

PERJURY STATEMENT

**Subject: 1395 MacArthur Boulevard, San Leandro, California
Indoor Air & Sub-Slab Vapor Monitoring Report**

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**Mr. Sayed Hussain, agent for
ESC Partners, L.P. and
Mr. William Mathews Brooks
4725 Thornton Avenue
Fremont, CA, 94536**

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**Indoor Air & Sub-Slab Monitoring Report
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California**

11 December 2015
AGE-Project No. 12 - 2461

PREPARED FOR:

Mr. William Matthew Brooks
ARDENBROOK

PREPARED BY:



Advanced GeoEnvironmental, Inc.

Environmental • Industrial Hygiene • Geotechnical • Contracting

(800) 511-9300

www.advgeoenv.com

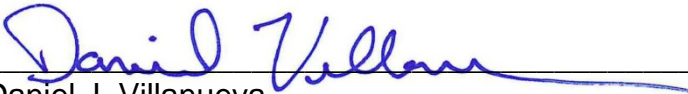
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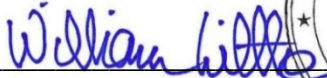
PREPARED BY:



Daniel J. Villanueva
Project Geologist

PROJECT MANAGER:


Daniel J. Villanueva
Project Geologist

REVIEWED BY:


William R. Little
Senior Project Geologist
California Professional Geologist No. 7473



Indoor Air & Sub-Slab Monitoring Report
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

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Indoor Air & Sub-Slab Monitoring Report
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

1.0. INTRODUCTION

Advanced GeoEnvironmental, Inc. has prepared this, *Indoor Air and Sub-Slab Monitoring Report*, for the above-referenced site. The scope of work included the sampling of indoor air in the subject (1395 MacArthur Boulevard) and two adjacent suites (1377 and 1383 MacArthur Boulevard) and the sampling of all four sub-slab vapor wells (SS-1 through SS-4) at the Swiss Valley Cleaners site.

The location of the site and the surrounding area are illustrated in Figure 1; detailed maps of site features and boring and soil-vapor sampling locations are included as Figures 2 and 3.

2.0. PROCEDURES

Indoor air and sub-slab vapor well sampling procedures were outlined in the AGE-prepared, *Site Assessment and Sub-Slab Vapor Well Installation Work Plan*, dated 05 November 2014. Procedures were further modified by the Alameda County Environmental Health Services (ACEHS) directive letter, dated 11 March 2014.

2.1. INDOOR AIR SAMPLING

Field work was performed utilizing procedures provided in the Interstate Technology Regulatory Council (ITRC)-prepared, *Vapor Intrusion Pathway: A Practical Guideline* dated January 2007 and the Department of Toxic Substance Control (DTSC)-prepared, *Guidance For The Evaluation And Mitigation Of Subsurface Vapor Intrusion To Indoor Air - Final (Vapor Intrusion Guidance)* dated October 2011. Additionally, the field work was performed in accordance with procedures outlined in the AGE-prepared, *Indoor Air Quality Sampling Work Plan*, dated 04 February 2014.

2.1.1. Pre-Field Work Preparations

On 30 October 2015, prior to the start of indoor air sample collection, all suites sampled (1377 [Estudillo Plaza Optometry] 1383 [Solthea Salon & Beauty Supply] and 1395 MacArthur Boulevard [Former Swiss Valley Cleaners]) were inspected to locate indoor contaminant sources and products that could potentially bias the sampling results (Figure 3). Several products with chemicals of concern had been previously identified in 1383 MacArthur Boulevard (Solthea Beauty Supply and Salon). Organic vapor was not measured during the survey of each building prior to deployment of the indoor air sampling canisters, as historical values had been established.

2.1.2. Indoor Air Sampling

During the October 2015 indoor air sampling event, passive integrated air samples were collected from inside the suites of 1377, 1383 and 1395 MacArthur Boulevard. During the sampling events one 6-liter summa canister was deployed in the center or rear of each of the facilities in areas lacking public access.

