SOMA
ENVIRONMENTAL ENGINEERING, INC.
6620 Owens Drive, Suite A • Pleasanton, CA 94588
TEL (925)734-6400 • FAX (925)734-6401
www.somaenv.com

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By Alameda County Environmental Health at 2:28 pm, Dec 10, 2014

December 10, 2014

Ms. Karel Detterman
Alameda County
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Oakland, California 94502

Subject: Fuel Leak Case#RO0000346
Site Location: 3519 Castro Valley Boulevard, Castro Valley

Dear Ms. Detterman:

SOMA's "Vapor Sampling Report" for the subject site has been uploaded to the State's GeoTracker database and to the Alameda County FTP site for your review.

If you have any questions or comments, please do not hesitate to call me. Your time is greatly appreciated in reviewing our report.

Sincerely,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist

cc: Mr. Mirazim Shakoori w/enclosure
Ms. Dilan Roe, PE-Alameda County Env. Health Services

Vapor Sampling Report
November 2014

3519 Castro Valley Boulevard
Castro Valley, California 94546

December 10, 2014

Project 2762

Prepared for:

Mr. Mirazim Shakoori
4313 Mansfield Drive
Danville, California 94506

SOMA ENVIRONMENTAL ENGINEERING, INC.
6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 www.somaenv.com

PERJURY STATEMENT

Site Location: 3519 Castro Valley Boulevard, Castro Valley, CA

"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".

Mirazim Shakoori
4313 Mansfield Drive
Danville, California 94506
Responsible Party

CERTIFICATION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this technical report on behalf of Mr. Mirazim Shakoori, for property located at 3519 Castro Valley Boulevard, Castro Valley, California. This report was prepared in response to September 17, 2013 correspondence from Alameda County Environmental Health Services (ACEH), Environmental Protection Division and in accordance with SOMA's recommendation presented in report dated June 26, 2014.

Mansour Sepehr, PhD, PE
Principal Hydrogeologist

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1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Mirazim Shakoori, for property located at 3519 Castro Valley Boulevard, Castro Valley, California.

As approved by ACEH, SOMA implemented a soil gas study in October 2013 adjacent to the southern property boundary to the west and east of and beneath the station building to establish whether vapor intrusion is a complete exposure pathway. Results were documented in SOMA's 'Soil Gas Investigation Report and Updated Site Conceptual Model' dated November 21, 2013. In order to assess the temporal and seasonal variations in soil gas concentrations, a second round of soil gas sampling was conducted on June 10, 2014. Results and recommendations were documented in a report dated June 26, 2014.

This report present the results of a third round of vapor sampling conducted in the fall of 2014 (November 2014).

1.1 Site Description

The site is located on the corner of Redwood Road and Castro Valley Boulevard (Figure 1). Prior to 1989, the site was a Mobil gasoline service station. In 1989, British Petroleum (BP) purchased and operated the station until ownership was transferred to Mr. Mirazim Shakoori in 1993. The station was operated under the Chevron brand until recently, and now operates as a Shell gasoline service station. Site features, including former and current USTs and former dispenser island, are shown in Figure 2.

In 1984, three single-walled fiberglass underground storage tanks (USTs) with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons, were installed in the southeastern portion of the site. In 1988, a 1,000 gallon waste oil tank (WOT) was installed to replace the previous 380-gallon WOT. Holes were observed in the 380-gallon WOT. As a result, confirmation soil samples were collected from the bottom of the excavation and the analytical results confirmed contamination. Subsequently, groundwater monitoring wells were installed at the site and the site has been monitored since 1992. The other three USTs were removed and replaced in September 2003 with two new double-walled, fiberglass USTs with capacities of 12,000 gallons and 20,000 gallons. In addition, the dispensers, product lines, and vent lines were removed and replaced.

Petroleum hydrocarbon contamination has been detected in soils beneath the site and in groundwater beneath the site and in the downgradient areas and is related to a historical unauthorized release. A concise background of soil and groundwater investigations performed in connection with this case and an

assessment of the residual impacts of chemicals of concern (COCs) for the site and the surrounding area are summarized in Appendix A.

1.2 Site Geology and Hydrogeology

The site is underlain with interbedded silty clay, sandy silt/silty sand, clayey sand, and clayey silt. An unconsolidated sequence of permeable and relatively impermeable sediments underlies the site. Borehole logs for TWB-1 through TWB-5 and SOMA-4 demonstrate that these unconsolidated sequences continue off-site to the south, with no obvious changes in lithology.

Depth to first-encountered groundwater has been recorded at approximately 12 feet bgs in the Shallow WBZ and between 18 and 31 feet bgs in the Semi-Confined WBZ, with groundwater later stabilizing to between 8.39 and 10.6 feet bgs (Shallow WBZ) and to between 6.5 and 11.50 feet bgs (Semi-Confined WBZ, except in DP-4 and DP-6, which stabilized only to 28 feet bgs and 19.79 feet bgs, respectively). Sometimes the Shallow WBZ was not encountered during drilling, suggesting an element of discontinuity for that zone. For example, borings SB-6 (SOMA-6) and SB-9 (SOMA-9) were left open for 7 days but no water accumulated in these boreholes, suggesting that the Shallow WBZ is discontinuous in their vicinity.

The Shallow WBZ is composed of silty sand, sand, and clayey sand. Preferential flow (stream) channels have also been observed south (downgradient) of the Xtra Oil station across Redwood Road.

The Semi-Confined WBZ appears to be continuous and extends off-site to the southeast. Below the Semi-Confined WBZ is a fairly homogenous silty clay unit that extends to 30 feet bgs, the greatest depths explored on-site during historical investigations. During historical soil and groundwater investigations, groundwater was observed in all explored areas of the Semi-Confined WBZ.

Groundwater monitoring wells have been installed at the site to monitor the encountered Shallow and Semi-Confined WBZs. The following wells are screened within the Shallow WBZ: SOMA-2, SOMA-3, SOMA-5, SOMA-7, SOMA-8, OB-1, and OB-2.

2. SCOPE OF WORK

This investigation was implemented in order to complete a soil gas study to evaluate the potential for soil vapor intrusion into the station building as well as the neighboring properties located south and east of the property. The property to the south is a strip mall containing a variety of businesses while the property to the east is commercial property occupied by Fremont Bank. In addition, the

results of this investigation will be used to evaluate if the site meets the conditions of Low Threat Closure Policy (LTCP) as set forth by the State Water Resources Control Board.

In fall of 2013 (October 2013), SOMA oversaw installation of five permanent soil vapor sampling probes adjacent to the southern property boundary to the west and east of station building (SV-1 through SV-5) and three sub-slab vapor sampling probes (SSG-1 through SSG-3) inside the station building. Details of field activities and results were documented in SOMA's report dated November 21, 2013.

In order to assess the temporal and seasonal variation in soil vapor concentrations, a second set of soil vapor samples were collected in the spring of 2014 (June 10, 2014). Due to the presence of water in two vapor sampling points (SV-1 and SV-2), another round of sampling was recommended during fall 2014.

2.1 Soil Vapor Sampling

As recommended in SOMA's previous report, a third round of vapor sampling was conducted on November 10, 2014. At this time, SV-2 still had water and hence could not be sampled. Soil vapor samples were obtained from all other sampling probes (SV-1, SV-3 through SV-5, SSG-1 through SSG-3).

Prior to soil vapor sampling a shut-in test was conducted at each sampling location to check for a possible leak in the above ground sampling system. To conduct a shut-in test, the above ground valves, lines and fittings down-stream from the top of the probe were assembled. The test was conducted while the connection to the purge pump was in closed position. While the system was under negative pressure, the pressure gauge was observed and any possible vacuum drop was noted and any fittings would be tightened. During the shut in tests there were no leaks causing pressure drops detected. To ensure that stagnant air was removed from the sampling system and that samples are representative of the subsurface conditions, each sampling location was purged of approximately three purge volumes prior to sampling.

A vacuum pump was used to sample the soil vapor, and the sampling train that Vironex provided contained a flow regulator. The flow regulator was calibrated to keep the flow from the sampling point set to 200 mL/minute. The sampling pump was connected to the outlet of the sample train, which was connected to the sampling point. A shroud was used with gaseous leak detection (helium) that covered the entire sampling train. A helium detector was used to gauge the amount of helium inside the shroud, keeping the helium at approximately 20 percent. For verification that there was not a leak in the sampling train, a leak check sample was taken using a lung box with a tedlar bag, which was connected to the sampling train. In order to take a sample, the sample pump was

started and the start time was recorded. After the desired duration the pump was stopped and time was recorded again.

After sampling, the plugs at both ends of sample tube were replaced. The sample ID, tube ID, collection time and date and sample volume were recorded on the chain of custody. One duplicate sample was collected from the sampling location SV-1 and was labeled as SV-1D on the chain-of-custody. The sorbent tubes were stored in a cooler with ice and delivered to the lab. Figure 4 shows the sampling set-up diagram and Figure 5 shows the soil vapor sampling train diagram.

Appendix B includes field records and pictures of soil vapor sampling.

2.2 Laboratory Analyses

Soil vapor samples were submitted under appropriate sample handling protocol to a California state-certified environmental laboratory for analysis of the following:

- EPA Method TO-17: benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX); and VOCs including naphthalene.

