor Intrusion concerns) for commercial/industrial land use from the 2007 Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater by the California Regional Water Quality Control Board, San Francisco Bay Region Interim Final November 2007, revised May 2008, Table E

sulfide was detected in probes VP1 and VP5 at a maximum concentration of 1,400 parts-per-billion-by-volume. Hydrogen sulfide is a gas that can be derived in sewers from the decay of organic matter. Details of this investigation can be found in CRA's *Soil Vapor Sampling Report and Work Plan for Sub-Slab Vapor Probes*, dated June 29, 2009.

2009 Additional Site Assessment – Area of Proposed Station Building Expansion: On October 28 and 29, 2009 CRA advanced three direct-push soil borings, installed four temporary soil vapor probes and collected soil, soil vapor and grab-groundwater samples. Hydrocarbon concentrations were detected in all three soil borings (SB6, SB7 and SB8) and were typically greatest between 12 to 22 fbg. TPHg concentrations in soil were greatest at 730 mg/kg in SB7 (18 fbg) and at 230 mg/kg in SB8 (15 fbg). Benzene concentrations were likewise greatest in these two sample locations at 3.4 mg/kg in SB7 (18 fbg) and 0.27 mg/kg in SB8 (15 fbg). Abundant subsurface debris prevented soil and groundwater sample collection from the SB9 boring location. TPHg concentrations in grab-groundwater samples were greatest from SB7 at  $1,400 \,\mu g/L$  but were also detected from SB6 at  $620 \,\mu g/L$ . Groundwater samples were not available at SB8 and SB9. Temporary soil vapor probes were advanced using a direct-push rig and installed inside the direct-push rods at 6 fbg. TPHg, benzene and naphthalene concentrations in soil vapor exceeded ESLs<sup>2</sup> in borings SB8 and SB9. TPHg concentrations were greatest in SB8 at  $130,000,000 \,\mu\text{g/m}^3$ . Benzene concentrations were greatest in SB8 at 23,000  $\mu$ g/m<sup>3</sup>. Naphthalene was detected in SB9 at 420  $\mu$ g/m<sup>3</sup>. All other analytes, if detected, were below ESLs. A report documenting additional information has not yet been submitted.

# ATTACHMENT C

# LABORATORY ANALYTICAL REPORTS



12/2/2009 Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville CA 94608

Project Name: Chevron 9-0917 Project #: 060057 Workorder #: 0911606A

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 11/30/2009 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,

Vgch Kyle

Kyle Vagadori Project Manager



## WORK ORDER #: 0911606A

Work Order Summary

CLIENT:	Ms. Charlotte Evans	BILL TO:	Ms. Charlotte Evans
	Conestoga-Rovers Associates (CRA)		Conestoga-Rovers Associates (CRA)
	5900 Hollis Street		5900 Hollis Street
	Suite A		Suite A
	Emeryville, CA 94608		Emeryville, CA 94608
PHONE:	510-420-3351	<b>P.O.</b> #	40-4026130
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	11/30/2009	CONTACT	Kyle Vagadori
DATE COMPLETED:	12/02/2009	connen	ityle i ugudoll

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	OA-1	Modified TO-15	2.4 "Hg	15 psi
01AA	OA-1 Lab Duplicate	Modified TO-15	2.4 "Hg	15 psi
02A	OA-1 DUP	Modified TO-15	5.0 "Hg	15 psi
03A	IA-1	Modified TO-15	2.5 "Hg	15 psi
04A	SSVP-1	Modified TO-15	5.0 "Hg	15 psi
05A	SSVP-2	Modified TO-15	5.0 "Hg	15 psi
06A	TRIP BLANK	Modified TO-15	28.5 "Hg	15 psi
07A	Lab Blank	Modified TO-15	NA	NA
08A	CCV	Modified TO-15	NA	NA
09A	LCS	Modified TO-15	NA	NA

CERTIFIED BY:

Sinda d. Fruman

DATE: <u>12/02/09</u>

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 Conestoga-Rovers Associates (CRA) Workorder# 0911606A

Six 1 Liter Summa Canister (100% Certified) samples were received on November 30, 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.