The sampling inlet on each canister was connected to a mass flow controller containing a particulate filter; the flow controllers were calibrated to a flow rate of 11.5 milliliters/minute (ml/min) in order to collect air samples over an 8-hour period. Each canister's initial vacuum was measured and recorded to ensure the initial vacuum was greater than 20 inches of mercury (in/Hg); Initial vacuum's were measured at 30 in/Hg prior to air sample collection.

Upon can retrieval final vacuum measurements were observed between 6 and 7 in/Hg.

The air samples were transported under chain-of-custody procedures to Eurofins Air Toxics (EAT) located in Folsom, California. The indoor air samples were analyzed for VOCs in accordance with EPA Method TO-15.

2.2. SUB-SLAB VAPOR WELL SAMPLING

On 23 March 2015 sub-slab vapor points (SS-1 through SS-4) were sampled. During the sampling event, one-liter (sampling) and six-liter Summa purge canisters were used to collect sub-slab vapor samples. The sampling and purge canisters were connected together with a dedicated and serialized sampling inlet manifold. The sampling inlet manifold consisted of a vapor-tight valve; a particulate filter; a calibrated flow restrictor calibrated to 50 milliliters per minute (ml/min); a stainless steel tee-fitting; two vacuum gauges at either end of the flow controller and connections for both purge and sampling canisters (manifold assembly).

The manifold assembly was attached to Teflon® tubing with a compression sleeve and nut, which was attached to a dedicated brass barb that was fitted to the fitting at the top of the sub-slab monitoring point. The threads of each fitting were covered with Teflon® tape to ensure an airtight seal. The purge canister was attached to the end of the sampling manifold, while the sample canister was attached to the middle of the manifold assembly. Teflon® tape was placed on the threads of each fitting of the manifold assembly prior to attaching the sampling and purge canisters.

The initial vacuum of each canister was measured and recorded in inches of mercury (in Hg) on field logs (Appendix A). Leak tests were performed on each assembly by attaching and securing the sample and purge canisters to the manifold and opening the valves on the purge canister and the manifold. The leak test was performed for

approximately 10 minutes on each assembly. Adjustments were made (tightening of fittings) and a leak test was performed again, if necessary. Once a proper seal was assured, each sub-slab monitoring location was isolated from ambient air by enclosing the sub-slab point, tubing and manifold/canister assembly in clear plastic shroud. Isopropyl alcohol (IPA) as a liquid was placed in a stainless steel bowl within the plastic shroud and allowed to volatilize into the air enclosed within the shroud surrounding the sub-slab monitoring point, tubing and manifold/canister assembly.

The purge volume was pre-determined prior to sampling by calculating the internal volume of the tubing of the manifold and well volume including filter pack.

Once the sampling apparatus was leak-tested and sealed within the shroud, the purge canister valve was opened for a calculated period of time (35 seconds) to allow the three calculated volumes of air and soil vapor to be purged. The purge vacuum gauge was monitored and recorded to ensure a proper decrease of vacuum purged.

Upon achieving the targeted purge volume, the purge canister valve was closed and the sample canister valve opened. The initial pressure on the sample canister and time were recorded. Upon reaching at least -5 in Hg or less, the sample canister valve was closed and final pressure and time recorded. The sampling port on the sampling canister was capped with a brass end-cap and sealed with Teflon® tape.

The vapor samples were transported by AGE under chain-of-custody procedures to EAT. The sub-slab vapor samples were analyzed for VOCs and iso-propyl alcohol (IPA - tracer gas) in accordance with EPA Method TO-15.

3.0. FINDINGS

Chlorinated hydrocarbon and VOC impact was quantified based on laboratory analysis of indoor air and sub-slab vapor samples collected at the site during the October 2015 investigations.

3.1. ANALYTICAL RESULTS OF INDOOR AIR SAMPLES

Three indoor air samples (IA-1877 MacArthur, 1883 MacArthur and IA-1395 MacArthur) were collected at the site during the 30 October 2015 sampling event. All samples were analyzed for VOCs in accordance with EPA method TO-15. Results are summarized below.