In addition to Helium (leak test compound), SOMA analyzed atmospheric gases O_2, CO_2, and methane. Reporting limits for O_2, CO_2, and methane were less than or equal to concentrations of these gases in the atmosphere. SOMA ensured that laboratory-reporting limits for COCs are below shallow soil gas Environmental Screening Levels (ESLs) that address inhalation of contaminants in an indoor setting, set by CRWCB–San Francisco Bay (CRWQCB, Interim Final 2013).

2.3 Sampling Results

The sampling manifold held the test vacuum prior to sampling. Furthermore, no significant breakthrough was indicated during the vapor sample collection, as helium (leak check compound) was below laboratory reporting limits in all samples except SV-1 and SSG-2 where it was detected at 0.18% and 0.094%, respectively. According to the DTSC guidelines, any detection of the leak detection compound below an amount greater than or equal to 10 times the reporting limit for the target analytes is acceptable. Since the reporting limit for helium was 0.05%, therefore the sampling train was free of any significant leaks.

Soil vapor analytical data is summarized in Table 1. All concentrations were compared against shallow soil gas environmental screening levels (ESLs) and low threat underground storage tank case closure policy (LTCP) screening levels for ‘Petroleum Vapor Intrusion to Indoor Air, scenario 4 for sites with bio attenuation zone and no bio attenuation zone’.

Benzene was detected at 32 µg/m^3 and 46 µg/m^3 in SV-1 and SV-3, respectively and was below the laboratory reporting limit in other vapor samples. Benzene concentration in SV-3 was above the ESL for residential land use (42 µg/m^3). However, these concentrations were below the LTCP screening levels (Bioattentuation zone-280,000 µg/m^3 for commercial/industrial land use and 85,000 µg/m^3 for residential land use)

Toluene was below the laboratory reporting limit in all vapor samples. Ethylbenzene and total xylenes were below the laboratory reporting limit in all vapor samples except for SV-1D where these contaminants were detected at low levels, significantly below ESL and LTCP screening levels.

Naphthalene was detected in concentrations ranging from 2.9 µg/m^3 in SSG-3 to 11 µg/m^3 in SV-3. All naphthalene concentrations were below the ESL and LTCP screening levels.

Oxygen was detected in all samples at concentrations ranging from 7.2% in SV-3 to 20% in SV-4 and SSG-1; methane was below the laboratory reporting limit in all samples except SV-1 and SV-4 where it was detected at 0.026% and 0.00023%, respectively; carbon dioxide was detected at concentrations ranging from 0.47% in SSG-1 to 11% in SV-3. The approximate concentrations of above gases in the atmosphere are 20.44 percent for oxygen and 0.039 percent for carbon dioxide.

Certified analytical reports and chain-of-custody documentation are included in Appendix D.

3. CONCLUSIONS AND RECOMMENDATIONS

During this soil gas study, SOMA evaluated the potential for soil vapor intrusion into the station building as well as the neighboring properties located south and east of the property. Five permanent soil vapor sampling points (SV-1 through SV-5) were installed in October 2013 to depths ranging between 5.5 and 8.5 feet bgs, adjacent to site boundary next to the off- site buildings and also in areas where elevated levels of petroleum hydrocarbons were encountered in the shallow soils. Three shallow semi-permanent sub-slab vapor sampling probes SSG-1 through SSG-3 were installed inside the on-site station building. First round of sampling was conducted in fall of 2013 (October 2013) and results were documented in SOMA's report dated November 21, 2013. The second round of sampling was conducted in the spring of 2014 and results were documented in SOMA's report dated June 26, 2014. The third round of sampling which was conducted in fall 2014 (November 10, 2014) is detailed in this report.

- Soil vapor samples were collected and analyzed for VOCs by EPA Method TO-17. Helium was used as a leak test gas. Based on the analytical result, the sampling train was free of any significant leaks.

- During the recent sampling event (fall 2014), soil vapor could be collected from only four of the five sampling probes due to the presence of water in SV-2. Soil vapor samples were also collected from all three sub-slab vapor sampling probes. All contaminants of concern were either below laboratory-reporting limit or below the ESLs for commercial/industrial land use and LTCP screening levels for residential and commercial land use.

- During the previous sampling event (spring 2014), soil vapor could be collected from only three of the five sampling probes due to the presence of water in SV-1 and SV-2. Soil vapor samples were also collected from all three sub-slab vapor sampling probes. All contaminants of concern were either below laboratory-reporting limit or below the ESLs for commercial/industrial land use and LTCP screening levels for residential and commercial land use.

- During the previous sampling event conducted in the Fall of 2013 (October 2013), benzene in SV-3 was above the LTCP screening level for residential land use (no bio attenuation zone); benzene concentrations in SV-1 through SV-5 were also above the ESL of 42 $\mu g/m^3$, ethylbenzene in SV-3 was above the ESL of 490 $\mu g/m^3$, and naphthalene concentrations in SV-3 and SSG-3 were above the ESL of 36 $\mu g/m^3$ for residential land use.

- Based on the observed contaminant concentrations during fall 2013, spring 2014, and fall 2014 vapor sampling events, it appears that if this site remains as a service station it will not pose a significant health risk to the onsite workers or nearby commercial workers or residents. As such SOMA requests a no further action (NFA) status to be adopted by ACEH for the site.

FIGURES

N

approximate scale in feet

0 60 120

Figure 1: Site vicinity map.

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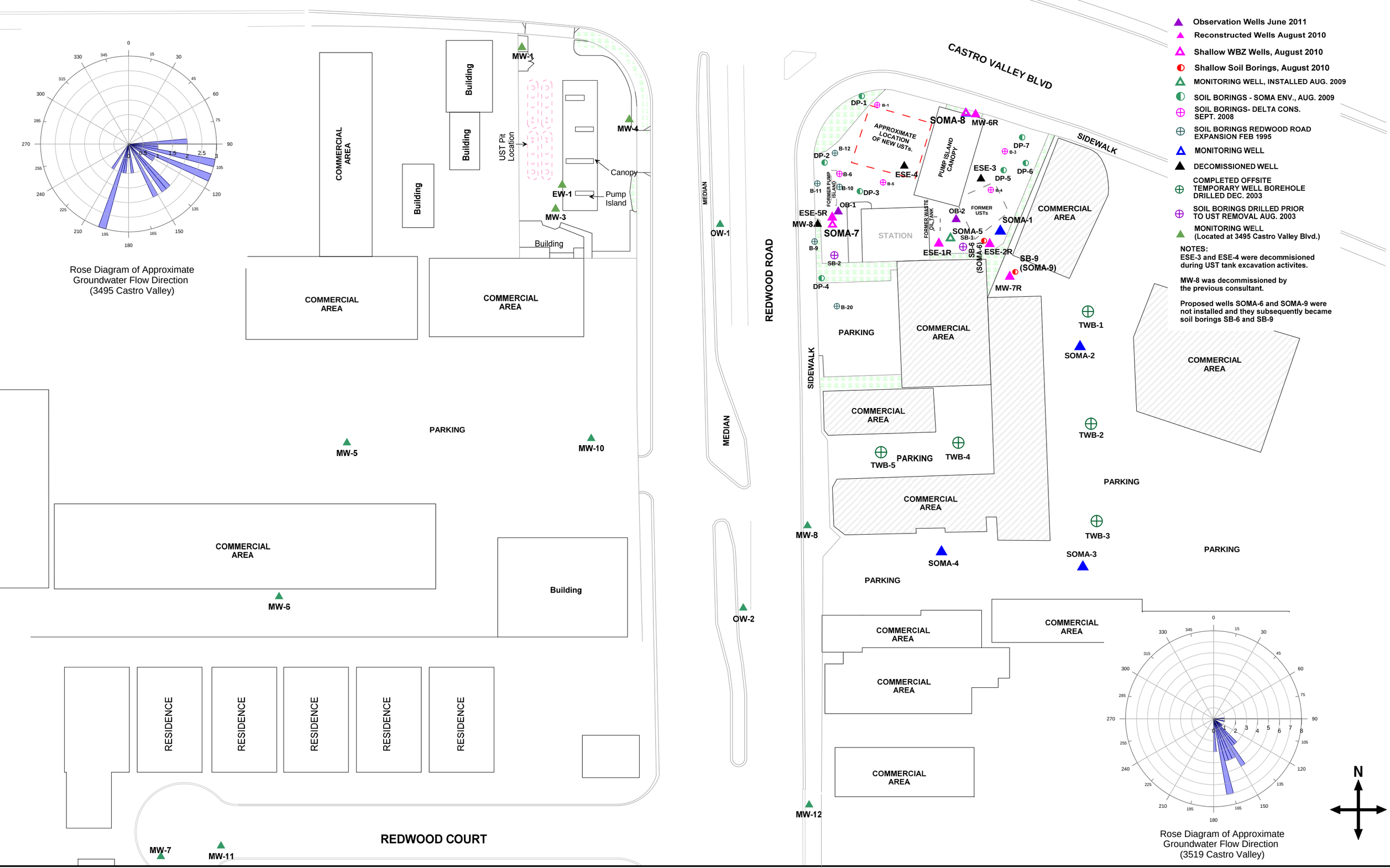
Rose Diagram of Approximate Groundwater Flow Direction (3495 Castro Valley)



Rose Diagram of Approximate Groundwater Flow Direction (3519 Castro Valley)

Figure 2: Site map showing locations of existing monitoring wells, decommissioned wells, offsite temporary well boreholes, monitoring wells installed by SOMA, and monitoring wells located at neighboring service station.