Requirement	TO-15	ATL Modifications
Daily CCV	= 30% Difference</td <td><!--= 30% Difference; Compounds exceeding this criterion<br-->and associated data are flagged and narrated.</td>	= 30% Difference; Compounds exceeding this criterion<br 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**

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

All Quality Control Limit exceedences 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: OA-1**

#### Lab ID#: 0911606A-01A

Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	2.0	4.1	7.6
m,p-Xylene	1.1	1.1	4.8	4.9
TPH ref. to Gasoline (MW=100)	22	72	90	290

#### Client Sample ID: OA-1 Lab Duplicate

#### Lab ID#: 0911606A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	2.0	4.1	7.4
m,p-Xylene	1.1	1.1	4.8	4.7
TPH ref. to Gasoline (MW=100)	22	65	90	260

#### **Client Sample ID: OA-1 DUP**

#### Lab ID#: 0911606A-02A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Toluene	1.2	2.1	4.6	7.8
m,p-Xylene	1.2	1.9	5.2	8.1
TPH ref. to Gasoline (MW=100)	24	44	99	180

#### **Client Sample ID: IA-1**

#### Lab ID#: 0911606A-03A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Toluene	1.1	2.9	4.1	11
m,p-Xylene	1.1	1.4	4.8	5.9
TPH ref. to Gasoline (MW=100)	22	62	90	250

#### **Client Sample ID: SSVP-1**

Lab ID#: 0911606A-04A				
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	24	34	99	140



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

#### Client Sample ID: SSVP-2

Lab ID#: 0911606A-05A				
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
TPH ref. to Gasoline (MW=100)	24	1600	99	6700

#### Client Sample ID: TRIP BLANK

#### Lab ID#: 0911606A-06A

No Detections Were Found.



# Client Sample ID: OA-1 Lab ID#: 0911606A-01A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

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File Name: Dil. Factor:	x120109 2.20	Date of Collection: 11/25/09 5:36:00 AM Date of Analysis: 12/1/09 12:58 PM		25/09 5:36:00 AM /09 12:58 PM
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.5	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
Toluene	1.1	2.0	4.1	7.6
m,p-Xylene	1.1	1.1	4.8	4.9
o-Xylene	1.1	Not Detected	4.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.4	Not Detected UJ	23	Not Detected UJ
TPH ref. to Gasoline (MW=100)	22	72	90	290

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

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130



# Client Sample ID: OA-1 Lab Duplicate Lab ID#: 0911606A-01AA MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	x120117 2.20	Date of Collection: 11/25/09 5:36:00 AM Date of Analysis: 12/1/09 06:15 PM		25/09 5:36:00 AM /09 06:15 PM
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.5	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
Toluene	1.1	2.0	4.1	7.4
m,p-Xylene	1.1	1.1	4.8	4.7
o-Xylene	1.1	Not Detected	4.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.4	Not Detected UJ	23	Not Detected UJ
TPH ref. to Gasoline (MW=100)	22	65	90	260

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

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	94	70-130	



# Client Sample ID: OA-1 DUP Lab ID#: 0911606A-02A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	x120110 2.42	Date of Collection: 11/25/09 5:36:00 AM Date of Analysis: 12/1/09 01:39 PM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	2.1	4.6	7.8
m,p-Xylene	1.2	1.9	5.2	8.1
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Naphthalene	4.8	Not Detected UJ	25	Not Detected UJ
TPH ref. to Gasoline (MW=100)	24	44	99	180

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

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	93	70-130	



# Client Sample ID: IA-1 Lab ID#: 0911606A-03A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

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File Name: Dil. Factor:	x120111 2.20	Date of Collection: 11/25/09 5:52:00 AM Date of Analysis: 12/1/09 02:15 PM		25/09 5:52:00 AM /09 02:15 PM
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.5	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
Toluene	1.1	2.9	4.1	11
m,p-Xylene	1.1	1.4	4.8	5.9
o-Xylene	1.1	Not Detected	4.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.4	Not Detected UJ	23	Not Detected UJ
TPH ref. to Gasoline (MW=100)	22	62	90	250