- Freon 11 was detected in the sample collected from 1395 MacArthur Boulevard at a concentration of 1.4 micrograms per cubic meter $\mu\text{g}/\text{m}^3$;

- Ethanol was detected in all three samples at a maximum concentration of 1,500 $\mu\text{g}/\text{m}^3$ (1383 MacArthur);
- Acetone was detected all three indoor air samples at a maximum concentration of 1,300 $\mu\text{g}/\text{m}^3$ (IA-1383 MacArthur);
- 2-propanol (IPA) was detected in all three indoor samples at a maximum concentration of 3,900 $\mu\text{g}/\text{m}^3$ (IA-1383 MacArthur);
- Tetrahydrofuran was detected in the sample collected from 1395 MacArthur Boulevard at a concentration of 3.1 $\mu\text{g}/\text{m}^3$;
- Heptane was detected in the samples collected from 1395 and 1383 MacArthur at a maximum concentration 30 $\mu\text{g}/\text{m}^3$;
- 4-methyl-2-pentanone was detected in the sample collected from 1377 MacArthur Boulevard at a concentration of 16 $\mu\text{g}/\text{m}^3$;
- Freon 12 was detected in all three indoor air samples at a maximum concentration of 2.5 $\mu\text{g}/\text{m}^3$ (IA-1377 MacArthur);
- Toluene was detected in all three indoor air samples at a maximum concentration of 5.2 $\mu\text{g}/\text{m}^3$ (IA-1383 MacArthur);
- Tetrachloroethene (PCE) was detected in all three indoor samples at a maximum concentration of 3.5 $\mu\text{g}/\text{m}^3$ (IA-1383 MacArthur);
- m,p-xylene was detected in the samples collected from 1377 and 1395 MacArthur at concentrations of 3.7 $\mu\text{g}/\text{m}^3$ and 1.4 $\mu\text{g}/\text{m}^3$;
- Chloromethane was detected in the samples collected from 1395 and 1383 MacArthur at a maximum concentration of 1.7 $\mu\text{g}/\text{m}^3$ (IA-1383 MacArthur);
- Chloroform was detected in the sample collected from 1395 MacArthur at a concentration of 0.18 $\mu\text{g}/\text{m}^3$;
- Carbon tetrachloride (CT) was detected in the sample collected from 1395 MacArthur at a concentration of 0.40 $\mu\text{g}/\text{m}^3$;
- Benzene was detected in sample collected from 1395 MacArthur at a concentration of 0.85 $\mu\text{g}/\text{m}^3$;
- Ethylbenzene was detected in the sample collected from 1395 MacArthur at a concentration of 0.44 $\mu\text{g}/\text{m}^3$;
- 1,1,2,2-tetrachloroethane was detected in the sample collected from 1395 MacArthur at a concentration of 1.3 $\mu\text{g}/\text{m}^3$;

A summary of analytical results from samples collected during the October 2015 sampling event are included in Table 1. The laboratory report (EAT work order number

1511054), quality assurance/quality control report, and chain-of-custody form are included in Appendix B. Laboratory analytical was uploaded to the State GeoTracker database under confirmation number 2756934881

3.2. ANALYTICAL RESULTS OF SUB-SLAB VAPOR SAMPLES

A total of four (4) sub-slab vapor samples were collected at the site in October 2015 and analyzed for VOCs and IPA. The following is a summary of the results:

- PCE was detected in all four sub-slab vapor samples at a maximum concentration of 24,000 $\mu\text{g}/\text{m}^3$ (SS-3);
- Tetrahydrofuran was detected in only one of the sub-slab samples (SS-1) at a concentration of 48 $\mu\text{g}/\text{m}^3$;
- Trichloroethene was detected in one of the sub-slab samples (SS-3) at a concentration 67 $\mu\text{g}/\text{m}^3$ (SS-1);
- Tracer gas isopropyl alcohol was not detected in any of the sub-slab samples collected during the October 2015 investigation.