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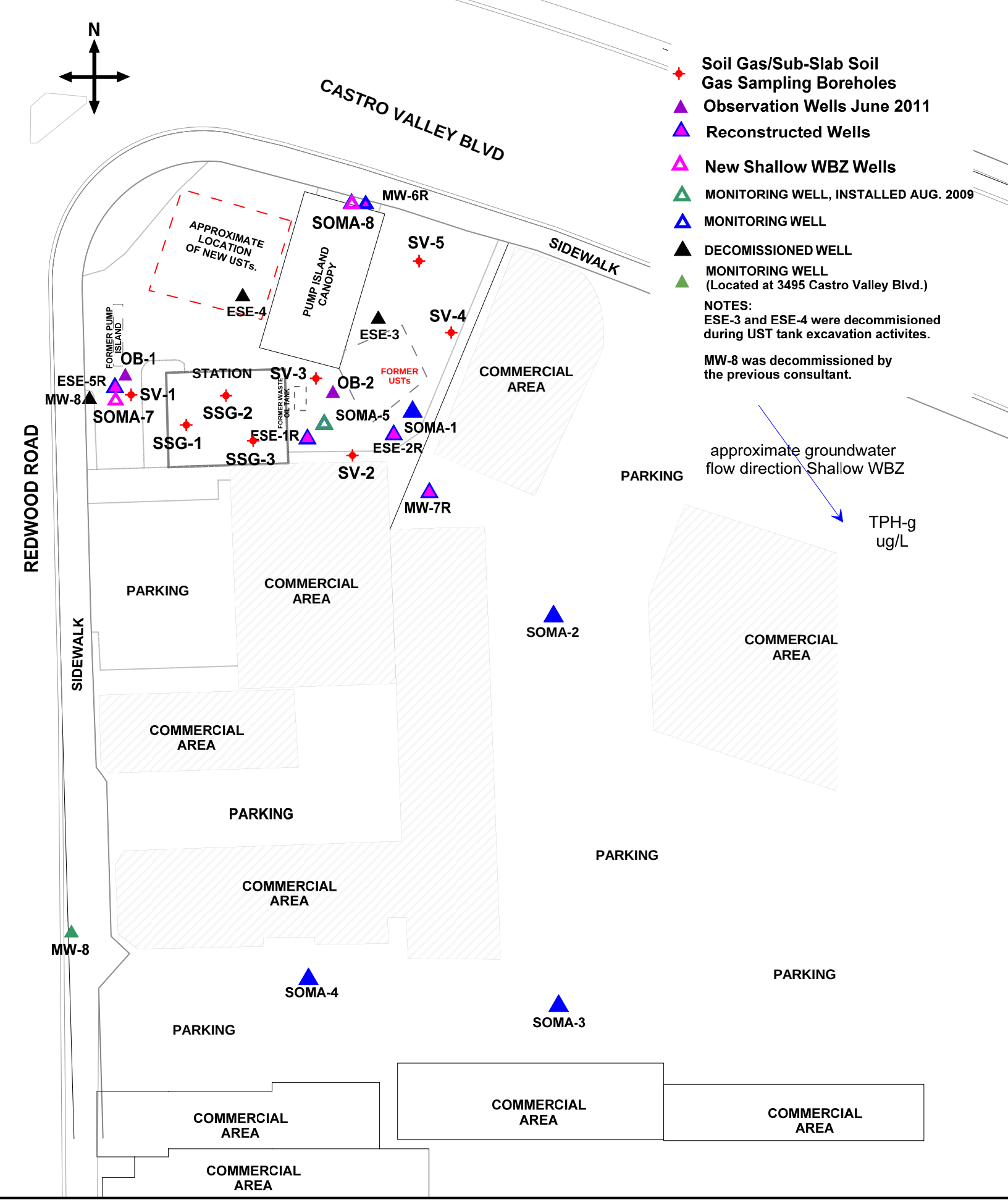

Figure 3: Locations of Soil Gas Sampling Boreholes and Sub-Slab Soil Gas Sampling Probes

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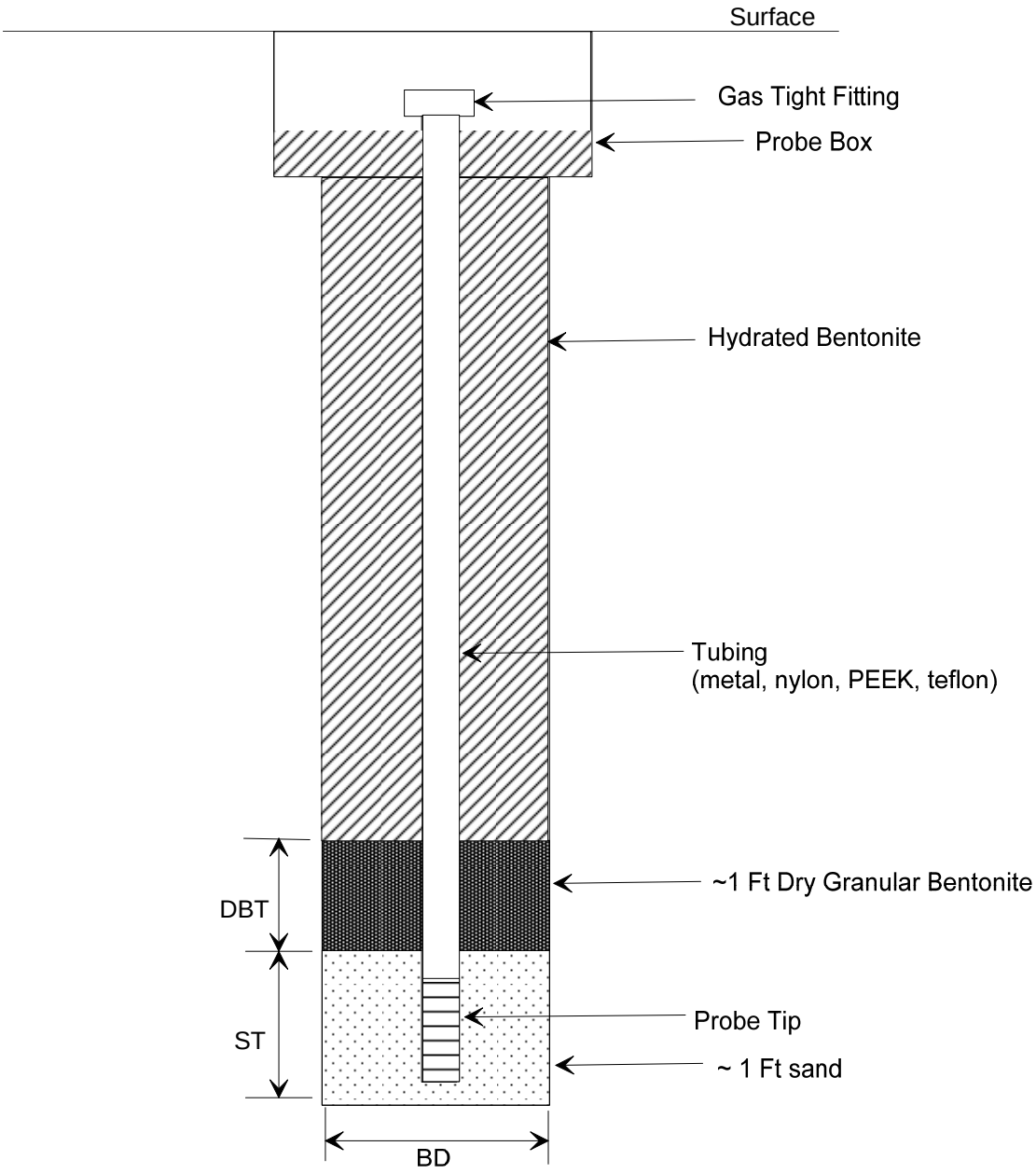

LEGEND

BD = borehole diameter (inches)
DBT = dry bentonite thickness (ft)
ST = sand pack thickness (FT)
PEEK = Polyetheretherketone