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

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



# Client Sample ID: SSVP-1 Lab ID#: 0911606A-04A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	x120112 2.42	Date of Collection: 11/25/09 6:36:00 AM Date of Analysis: 12/1/09 02:53 PM		
Compound	Røt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Naphthalene	4.8	Not Detected UJ	25	Not Detected UJ
TPH ref. to Gasoline (MW=100)	24	34	99	140

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

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	93	70-130	



# Client Sample ID: SSVP-2 Lab ID#: 0911606A-05A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	x120113 2.42	Date of Collection: 11/25/09 7:34:00 AM Date of Analysis: 12/1/09 03:30 PM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Naphthalene	4.8	Not Detected UJ	25	Not Detected UJ
TPH ref. to Gasoline (MW=100)	24	1600	99	6700

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

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	102	70-130	
4-Bromofluorobenzene	95	70-130	



# Client Sample ID: TRIP BLANK Lab ID#: 0911606A-06A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	x120114 1.00	Date of Collection: 11/25/09 7:30:00 A Date of Analysis: 12/1/09 04:06 PM		25/09 7:30:00 AM /09 04:06 PM
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Naphthalene	2.0	Not Detected UJ	10	Not Detected UJ
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

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

		Method		
Surrogates	%Recovery	Limits		
1,2-Dichloroethane-d4	104	70-130		
Toluene-d8	100	70-130		
4-Bromofluorobenzene	93	70-130		



# Client Sample ID: Lab Blank Lab ID#: 0911606A-07A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	x120108 1.00	Date o	of Collection: NA of Analysis: 12/1	/09 11:20 AM
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Naphthalene	2.0	Not Detected UJ	10	Not Detected UJ
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

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

		Method		
Surrogates	%Recovery	Limits		
1,2-Dichloroethane-d4	103	70-130		
Toluene-d8	100	70-130		
4-Bromofluorobenzene	94	70-130		



# Client Sample ID: CCV Lab ID#: 0911606A-08A

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

1

File Name:	x120104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/1/09 08:36 AM
Compound		%Recovery
Benzene		81
Ethyl Benzene		90
Toluene		84
m,p-Xylene		90
o-Xylene		89
Methyl tert-butyl ether		88
Naphthalene		68 Q
TPH ref. to Gasoline (MW=100)		135
Q = Exceeds Quality Control limits.		
Container Type: NA - Not Applicable		
		Method
•		

Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	91	70-130



# Client Sample ID: LCS Lab ID#: 0911606A-09A

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

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File Name:	x120103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/1/09 08:00 AM
Compound		%Recovery
Benzene		84
Ethyl Benzene		100
Toluene		85
m,p-Xylene		100
o-Xylene		98
Methyl tert-butyl ether		91
Naphthalene		81
TPH ref. to Gasoline (MW=100)		Not Spiked

		Method		
Surrogates	%Recovery	Limits		
1,2-Dichloroethane-d4	108	70-130		
Toluene-d8	103	70-130		
4-Bromofluorobenzene	96	70-130		



12/1/2009 Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville CA 94608

Project Name: Chevron 9-0917 Project #: 060057 Workorder #: 0911606B

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 11/30/2009 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,

Vgch Kyle

Kyle Vagadori Project Manager

Page 1 of 16



## WORK ORDER #: 0911606B

Work Order Summary

CLIENT: N	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	BILL TO:	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE: 5	510-420-3351	<b>P.O.</b> #	40-4026130
FAX: 5	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED: 1 DATE COMPLETED: 1	11/30/2009 12/01/2009	CONTACT:	Kyle Vagadori