No other constituents of concern were detected in the sub-slab samples collected during the October 2015 monitoring event. A summary of the analytical results from the sampling event are included in Table 2. The laboratory report (EAT work order number 1511055), quality assurance/quality control report, and chain-of-custody forms are included in Appendix C. Laboratory analytical data was uploaded to the State GeoTracker database under confirmation number 1475852310.

4.0. SUMMARY/CONCLUSIONS

Based upon the findings of this investigation, AGE concludes:

- Based on sub-slab vapor samples collected during the March 2015 sampling event, significant attenuation appears to be taking place from five feet bsg to just beneath the concrete slab. However, PCE concentrations detected in sub-slab soil-vapor samples SS-1 though SS-4 remain above the Commercial CHHSL for PCE in soil gas. Accumulation of chlorinated hydrocarbon impact below the slab will likely be addressed following active remediation. Additional sampling should be completed following a significant period of remedial operation to evaluate conditions beneath the concrete slab.
- Based on sub-slab vapor samples and indoor air samples collected during this round of investigation, a significant attenuation in chlorinated hydrocarbon impact is still occurring between the sub-slab and indoor air (Tables 1 and 2). PCE

concentrations detected in indoor air samples were significantly lower in all units in comparison to samples collected during the March 2015 sampling event. Concentrations detected during the October 2015 monitoring event are now either slightly above or below commercial screening levels in all sampled units.

- Based on sample concentrations during the October 2015 sampling event, it appears that installation of fresh air and exhaust fans has reduced concentrations of contaminants in indoor air. The proposed corrective action, once initiated, will likely further reduce indoor air impacts.