Not to Scale

Figure 4: Schematic Diagram of Soil Gas Probe

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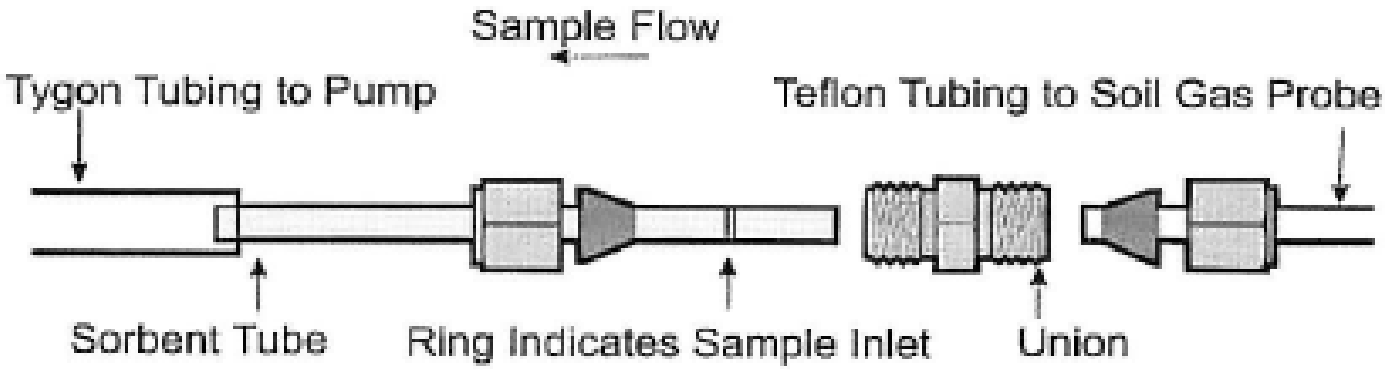

Not to Scale

Figure 5: Soil Vapor Sampling Train Diagram

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TABLES

Table 1
Soil Vapor Analytical Results
3519 Castro Valley Blvd.
Castro Valley, California

Compound	Date	Sample ID										Shallow Soil Gas Screening Levels (ESLs)		LTCP Screening Levels (Scenario 4, no bioattentuation zone)		LTCP Screening Levels (Scenario 4, with bioattentuation zone)	
		SV-1 (ug/m^3)	SV-2 (ug/m^3)	SV-3 (ug/m^3)	SV-4 (ug/m^3)	SV-5 (ug/m^3)	SSG-1 (ug/m^3)	SSG-2 (ug/m^3)	SSG-3 (ug/m^3)	SV-1D *duplicate sample* (ug/m^3)	SSG-1D *duplicate sample* (ug/m^3)	Commercial/ Industrial (ug/m^3)	Residential (ug/m^3)	Commercial/ Industrial (ug/m^3)	Residential (ug/m^3)	Commercial/ Industrial (ug/m^3)	Residential (ug/m^3)
Benzene	10/10/2013	**51**	**63**	**250**	**51**	**43**	<32	<32	18	**53**	NA	420	42	280	85	280,000	85,000
	6/10/2014	NA	NA	<32	<32	<32	<32	<32	<32	NA	<32						
	11/10/2014	32	NA	**46**	<32	<32	<32	<32	<32	37	NA						
Toluene	10/10/2013	99	85	44	160	26	<19	<19	94[J]	73	NA	1,300,000	160,000	NA	NA	NA	NA
	6/10/2014	NA	NA	<38	<38	<38	65	<38	<38	NA	<38						
	11/10/2014	<38	NA	<38	<38	<38	<38	<38	<38	<38	NA						
Ethyl Benzene	10/10/2013	280	38	820	68	<22	<22	<22	140	230	NA	4,900	490	3,600	1,100	3,600,000	1,100,000
	6/10/2014	NA	NA	<22	<22	<22	<22	<22	<22	NA	<22						
	11/10/2014	<22	NA	<22	<22	<22	<22	<22	<22	56	NA						
Total Xylenes	10/10/2013	516	109	349	304	44	<22	<22	580[J]	450	NA	440,000	52,000	NA	NA	NA	NA
	6/10/2014	NA	NA	<44	<44	<44	46	<44	<44	NA	<44						
	11/10/2014	<44	NA	<44	<44	<44	<44	<44	<44	62	NA						
Naphthalene	10/10/2013	14	4.7	76	3.7	3.7	9.4	3	65	16	NA	360	36	310	93	310,000	93,000
	6/10/2014	NA	NA	3.6	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5						
	11/10/2014	4.5	NA	11	3.9	5	3.9	3.2	2.9	6.8	NA						
		% by volume	% by volume	% by volume	% by volume	% by volume	% by volume	% by volume	% by volume	% by volume	% by volume						
Carbondioxide	10/10/2013	0.1	1.2	8.2	2.4	6.5	0.13	0.63	3.4	0.1	NA						
	6/10/2014	NA	NA	12	3.1	11	0.66	4.5	3.7	NA	0.66						
	11/10/2014	1.6	NA	11	0.89	10	0.47	4	3.9	NA	NA						
Methane	10/10/2013	0.002	0.00012	0.002	0.00018	0.0001	0.00018	0.00019	<0.00010	0.002	NA						
	6/10/2014	NA	NA	<0.0001	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001						
	11/10/2014	0.026	NA	<0.0001	0.00023	<0.0001	<0.0001	<0.0001	<0.0001	NA	NA						
Oxygen	10/10/2013	21	20	11	12	15	21	20	17	21	NA						
	6/10/2014	NA	NA	6.7	17	8.9	20	16	17	NA	20						
	11/10/2014	19	NA	7.2	20	10	20	16	16	NA	NA						
Helium	10/10/2013	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.079	0.056	<0.05	NA						
	6/10/2014	NA	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<0.05						
	11/10/2014	0.18	NA	<0.05	<0.05	<0.05	<0.05	0.094	<0.05	NA	NA						

Laboratory Note:

J- Estimated Value

Note

NL- Not Listed

< - Less Than Laboratory Reporting ILimit

ESLs Environmental Screening Levels per CRWQCB SFBay Region, Interim Final 2013, Table E-2

(Shallow Soil Gas Screening levels for evaluation of Potential Vapor Intrusion Concerns)

LTCP Low Threat Underground Storage Tank Case Closure Policy, Media specific criteria: Petroleum vapor intrusion to indoor air, scenario 4

APPENDIX A
Site History

Previous Activities

1984: Three single-walled fiberglass underground storage tanks (USTs) with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons, were installed in the southeastern portion of the site. A former dispenser island reportedly existed on the west side of the site; however, there was no available information about the dispenser removal date.

1988: A 1,000-gallon, double-walled, fiberglass waste oil tank (WOT) was installed to replace the previous 380-gallon WOT. In September, Kaprealian Engineering, Inc. removed the original 380-gallon WOT and observed holes in this UST. As a result, confirmation soil samples were collected from the bottom of the excavation. The following analytical soil results were observed: benzene and toluene were detected at 6.8 µg/kg and 9.5 µg/kg, respectively; total petroleum hydrocarbons (TPH) and total oil and grease (TOG) constituents were not detected.

September and October 1992: Environmental Science & Engineering, Inc. (ESE) drilled five soil boreholes and converted them into monitoring wells (ESE-1 through ESE-5). Soil and groundwater samples were collected during well installation. In the soil samples, the maximum level of soil contamination was detected in monitoring well borehole ESE-5 at 220,000 µg/kg TPH as gasoline (TPH-g); 1,400 µg/kg benzene; 8,200 µg/kg toluene; 3,300 µg/kg ethylbenzene; and 18,000 µg/kg xylenes. In the groundwater samples collected from ESE-1, maximum concentrations were TPH-g at 2,300 µg/L; benzene at 370 µg/L; toluene at 160 µg/L; ethylbenzene at 17 µg/L; and xylenes at 110 µg/L.

July 1995: Three additional monitoring wells were installed: two on-site wells, MW-6 and MW-8, and one off-site well, MW-7.

April 1996: Well MW-8, located on the western margin of the site, was decommissioned to accommodate the road-widening project along Redwood Boulevard.

August 20, 2003: Prior to UST removal, SOMA oversaw drilling of two boreholes by Vironex. The boreholes were drilled in order to characterize the soil for landfill acceptance criteria.

September 2003: Three single-walled, fiberglass USTs, with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons, were removed and replaced with two new double-walled, fiberglass USTs with capacities of 12,000 gallons and 20,000 gallons. In addition, the dispensers, product lines, and vent lines were removed and replaced. Soil below 5 feet bgs was disposed of off-site. Shallow soil was used as backfill material for the former UST pit after confirmation.

Third Quarter 2003: Two monitoring wells, ESE-3 and ESE-4, were decommissioned due to construction activities.

Fourth Quarter 2003: In December, SOMA oversaw drilling of off-site temporary well boreholes TWB-1 through TWB-5 to determine the horizontal extent of off-site petroleum hydrocarbon contamination.

June 2004: On June 10, SOMA installed on- and off-site monitoring wells: SOMA-1 in the southeastern section of the site, and SOMA-2 to SOMA-4 south and southeast of the site. Kier and Wright Engineers Surveyors, of Pleasanton, California, surveyed all site wells on June 21.

August 2006: SOMA conducted a sensitive receptor survey and it was concluded that no irrigation or domestic wells, and no sensitive groups or environments, evaluated during this sensitive receptor survey and located within ½-mile radius have the potential to be impacted by the site's contaminants at this time

Third Quarter 1993 to Present: On-going quarterly groundwater monitoring events have been conducted at the site.

September 2008: Shell Oil conducted a Phase II investigation. Elevated TPH-g concentrations 900 µg/L in groundwater and 720 mg/kg in soil were observed in the borings. Based on these elevated readings, Shell Oil filed a UST Unauthorized Release Report with Alameda County Environmental Health on September 24, 2008.