			RECEIPT	FINAL
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	<b>PRESSURE</b>
01A	OA-1	Modified ASTM D-1946	2.4 "Hg	15 psi
02A	OA-1 DUP	Modified ASTM D-1946	5.0 "Hg	15 psi
03A	IA-1	Modified ASTM D-1946	2.5 "Hg	15 psi
03AA	IA-1 Lab Duplicate	Modified ASTM D-1946	2.5 "Hg	15 psi
04A	SSVP-1	Modified ASTM D-1946	5.0 "Hg	15 psi
05A	SSVP-2	Modified ASTM D-1946	5.0 "Hg	15 psi
06A	TRIP BLANK	Modified ASTM D-1946	28.5 "Hg	15 psi
07A	Lab Blank	Modified ASTM D-1946	NA	NA
07B	Lab Blank	Modified ASTM D-1946	NA	NA
08A	LCS	Modified ASTM D-1946	NA	NA

Sinda d. Fruman CERTIFIED BY:

DATE: <u>12/01/09</u>

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 Conestoga-Rovers Associates (CRA) Workorder# 0911606B

Six 1 Liter Summa Canister (100% Certified) samples were received on November 30, 2009. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modification	s taken to run	these samples	s are summarized	in the	table b	elow.	Specific	project
requirements may ov	er-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: OA-1**

#### Lab ID#: 0911606B-01A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	22	
Nitrogen	0.22	78	
Carbon Dioxide	0.022	0.064	
Methane	0.00022	0.00028	

#### **Client Sample ID: OA-1 DUP**

#### Lab ID#: 0911606B-02A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.24	21	
Nitrogen	0.24	79	
Carbon Dioxide	0.024	0.057	
Methane	0.00024	0.00027	

#### **Client Sample ID: IA-1**

#### Lab ID#: 0911606B-03A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	20	
Nitrogen	0.22	80	
Carbon Dioxide	0.022	0.080	
Methane	0.00022	0.00026	

#### **Client Sample ID: IA-1 Lab Duplicate**

#### Lab ID#: 0911606B-03AA

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	20	
Nitrogen	0.22	80	
Carbon Dioxide	0.022	0.080	
Methane	0.00022	0.00026	

#### Client Sample ID: SSVP-1

#### Lab ID#: 0911606B-04A



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

#### Client Sample ID: SSVP-1

#### Lab ID#: 0911606B-04A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.24	20	
Nitrogen	0.24	79	
Carbon Dioxide	0.024	0.66	
Helium	0.12	0.25	

### Client Sample ID: SSVP-2

#### Lab ID#: 0911606B-05A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.24	20	
Nitrogen	0.24	78	
Carbon Dioxide	0.024	0.39	
Methane	0.00024	0.00061	
Helium	0.12	1.9	

#### **Client Sample ID: TRIP BLANK**

#### Lab ID#: 0911606B-06A

	Rpt. Limit	Amount
Compound	(%)	(%)
Nitrogen	0.10	100



# Client Sample ID: OA-1 Lab ID#: 0911606B-01A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113016 2.20	Date of Collection: 11/25/09 5:36:00 AM Date of Analysis: 11/30/09 03:40 PM	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	22
Nitrogen		0.22	78
Carbon Dioxide		0.022	0.064
Methane		0.00022	0.00028
Helium		0.11	Not Detected



# Client Sample ID: OA-1 DUP Lab ID#: 0911606B-02A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113017 2.42	Date of Collection: 11/25/09 5:36:00 AM Date of Analysis: 11/30/09 04:21 PM	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.24	21
Nitrogen		0.24	79
Carbon Dioxide		0.024	0.057
Methane		0.00024	0.00027
Helium		0.12	Not Detected



# Client Sample ID: IA-1 Lab ID#: 0911606B-03A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	9113018 2.20	Date of Collection: 11/25/09 5:52:00 AM Date of Analysis: 11/30/09 04:54 PM	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	20
Nitrogen		0.22	80
Carbon Dioxide		0.022	0.080
Methane		0.00022	0.00026
Helium		0.11	Not Detected



# Client Sample ID: IA-1 Lab Duplicate Lab ID#: 0911606B-03AA NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113019 2.20	Date of Collection: 11/25/09 5:52:00 AM Date of Analysis: 11/30/09 05:19 PM	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	20
Nitrogen		0.22	80
Carbon Dioxide		0.022	0.080
Methane		0.00022	0.00026
Helium		0.11	Not Detected