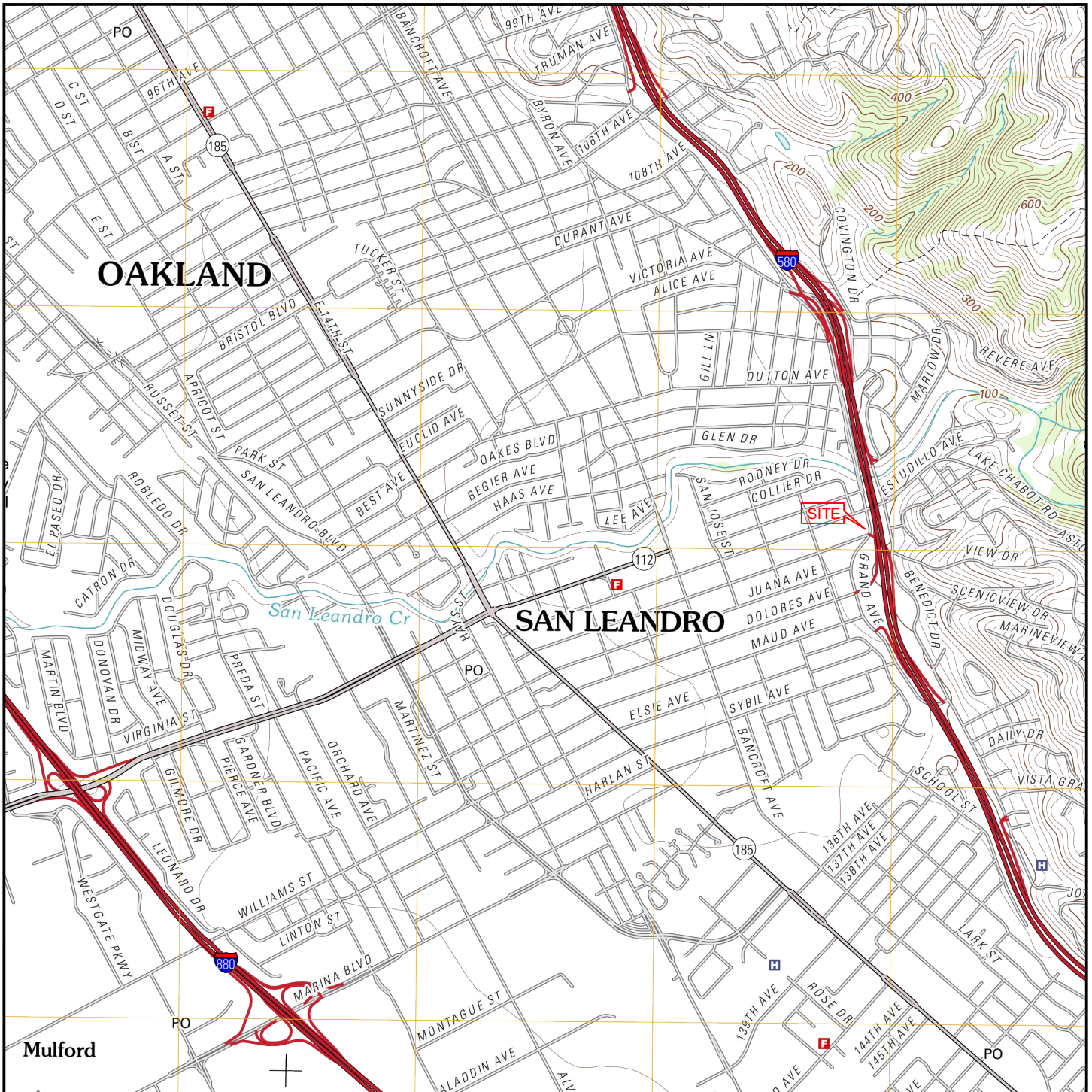
5.0. RECOMMENDATIONS

Based on the results of this investigation, AGE recommends that additional sub-slab and indoor air samples be collected in the summer of 2016, following active proposed soil-vapor remediation. Furthermore, it appears that it is now appropriate for the subject unit to be re-occupied by a new tenant and dry cleaner. Chlorinated hydrocarbon concentrations reported during the October 2015 indoor air sampling event were below commercial screening and will likely continue to decrease following active remediation.

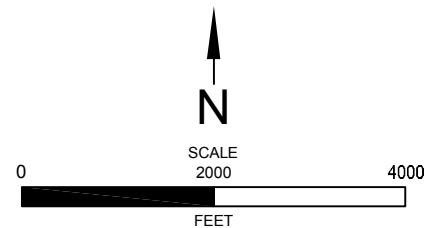
6.0. LIMITATIONS

Our professional services were performed using the degree of care and skill ordinarily exercised by environmental consultants practicing in this or similar localities. The findings were based mainly upon analytical results provided by an independent laboratory. Evaluations of the geologic/ hydrogeologic conditions at the site for the purpose of this investigation are made from a limited number of available data points (i.e. soil borings, soil samples and soil-vapor samples) and subsurface conditions may vary away from these data points. No other warranty, expressed or implied, is made as to the professional recommendations contained in this report.

FIGURES



SAN LEANDRO QUADRANGLE, CALIFORNIA
 7.5 MINUTE SERIES (U.S. GEOLOGICAL SURVEY)



LOCATION MAP
 SWISS VALLEY CLEANERS
 1395 MacArthur Boulevard
 SAN LEANDRO, CALIFORNIA