February 2009: Per ACEHD correspondence dated January 8, 2009, SOMA prepared a Site Conceptual Model and workplan to address data gaps at the site. SOMA proposed advancing soil borings to further define the lateral and horizontal extent of COC impact to vadose zone and the WBZ (up to 31 feet bgs). Per the ACEHD correspondence dated March 27, 2009, SOMA submitted a workplan addendum which was approved by the ACEHD on July 10, 2009 which reduced the number of DP borings from 9 to 7 and proposed the advancement of a shallow groundwater monitoring well within the vadose zone (screened across the potentiometric surface) to determine the appropriateness of the screening interval for existing wells at the site.

August 2009: SOMA conducted a soil and groundwater investigation at the site, advancing seven soil borings and installed shallow groundwater monitoring well SOMA-5 to determine if groundwater at the site is confined or semi-confined. TPH-g was elevated in groundwater samples from DP-1 and DP-2 (210 µg/L and 130 µg/L, respectively) along the northwestern portion of the site and in DP-5 and DP-6 (640 µg/L and 1,600 µg/L, respectively) along the eastern portion of the station (north of the former USTs). TPH-d was elevated in all groundwater samples, with concentrations between 130 µg/L and 980 µg/L (DP-7 and DP-4,

respectively). TPH-mo was observed only along the western portion of the site, in DP-2 through DP-4, with concentrations ranging from 360 µg/L to 570 µg/L. Based on elevated TPH concentrations along the northwestern portion of the site it appears that plume commingling might be occurring. It was determined that wells of ESE-1, ESE-2, ESE-5, MW-6 and MW-7 appear to be screened excessively long and are causing cross-contamination.

August 2010: SOMA replaced (reconstructed) ESE-1, ESE-2, ESE-5, MW-6 and MW-7 with wells screened within the confined WBZ and installed two additional groundwater monitoring wells (SOMA-7 and SOMA-9) adjacent to the reconstructed wells (within 5 feet) and completed within the shallow zone. No water was observed in SB-6 and SB-8, therefore the borings were not converted to wells.

March 2011: SOMA prepared a CAP/Feasibility Study proposing MPE Pilot Testing, Air Sparging, and aquifer testing at the site.

June/July 2011: Two observation wells (OB-1 and OB-2) were installed on the site. Under SOMA's oversight, Golden Gate Remediation Technology (GGRT) performed MPE pilot testing between June 20 and July 1, 2011, utilizing SOMA-5, SOMA-7 OB-1 and OB-2. The pilot test was performed using a self-contained mobile treatment system (MTS). Both soil vapor and groundwater were extracted from the subsurface. Due to relatively low water recovery rates observed during pilot testing, MPE configuration rather than dual phase extraction (DPE) was utilized. The estimated total mass of VOCs removed from soil vapor extracted from extraction wells was 7.05 pounds. The calculated average VOC mass removal rate was approximately 2.46 lbs/day.

July 2013: SOMA submitted a workplan for soil gas study for evaluation of soil vapor intrusion to the ACEH.

October 2013: Five permanent soil vapor sampling points and three semi-permanent sub-slab soil vapor sampling points were installed on-site and first round of sampling was conducted. Details and results were documented in SOMA's report dated November 21, 2013 along with an updated site conceptual model.

June 2014: All soil vapor sampling probes were sampled during spring 2014. A report was submitted to ACEH recommending an additional round of sampling during Fall 2014.

APPENDIX B

Field Records and
Photographic Documentation

SOMA
ENVIRONMENTAL ENGINEERING, INC.
6620 Owens Drive, Suite A • Pleasanton, CA 94588
TEL (925)734-6400 • FAX (925)734-6401

FIELD REPORT

Site Address: 3519 Castro Valley Blvd., Castro Valley Proj. No: 12762

Job Performing: Soil Vapor sampling Date: Nov. 10, 2014

Arrival Time: 8:00 Departure Time: 14:20

Travel Time to Site & Back:

Staff Geol/Eng Signature: EHA

Time: 07:30 left for site

08:00 Arrived onsite, Vironex onsite H+S meeting.

08:15 Set up on SV-2 → still has

Time: water coming up, so no sample collected.

08:45 Set up on SV-4, purged sample of ~3 purge volumes. Shut-in/leak test good.

Time: Sampled 10:45-10:46 @ 200mL/min.

10:50 Set up on SV-5, purged sample of ~3 purge volumes. Shut-in/leak test good.

Time: Sampled 11:18-11:19 @ 200 mL/min.

11:28 Set up on SV-3, purged sample of ~3 purge volumes. Shut-in/leak test good.

Sampled 11:45-11:46 @ 200mL/min.

Time: 11:55 Set up on SV-1, purged sample of ~3 purge volumes, Shut-in/leak test good.

Sampled 12:16-12:17 @ 200 mL/min

Time: Sampled SV-1D 12:22-12:23 @ 200 mL/min

[12:30-12:45] Lunch

12:50 Set up on SSG-3, purged ~30 seconds

SOMA
ENVIRONMENTAL ENGINEERING, INC.
5620 Owens Drive, Suite A • Pleasanton, CA 94588
TEL (925)734-6400 • FAX (925)734-6401

FIELD REPORT

Site Address: 3519 ~~Br~~ Castro Valley Blvd, Castro Valley Proj. No: 2762

Job Performing: Soil Vapor Sampling Date: Nov. 10, 2014

Arrival Time: 8:00 Departure Time: 14:20

Travel Time to Site & Back: _____

Staff Geol/Eng Signature: EHafel

(SSG-3)
Time: Shut-in/leak test good. Sampled 13:16-13:17 @ 200 mL/min.
13:20 set up on SSG-2, purged for ~30 seconds
shut-in/leak test good, sampled 13:26-1327 @ 200 mL/min
13:33 Set up on SSG-1, purged for ~30 seconds

Time: shut-in/leak test good, sampled 13:41-13:42
@ 200 mL/min.
13:50 Cleaned up site, loaded up truck

Time: 14:~~3~~20 left site
14:~~5~~0 Arrived @ office, unloaded truck
15:00-15:30 Filled out COC for

Time: samples.

Time: _____

Time: _____

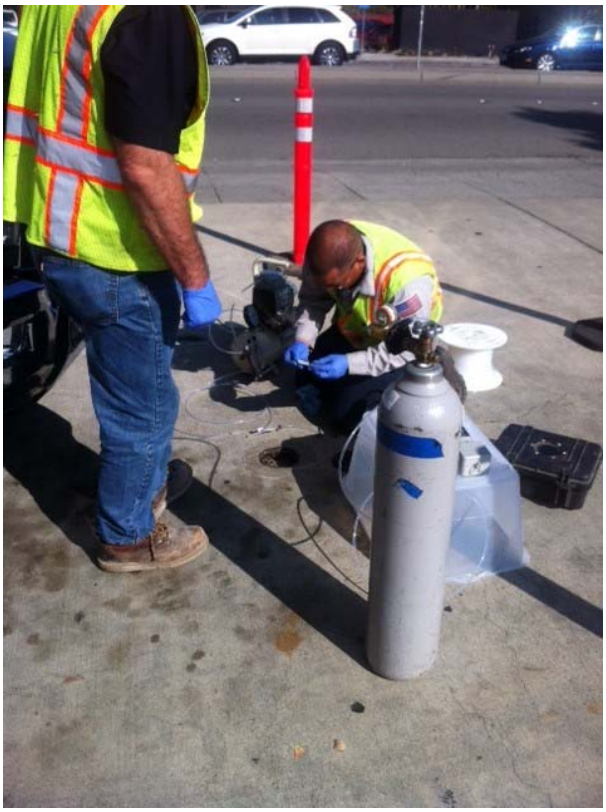

Plate 1. Vironex setting up on SV-5

Plate 2. Set up on SV-3

Plate 3. Vironex setting up on SSG-3

Plate 4. Vironex set up on SSG-2

APPENDIX C
Laboratory Analytical Results

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11/25/2014
Ms. Lizzie Hightower
SOMA Environmental
6620 Owens Drive
Suite A
Pleasanton CA 94588

Project Name: 3519 Castro Valley Blvd Castro Valley
Project #: 2762
Workorder #: 1411133

Dear Ms. Lizzie Hightower

The following report includes the data for the above referenced project for sample(s) received on 11/11/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-17 VI 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1411133

Work Order Summary

CLIENT:	Ms. Lizzie Hightower SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588	**BILL TO:**	Ms. Lizzie Hightower SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588
PHONE:	925-734-6400	**P.O. #**	
FAX:	925-734-6401	**PROJECT #**	2762 3519 Castro Valley Blvd Castro Valley
DATE RECEIVED:	11/11/2014	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	11/25/2014		

FRACTION #	NAME	TEST
01A	SV-1	Modified TO-17 VI
02A	SV-1D	Modified TO-17 VI
03A	SV-3	Modified TO-17 VI
04A	SV-4	Modified TO-17 VI
05A	SV-5	Modified TO-17 VI
06A	SSG-1	Modified TO-17 VI
07A	SSG-2	Modified TO-17 VI
08A	SSG-3	Modified TO-17 VI
09A	Lab Blank	Modified TO-17 VI
10A	CCV	Modified TO-17 VI
11A	LCS	Modified TO-17 VI
11AA	LCSD	Modified TO-17 VI

CERTIFIED BY: Heidi Rayos DATE: 11/25/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
SOMA Environmental
Workorder# 1411133

Eight TO-17 VI Tube samples were received on November 11, 2014. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

A modification that may be applied to EPA Method TO-17 at the client's discretion is the requirement to transport sorbent tubes at 4 deg C. Laboratory studies demonstrate a high level of stability for VOCs on the TO-17 'VI' tube at room temperature for periods of up to 14 days. Tubes can be shipped to and from the field site at ambient conditions as long as the 14-day sample hold time is upheld. Trip blanks and field surrogate spikes are used as additional control measures to monitor recovery and background contribution during tube transport.