# Client Sample ID: SSVP-1 Lab ID#: 0911606B-04A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113020 2.42	Date of Collection: 11/25/09 6:36:00 AM Date of Analysis: 11/30/09 05:55 PM	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.24	20
Nitrogen		0.24	79
Carbon Dioxide		0.024	0.66
Methane		0.00024	Not Detected
Helium		0.12	0.25



# Client Sample ID: SSVP-2 Lab ID#: 0911606B-05A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113021 2.42	Date of Colle Date of Analy	ction: 11/25/09 7:34:00 AM /sis: 11/30/09 06:43 PM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.24	20
Nitrogen		0.24	78
Carbon Dioxide		0.024	0.39
Methane		0.00024	0.00061
Helium		0.12	1.9



# Client Sample ID: TRIP BLANK Lab ID#: 0911606B-06A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113022 1.00	Date of Collection: 11/25/09 7:30:00 AM Date of Analysis: 11/30/09 07:08 PM			
Compound		Rpt. Limit (%)	Amount (%)		
Oxygen		0.10	Not Detected		
Nitrogen		0.10	100		
Carbon Dioxide		0.010	Not Detected		
Methane		0.00010	Not Detected		
Helium		0.050	Not Detected		



# Client Sample ID: Lab Blank Lab ID#: 0911606B-07A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

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File Name: Dil. Factor:	9113003 1.00	Date of Collection: NA Date of Analysis: 11/30/09 08:20 AM		
Compound		Rpt. Limit (%)	Amount (%)	
Oxygen		0.10	Not Detected	
Nitrogen		0.10	Not Detected	
Carbon Dioxide		0.010	Not Detected	
Methane		0.00010	Not Detected	



# Client Sample ID: Lab Blank Lab ID#: 0911606B-07B NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	9113015b 1.00	Date of Collection: NA Date of Analysis: 11/30/09 02:54 PM		
Compound		Rpt. Limit (%)	Amount (%)	
Helium		0.050	Not Detected	



# Client Sample ID: LCS Lab ID#: 0911606B-08A NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

#### File Name: 9113026 Date of Collection: NA Date of Analysis: 11/30/09 10:07 PM Dil. Factor: 1.00 Compound %Recovery Oxygen 99 100 Nitrogen Carbon Dioxide 101 101 Methane 105 Helium



#### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local. State, Hederal, 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 incernity Air Toxics Limited against any claim, denrand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hoffine (800) 467-4922

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

Page <u>1</u> of <u>1</u>

Project Manager <u>(HARLOTTE EVANS</u>	Project Info:		Turn Arou	nd Lab Use	Lab Use Cnly			
Collected by: (Print and Sign)	P.O. <u># 40</u> - 402 <u>Gi ≥0</u>		Time:	Press	Pressurized by:			
Company CRA Email CRYAPS @CTRONOFID.Com			🖾 Normal	Date:	Date:			
Address 5900 HOLLIS ST. STE A City BASERVILLE State CA ZID 94608		Project #57		🔄 Rush	Press	Pressurization Gas:		
Phone 510-420-3351 Fax 510-420-9170				<u>2* Hr</u>				
		ate Time		Ca	nister Pre	er Pressure/Vacuum		
Lab <sup>*</sup> i.D. Field Sample I.D. (Location)	Can # of Co	ellection of Collection	Analyses Reques	ted Init	al Final	Receipt	Final	
01A 0A-1	37343 112	si2aa 0536 ·	TO-15 (GC/MS	): ~20	1 -3.5		<b>(2</b> 42)	
OZA DA-1 DUP	2055	0536	TPHA BTEX,	-29	-6			
034 = = + - 1	12375	0552	MTRE,	24	9 -5			
DUA SSVP-1	30822	0636	NAPHTHALE	-20	\ - 5	1.7	: "	
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Belinquished by: (signature) Date/Time Received by: (signature) Date/Time GOV invit@croworld. Com								
Lab Shipper Name State Bill # Work Order # Work Order #								
Use Fed cy	MA	freed	Yes No	None	0911	606		