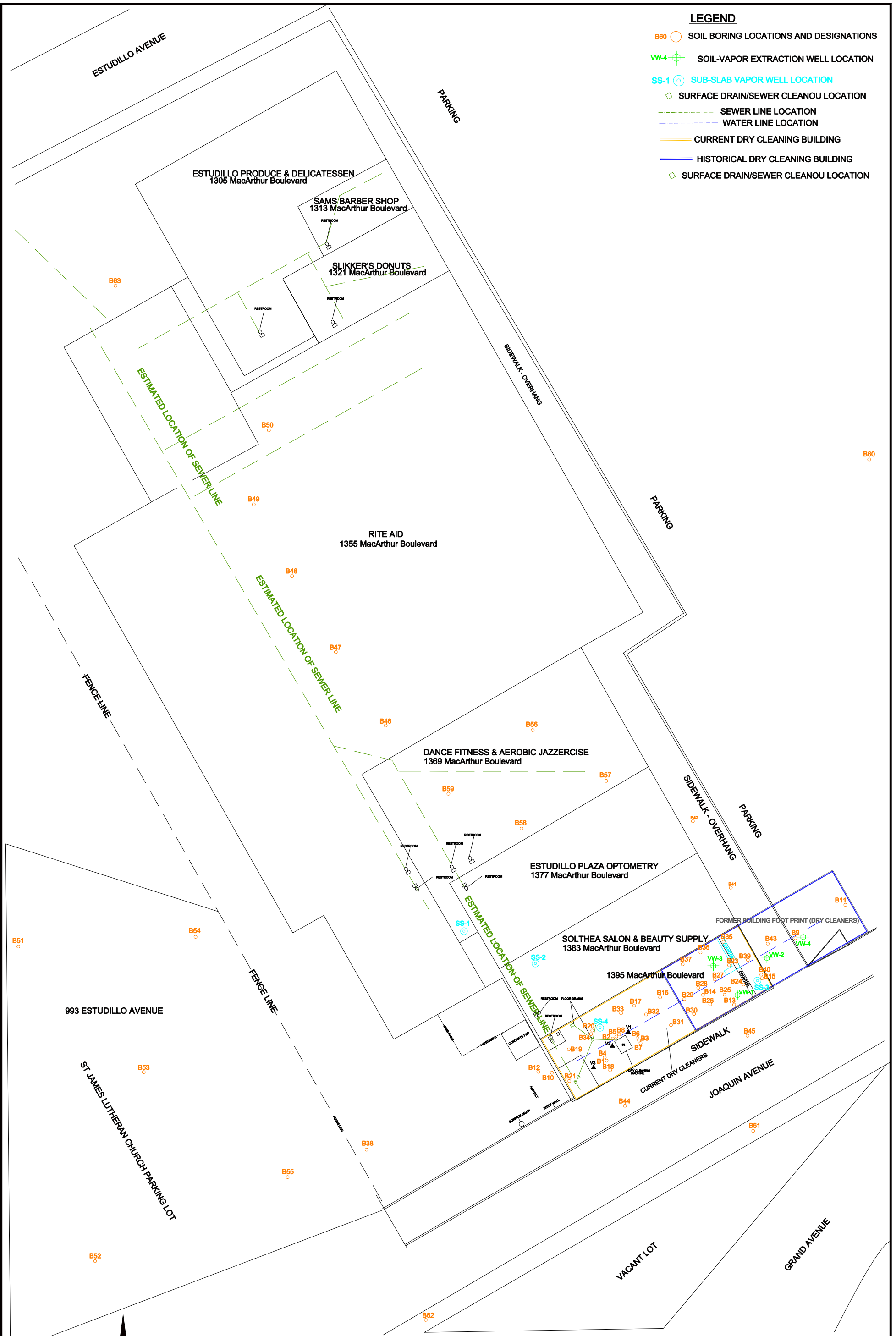


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PROJECT NO. AGE-NC-12-2461	FILE: LOCATION	FIGURE:
DATE: 21 MAY, 2013	DRAWN BY: MAC	1

LEGEND

- B60 ○ SOIL BORING LOCATIONS AND DESIGNATIONS
- VW-4 ⊕ SOIL-VAPOR EXTRACTION WELL LOCATION
- SS-1 ⊕ SUB-SLAB VAPOR WELL LOCATION
- ◇ SURFACE DRAIN/SEWER CLEANOUT LOCATION
- SEWER LINE LOCATION
- WATER LINE LOCATION
- CURRENT DRY CLEANING BUILDING
- HISTORICAL DRY CLEANING BUILDING
- ◇ SURFACE DRAIN/SEWER CLEANOUT LOCATION