Since the TO-17 VI application significantly extends the scope of target compounds addressed in EPA Method TO-15 and TO-17, the laboratory has implemented several method modifications outlined in the table below. Specific project requirements may over-ride the laboratory modifications.

Requirement	***TO-17***	***ATL Modifications***
Initial Calibration	%RSD</=30% with 2 allowed out up to 40%	VOC list: %RSD</=30% with 2 allowed out up to 40% SVOC list: %RSD</=30% with 2 allowed out up to 40%
Daily Calibration	%D for each target compound within +/-30%.	Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene within +/-40%D
Audit Accuracy	70-130%	Second source recovery limits for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene = 60-140%.
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If the client is sampling well characterized air or has verified performance through previous sampling or distributed pairs, single tube sampling may be appropriate. Distributed volume pairs may not be practical or useful for soil vapor collection due to
Analytical Precision	</=20% RPD	<30% RPD for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene.

Receiving Notes

A Temperature Blank was included with the shipment. Temperature was measured and was not within 4±2 °C. Coolant in the form of ice/blue ice was present. Analysis proceeded.

Analytical Notes

A sampling volume of 0.200 L was used to convert ng to ug/m3 for the associated Lab Blank.

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 blank (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, LOD, or MDL value. See data page for project specific U-flag definition.

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

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Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SV-1

Lab ID#: 1411133-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Isopentane	5.9	30	1500 E	7400 E
Benzene	6.4	32	6.4	32
Cyclohexane	6.9	34	410	2000
2,2,4-Trimethylpentane	9.4	47	360	1800
Methylcyclohexane	8.0	40	110	540
Cumene	9.8	49	12	61
Naphthalene	0.50	2.5	0.90	4.5

Client Sample ID: SV-1D

Lab ID#: 1411133-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Isopentane	5.9	30	340	1700
Benzene	6.4	32	7.5	37
Cyclohexane	6.9	34	180	900
2,2,4-Trimethylpentane	9.4	47	140	680
Methylcyclohexane	8.0	40	58	290
Ethyl Benzene	4.3	22	11	56
m,p-Xylene	8.7	44	12	62
Cumene	9.8	49	14	73
Naphthalene	0.50	2.5	1.4	6.8

Client Sample ID: SV-3

Lab ID#: 1411133-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	6.4	32	9.1	46
Naphthalene	0.50	2.5	2.1	11

Client Sample ID: SV-4

Lab ID#: 1411133-04A

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Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SV-4

Lab ID#: 1411133-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Isopentane	5.9	30	38	190
Cyclohexane	6.9	34	11	57
2,2,4-Trimethylpentane	9.4	47	10	51
Naphthalene	0.50	2.5	0.77	3.9

Client Sample ID: SV-5

Lab ID#: 1411133-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	0.50	2.5	1.0	5.0

Client Sample ID: SSG-1

Lab ID#: 1411133-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Chloroform	4.9	24	13	67
Naphthalene	0.50	2.5	0.78	3.9

Client Sample ID: SSG-2

Lab ID#: 1411133-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Cyclohexane	6.9	34	7.0	35
Tetrachloroethene	6.8	34	30	150
Naphthalene	0.50	2.5	0.64	3.2

Client Sample ID: SSG-3

Lab ID#: 1411133-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Cyclohexane	6.9	34	9.0	45
2,2,4-Trimethylpentane	9.4	47	9.7	48

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Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SSG-3

Lab ID#: 1411133-08A

Tetrachloroethene	6.8	34	17	83
Naphthalene	0.50	2.5	0.58	2.9

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Client Sample ID: SV-1

Lab ID#: 1411133-01A

EPA METHOD TO-17

File Name:	**18111406**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 12:17:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 06:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	1500 E	7400 E
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	6.4	32
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	410	2000
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	360	1800
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	110	540
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	12	61
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SV-1

Lab ID#: 1411133-01A

EPA METHOD TO-17

File Name:	**18111406**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 12:17:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 06:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	0.90	4.5
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

E = Exceeds instrument calibration range.

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	50-150
Toluene-d8	72	50-150
Naphthalene-d8	72	50-150

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Client Sample ID: SV-1D

Lab ID#: 1411133-02A

EPA METHOD TO-17

File Name:	**18111407**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 12:23:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 06:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	340	1700
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	7.5	37
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	180	900
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	140	680
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	58	290
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	11	56
m,p-Xylene	8.7	44	12	62
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	14	73
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SV-1D

Lab ID#: 1411133-02A

EPA METHOD TO-17

File Name:	**18111407**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 12:23:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 06:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	1.4	6.8
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	50-150
Toluene-d8	78	50-150
Naphthalene-d8	73	50-150

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Client Sample ID: SV-3

Lab ID#: 1411133-03A

EPA METHOD TO-17

File Name:	**18111408**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 11:46:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 07:33 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	Not Detected	Not Detected
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	9.1	46
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	Not Detected	Not Detected
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	Not Detected	Not Detected
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SV-3

Lab ID#: 1411133-03A

EPA METHOD TO-17

File Name:	**18111408**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 11:46:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 07:33 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	2.1	11
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	76	50-150
Toluene-d8	90	50-150
Naphthalene-d8	73	50-150

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Client Sample ID: SV-4

Lab ID#: 1411133-04A

EPA METHOD TO-17

File Name:	**18111409**	**Date of Extraction:**	**NA**
Dil. Factor:	**1.00**	**Date of Collection:**	**11/10/14 10:46:00 AM**
		Date of Analysis:	**11/14/14 08:14 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	38	190
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	Not Detected	Not Detected
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	11	57
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	10	51
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SV-4

Lab ID#: 1411133-04A

EPA METHOD TO-17

File Name:	**18111409**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 10:46:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 08:14 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	0.77	3.9
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	78	50-150
Toluene-d8	80	50-150
Naphthalene-d8	74	50-150

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Client Sample ID: SV-5

Lab ID#: 1411133-05A

EPA METHOD TO-17

File Name:	**18111410**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 11:19:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 08:56 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	Not Detected	Not Detected
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	Not Detected	Not Detected
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	Not Detected	Not Detected
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	Not Detected	Not Detected
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SV-5

Lab ID#: 1411133-05A

EPA METHOD TO-17

File Name:	**18111410**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 11:19:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 08:56 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	1.0	5.0
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	81	50-150
Toluene-d8	86	50-150
Naphthalene-d8	70	50-150

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Client Sample ID: SSG-1

Lab ID#: 1411133-06A

EPA METHOD TO-17

File Name:	**18111411**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 1:42:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 09:38 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	Not Detected	Not Detected
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	13	67
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	Not Detected	Not Detected
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	Not Detected	Not Detected
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	Not Detected	Not Detected
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SSG-1

Lab ID#: 1411133-06A

EPA METHOD TO-17

File Name:	**18111411**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 1:42:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 09:38 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	0.78	3.9
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	74	50-150
Toluene-d8	84	50-150
Naphthalene-d8	71	50-150

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Client Sample ID: SSG-2

Lab ID#: 1411133-07A

EPA METHOD TO-17

File Name:	**18111412**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 1:27:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 10:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	Not Detected	Not Detected
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	Not Detected	Not Detected
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	7.0	35
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	Not Detected	Not Detected
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	30	150
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SSG-2

Lab ID#: 1411133-07A

EPA METHOD TO-17

File Name:	**18111412**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 1:27:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 10:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	0.64	3.2
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	50-150
Toluene-d8	91	50-150
Naphthalene-d8	86	50-150

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Client Sample ID: SSG-3

Lab ID#: 1411133-08A

EPA METHOD TO-17

File Name:	**18111414**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 1:17:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 11:49 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	Not Detected	Not Detected
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	Not Detected	Not Detected
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	9.0	45
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	9.7	48
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	17	83
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: SSG-3

Lab ID#: 1411133-08A

EPA METHOD TO-17

File Name:	**18111414**	**Date of Extraction: NA**	**Date of Collection: 11/10/14 1:17:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 11:49 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	0.58	2.9
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	72	50-150
Toluene-d8	81	50-150
Naphthalene-d8	73	50-150

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Client Sample ID: Lab Blank

Lab ID#: 1411133-09A

EPA METHOD TO-17

File Name:	**18111405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 04:55 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 114	14	70	Not Detected	Not Detected
Vinyl Chloride	2.6	13	Not Detected	Not Detected
1,3-Butadiene	2.2	11	Not Detected	Not Detected
Isopentane	5.9	30	Not Detected	Not Detected
Freon 11	11	55	Not Detected	Not Detected
1,1-Dichloroethene	4.0	20	Not Detected	Not Detected
Methylene Chloride	21	100	Not Detected	Not Detected
Freon 113	7.7	38	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
1,1-Dichloroethane	4.0	20	Not Detected	Not Detected
cis-1,2-Dichloroethene	4.0	20	Not Detected	Not Detected
Hexane	35	180	Not Detected	Not Detected
Chloroform	4.9	24	Not Detected	Not Detected
1,2-Dichloroethane	4.0	20	Not Detected	Not Detected
1,1,1-Trichloroethane	5.4	27	Not Detected	Not Detected
Benzene	6.4	32	Not Detected	Not Detected
Carbon Tetrachloride	6.3	32	Not Detected	Not Detected
Cyclohexane	6.9	34	Not Detected	Not Detected
1,2-Dichloropropane	4.6	23	Not Detected	Not Detected
Trichloroethene	5.4	27	Not Detected	Not Detected
1,4-Dioxane	11	55	Not Detected	Not Detected
2,2,4-Trimethylpentane	9.4	47	Not Detected	Not Detected
Heptane	8.2	41	Not Detected	Not Detected
Methylcyclohexane	8.0	40	Not Detected	Not Detected
1,1,2-Trichloroethane	5.4	27	Not Detected	Not Detected
4-Methyl-2-pentanone	8.2	41	Not Detected	Not Detected
Toluene	7.5	38	Not Detected	Not Detected
2-Hexanone	8.2	41	Not Detected	Not Detected
Tetrachloroethene	6.8	34	Not Detected	Not Detected
Chlorobenzene	4.6	23	Not Detected	Not Detected
Ethyl Benzene	4.3	22	Not Detected	Not Detected
m,p-Xylene	8.7	44	Not Detected	Not Detected
o-Xylene	8.7	44	Not Detected	Not Detected
Styrene	8.5	42	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	6.9	34	Not Detected	Not Detected
Cumene	9.8	49	Not Detected	Not Detected
Propylbenzene	9.8	49	Not Detected	Not Detected
4-Ethyltoluene	9.8	49	Not Detected	Not Detected
1,3,5-Trimethylbenzene	9.8	49	Not Detected	Not Detected
1,2,4-Trimethylbenzene	29	140	Not Detected	Not Detected
1,3-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,4-Dichlorobenzene	6.0	30	Not Detected	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1411133-09A

EPA METHOD TO-17

File Name:	**18111405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 04:55 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,2-Dichlorobenzene	6.0	30	Not Detected	Not Detected
1,2,4-Trichlorobenzene	15	75	Not Detected	Not Detected
Hexachlorobutadiene	21	100	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected
2-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
1-Methylnaphthalene	1.0	5.0	Not Detected	Not Detected
Acenaphthylene	5.0	25	Not Detected	Not Detected
Acenaphthene	5.0	25	Not Detected	Not Detected
Fluorene	5.0	25	Not Detected	Not Detected
Phenanthrene	5.0	25	Not Detected	Not Detected
Anthracene	5.0	25	Not Detected	Not Detected
Fluoranthene	5.0	25	Not Detected	Not Detected
Pyrene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	76	50-150
Toluene-d8	81	50-150
Naphthalene-d8	72	50-150

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Client Sample ID: CCV

Lab ID#: 1411133-10A

EPA METHOD TO-17

File Name:	**18111402**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 01:21 PM**

Compound	%Recovery
Freon 114	104
Vinyl Chloride	106
1,3-Butadiene	111
Isopentane	105
Freon 11	107
1,1-Dichloroethene	105
Methylene Chloride	106
Freon 113	102
trans-1,2-Dichloroethene	107
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	105
Hexane	105
Chloroform	103
1,2-Dichloroethane	101
1,1,1-Trichloroethane	94
Benzene	97
Carbon Tetrachloride	105
Cyclohexane	98
1,2-Dichloropropane	100
Trichloroethene	109
1,4-Dioxane	96
2,2,4-Trimethylpentane	100
Heptane	97
Methylcyclohexane	95
1,1,2-Trichloroethane	94
4-Methyl-2-pentanone	103
Toluene	101
2-Hexanone	121
Tetrachloroethene	92
Chlorobenzene	98
Ethyl Benzene	100
m,p-Xylene	98
o-Xylene	98
Styrene	96
1,1,2,2-Tetrachloroethane	84
Cumene	98
Propylbenzene	100
4-Ethyltoluene	94
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	100

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Client Sample ID: CCV

Lab ID#: 1411133-10A

EPA METHOD TO-17

File Name:	**18111402**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 01:21 PM**

Compound	%Recovery
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	106
Hexachlorobutadiene	113
Naphthalene	94
2-Methylnaphthalene	104
1-Methylnaphthalene	103
Acenaphthylene	94
Acenaphthene	131 Q
Fluorene	138
Phenanthrene	103
Anthracene	115
Fluoranthene	146 Q
Pyrene	153 Q

Air Sample Volume(L): 1.00

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	50-150
Toluene-d8	87	50-150
Naphthalene-d8	78	50-150

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Client Sample ID: LCS

Lab ID#: 1411133-11A

EPA METHOD TO-17

File Name:	**18111403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 02:03 PM**

Compound	%Recovery	Method Limits
Freon 114	105	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	105	70-130
Isopentane	104	70-130
Freon 11	102	70-130
1,1-Dichloroethene	102	70-130
Methylene Chloride	109	70-130
Freon 113	104	70-130
trans-1,2-Dichloroethene	101	70-130
1,1-Dichloroethane	105	70-130
cis-1,2-Dichloroethene	106	70-130
Hexane	105	70-130
Chloroform	100	70-130
1,2-Dichloroethane	100	70-130
1,1,1-Trichloroethane	94	70-130
Benzene	97	70-130
Carbon Tetrachloride	100	70-130
Cyclohexane	100	70-130
1,2-Dichloropropane	105	70-130
Trichloroethene	88	70-130
1,4-Dioxane	105	70-130
2,2,4-Trimethylpentane	100	70-130
Heptane	101	70-130
Methylcyclohexane	98	70-130
1,1,2-Trichloroethane	98	70-130
4-Methyl-2-pentanone	111	70-130
Toluene	104	70-130
2-Hexanone	130	70-130
Tetrachloroethene	94	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	101	70-130
o-Xylene	101	70-130
Styrene	108	70-130
1,1,2,2-Tetrachloroethane	121	70-130
Cumene	100	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	105	70-130
1,3,5-Trimethylbenzene	111	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1411133-11A

EPA METHOD TO-17

File Name:	**18111403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 02:03 PM**

Compound	%Recovery	Method Limits
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	126	70-130
Hexachlorobutadiene	119	70-130
Naphthalene	94	70-130
2-Methylnaphthalene	110	70-130
1-Methylnaphthalene	109	70-130
Acenaphthylene	102	70-130
Acenaphthene	138 Q	70-130
Fluorene	164 Q	60-140
Phenanthrene	126	60-140
Anthracene	141 Q	60-140
Fluoranthene	208 Q	60-140
Pyrene	209 Q	60-140

Air Sample Volume(L): 1.00

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	50-150
Toluene-d8	90	50-150
Naphthalene-d8	80	50-150

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Client Sample ID: LCSD

Lab ID#: 1411133-11AA

EPA METHOD TO-17

File Name:	**18111404**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 02:45 PM**

Compound	%Recovery	Method Limits
Freon 114	101	70-130
Vinyl Chloride	108	70-130
1,3-Butadiene	101	70-130
Isopentane	101	70-130
Freon 11	96	70-130
1,1-Dichloroethene	102	70-130
Methylene Chloride	106	70-130
Freon 113	101	70-130
trans-1,2-Dichloroethene	97	70-130
1,1-Dichloroethane	100	70-130
cis-1,2-Dichloroethene	101	70-130
Hexane	104	70-130
Chloroform	94	70-130
1,2-Dichloroethane	94	70-130
1,1,1-Trichloroethane	89	70-130
Benzene	99	70-130
Carbon Tetrachloride	100	70-130
Cyclohexane	99	70-130
1,2-Dichloropropane	103	70-130
Trichloroethene	84	70-130
1,4-Dioxane	102	70-130
2,2,4-Trimethylpentane	100	70-130
Heptane	100	70-130
Methylcyclohexane	99	70-130
1,1,2-Trichloroethane	97	70-130
4-Methyl-2-pentanone	112	70-130
Toluene	100	70-130
2-Hexanone	126	70-130
Tetrachloroethene	92	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	101	70-130
o-Xylene	97	70-130
Styrene	104	70-130
1,1,2,2-Tetrachloroethane	118	70-130
Cumene	96	70-130
Propylbenzene	100	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	108	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1411133-11AA

EPA METHOD TO-17

File Name:	**18111404**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/14 02:45 PM**