ESTUDILLO PRODUCE & DELICATESSEN
1305 MacArthur Boulevard

SAMS BARBER SHOP
1313 MacArthur Boulevard

SLIKKER'S DONUTS
1321 MacArthur Boulevard

RITE AID
1355 MacArthur Boulevard

DANCE FITNESS & AEROBIC JAZZERCISE
1369 MacArthur Boulevard

ESTUDILLO PLAZA OPTOMETRY
1377 MacArthur Boulevard

SOLTHEA SALON & BEAUTY SUPPLY
1383 MacArthur Boulevard

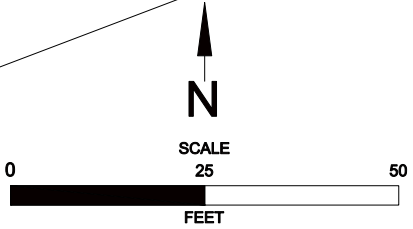
1395 MacArthur Boulevard

REGIONAL SITE PLAN - SOIL BORING LOCATIONS

SWISS VALLEY CLEANERS
1395 MACARUTHER BOULEVARD
SAN LEANDRO, CALIFORNIA

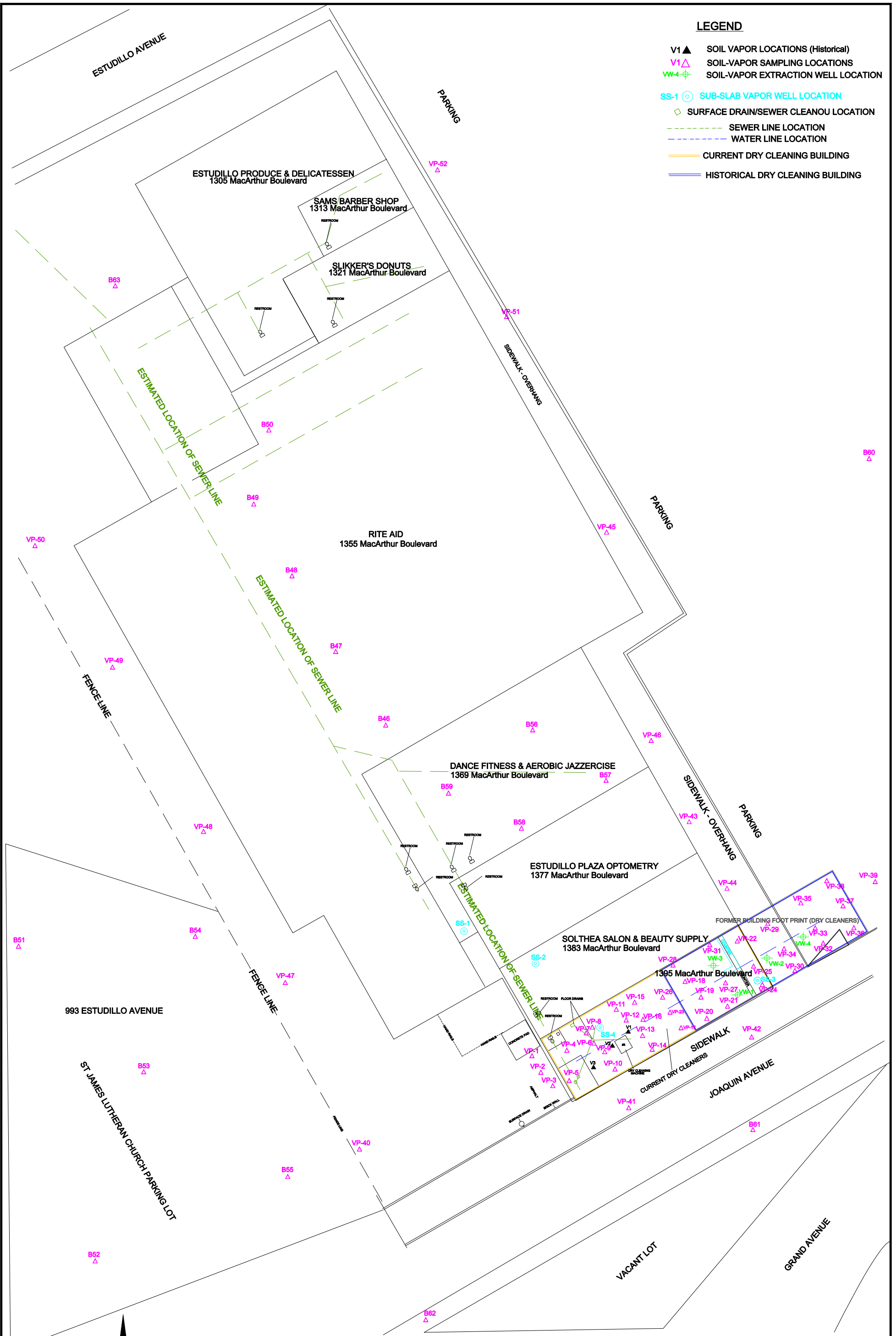
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PROJECT NO. AGE-NC-SC	FILE: FILE	FIGURE:
DATE: MAY 2014	DRAWN BY: MAC	2