Compound	%Recovery	Method Limits
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	135 Q	70-130
Hexachlorobutadiene	123	70-130
Naphthalene	102	70-130
2-Methylnaphthalene	119	70-130
1-Methylnaphthalene	118	70-130
Acenaphthylene	111	70-130
Acenaphthene	146 Q	70-130
Fluorene	146 Q	60-140
Phenanthrene	118	60-140
Anthracene	117	60-140
Fluoranthene	93	60-140
Pyrene	92	60-140

Air Sample Volume(L): 1.00

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	50-150
Toluene-d8	92	50-150
Naphthalene-d8	81	50-150

TO-17 SAMPLE COLLECTION

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
(916) 985-1000 FAX (916) 985-1020

Project Manager Mansour Sepehr
Collected by: (Print and Sign) Lizzie Hightower
Company SOMA Environmental Eng. Email jbobek@somaenv.com
Address 6620 Owens Dr, Suite A City Pleasanton State CA Zip 94588
Phone 925-734-6400 Fax 925-734-6401

Project Info:
P.O. # _____
Project # 2762
Project Name 3519 Castro Valley Blvd Castro Valley

Turn Around Time:
☒ Normal
☐ Rush
_____ specify

Reporting Units:
☐ ppmv
☐ ppbv
☐ µg/m3
☐ mg/m3

Lab I.D.	Field Sample I.D. (Location)	Tube #	Date of Collection (mm/dd/yy)	Start Time (hr:min)	End Time (hr:min)	Pre-Test Flow Rate	Post-Test Flow Rate	Volume	Indoor/Outdoor % RH	Indoor/Outdoor Temp	Indoor Air	Outdoor Air	Soil Vapor	Other ( )
01A	SV-1	G0147265	11/10/14	12:16	12:17	200 mL/min	200 mL/min	200mL			☐	☐	☒	☐
02A	SV-1D	G0141580	11/10/14	12:22	12:23	200mL/min	200mL/min	200mL			☐	☐	☒	☐
03A	SV-3	G0132062	11/10/14	11:45	11:46	200mL/min	200mL/min	200mL			☐	☐	☒	☐
04A	SV-4	G0150557	11/10/14	10:45	10:46	200mL/min	200mL/min	200mL			☐	☐	☒	☐
05A	SV-5	G0145565	11/10/14	11:18	11:19	200mL/min	200mL/min	200mL			☐	☐	☒	☐
06A	SSG-1	G0137249	11/10/14	13:41	13:42	200mL/min	200mL/min	200mL			☐	☐	☒	☐
07A	SSG-2	G0139919	11/10/14	13:26	13:27	200mL/min	200mL/min	200mL			☐	☐	☒	☐
08A	SSG-3	G0135640	11/10/14	13:18	13:17	200mL/min	200mL/min	200mL			☐	☐	☒	☐
											☐	☐	☐	☐
											☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
DAV POSH	11/11/14 12:25	EATL	11/12/14 1225
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 #
	Hand Delivered		11.4°C	SDR	Yes No None	1411133

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11/25/2014
Ms. Lizzie Hightower
SOMA Environmental
6620 Owens Drive
Suite A
Pleasanton CA 94588

Project Name: 3519 Castro Valley Blvd Castro Valley
Project #: 2762
Workorder #: 1411134

Dear Ms. Lizzie Hightower

The following report includes the data for the above referenced project for sample(s) received on 11/11/2014 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1411134

Work Order Summary

CLIENT:	Ms. Lizzie Hightower SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588	**BILL TO:**	Ms. Lizzie Hightower SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588
PHONE:	925-734-6400	**P.O. #**	
FAX:	925-734-6401	**PROJECT #**	2762 3519 Castro Valley Blvd Castro Valley
DATE RECEIVED:	11/11/2014	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	11/25/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SV-1	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
02A	SV-3	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
03A	SV-4	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
04A	SV-5	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
05A	SSG-1	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
06A	SSG-2	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
07A	SSG-3	Modified ASTM D-1946	Tedlar Bag	Tedlar Bag
08A	Lab Blank	Modified ASTM D-1946	NA	NA
08B	Lab Blank	Modified ASTM D-1946	NA	NA
09A	LCS	Modified ASTM D-1946	NA	NA
09AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 11/25/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1946
SOMA Environmental
Workorder# 1411134

Seven 1 Liter Tedlar Bag samples were received on November 11, 2014. 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.

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 minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
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

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

Client Sample ID: SV-1

Lab ID#: 1411134-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	19
Carbon Dioxide	0.010	1.6
Helium	0.050	0.18
Methane	0.00010	0.026

Client Sample ID: SV-3

Lab ID#: 1411134-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	7.2
Carbon Dioxide	0.010	11

Client Sample ID: SV-4

Lab ID#: 1411134-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	20
Carbon Dioxide	0.010	0.89
Methane	0.00010	0.00023

Client Sample ID: SV-5

Lab ID#: 1411134-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	10
Carbon Dioxide	0.010	10

Client Sample ID: SSG-1

Lab ID#: 1411134-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	20

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

Client Sample ID: SSG-1

Lab ID#: 1411134-05A

Carbon Dioxide	0.010	0.47

Client Sample ID: SSG-2

Lab ID#: 1411134-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	16
Carbon Dioxide	0.010	4.0
Helium	0.050	0.094

Client Sample ID: SSG-3

Lab ID#: 1411134-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	16
Carbon Dioxide	0.010	3.9

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Client Sample ID: SV-1

Lab ID#: 1411134-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111208**	**Date of Collection: 11/10/14 12:28:00 P**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 11:58 AM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.10	19
Carbon Dioxide	0.010	1.6
Helium	0.050	0.18
Methane	0.00010	0.026

Container Type: 1 Liter Tedlar Bag

eurofins | Air Toxics

Client Sample ID: SV-3

Lab ID#: 1411134-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111209**	**Date of Collection: 11/10/14 11:52:00 A**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 12:32 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	7.2
Carbon Dioxide	0.010	11
Helium	0.050	Not Detected
Methane	0.00010	Not Detected

Container Type: 1 Liter Tedlar Bag

eurofins | Air Toxics

Client Sample ID: SV-4

Lab ID#: 1411134-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111206**	**Date of Collection: 11/10/14 10:53:00 A**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 10:24 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	20
Carbon Dioxide	0.010	0.89
Helium	0.050	Not Detected
Methane	0.00010	0.00023

Container Type: 1 Liter Tedlar Bag

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Client Sample ID: SV-5

Lab ID#: 1411134-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111207**	**Date of Collection:**	**11/10/14 11:26:00 A**
Dil. Factor:	**1.00**	**Date of Analysis:**	**11/12/14 11:07 AM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	10
Carbon Dioxide	0.010	10
Helium	0.050	Not Detected
Methane	0.00010	Not Detected

Container Type: 1 Liter Tedlar Bag

eurofins | Air Toxics

Client Sample ID: SSG-1

Lab ID#: 1411134-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111210**	**Date of Collection: 11/10/14 1:45:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 01:05 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	20
Carbon Dioxide	0.010	0.47
Helium	0.050	Not Detected
Methane	0.00010	Not Detected

Container Type: 1 Liter Tedlar Bag

eurofins | Air Toxics

Client Sample ID: SSG-2

Lab ID#: 1411134-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111211**	**Date of Collection: 11/10/14 1:30:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 01:43 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	16
Carbon Dioxide	0.010	4.0
Helium	0.050	0.094
Methane	0.00010	Not Detected

Container Type: 1 Liter Tedlar Bag

eurofins | Air Toxics

Client Sample ID: SSG-3

Lab ID#: 1411134-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111205**	**Date of Collection: 11/10/14 1:20:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 09:53 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	16
Carbon Dioxide	0.010	3.9
Helium	0.050	Not Detected
Methane	0.00010	Not Detected

Container Type: 1 Liter Tedlar Bag

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1411134-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 09:28 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Carbon Dioxide	0.010	Not Detected
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1411134-08B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111203c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 09:01 AM**	

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

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1411134-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 08:24 AM**	

Compound	%Recovery	Method Limits
Oxygen	102	85-115
Carbon Dioxide	100	85-115
Helium	98	85-115
Methane	102	85-115

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1411134-09AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10111223**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/14 09:51 PM**	

Compound	%Recovery	Method Limits
Oxygen	102	85-115
Carbon Dioxide	100	85-115
Helium	98	85-115
Methane	102	85-115

Container Type: NA - Not Applicable

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 Mansour Sepehr
Collected by: (Print and Sign) Lizzie Hightower
Company SOMA Environmental Eng. Email jbobek@somaenv.com
Address 6620 Owens Dr, Suite A City Pleasanton State CA Zip 94588
Phone 925-734-6400 Fax 925-734-6401

Project Info:
P.O. # ____
Project # 2762
Project Name 3519 Castro Valley Blvd Castro Valley

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	SV-1	Tedlar Bag	11/10/14	12:28	Atmospheric Gas O_2, CO_2, methane Helium				
02A	SV-3	↓	↓	11:52	↓				
03A	SV-4			10:53					
04A	SV-5			11:26					
05A	SSG-1			13:45					
06A	SSG-2			13:30					
07A	SSG-3	↓	↓	13:20	↓				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
DAV POSH	11/11/14 12:25	[signature] ESDZ	11/11/14 1225

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Hand Delivered		NA	Good	Yes No (None)	1411134

Form 1293 rev.11