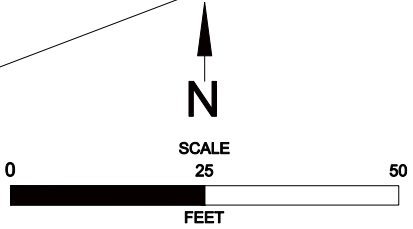
LEGEND

- V1 ▲ SOIL VAPOR LOCATIONS (Historical)
- V1△ SOIL-VAPOR SAMPLING LOCATIONS
- WW-4 ⊕ SOIL-VAPOR EXTRACTION WELL LOCATION
- SS-1 ⊙ SUB-SLAB VAPOR WELL LOCATION
- ◇ SURFACE DRAIN/SEWER CLEANOUT LOCATION
- - - SEWER LINE LOCATION
- - - WATER LINE LOCATION
- CURRENT DRY CLEANING BUILDING
- HISTORICAL DRY CLEANING BUILDING



REGIONAL SITE PLAN - VAPOR SAMPLING LOCATIONS
SWISS VALLEY CLEANERS
1395 MACARUTHER BOULEVARD
SAN LEANDRO, CALIFORNIA

 Advanced GeoEnvironmental, Inc. www.advgeoenv.com		PROJECT NO. AGE-NC-SC	FILE: FILE	FIGURE:
		DATE: MAY 2014	DRAWN BY: MAC	3



TABLES

TABLE 1
INDOOR AIR ANALYTICAL RESULTS
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard,
San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	TO-15																
		PCE	TCE	1,2-DCA	EDB	Naphthalene	1,4-DCB	Acetone	CT	B	T	E	X	Chloromethane	DCDFM	Ethyl Acetate	TCFM	Chloroform
IA-1395 MacArthur	04-10-2014	12	0.038	0.085	<0.0078	0.34	0.099	46	0.41	0.52	1.4	<0.44	1.2	0.60	2.0	2.7	1.4	0.19
	05-08-2014	14	0.11	0.19	<0.0078	0.17	0.063	75	0.44	0.27	0.74	<0.44	<1.3	0.67	2.0	8.8	1.1	0.22
	03-23-2015	16	0.03	0.10	<0.0078	0.17	0.074	110	0.46	0.50	2.3	<0.44	<1.3	0.62	2.4	14.0	1.3	0.33
	10-30-2015	0.77	<0.17	<0.13	<0.25	-	<0.19	<1.9	<0.20	0.85	3.0	0.44	2.03	1.0	-	-	-	0.18
IA-1383 MacArthur	04-10-2014	11	0.057	0.43	0.011	0.26	0.096	3,600	0.38	0.65	11	0.49	2.0	<0.21	<0.50	260	<0.57	0.51
	05-08-2014	17	0.055	1.1	<0.0078	0.36	0.12	5,200	0.45	0.69	21	<0.44	1.5	<0.21	<0.50	1600	<0.57	0.49
	03-23-2015	19	0.064	0.37	<0.0078	0.41	0.33	8,600	0.56	0.64	15	0.53	2.0	<0.21	0.89	580	0.84	5.3
	10-30-2015	3.5	<0.17	<1.3	<2.5	-	<1.9	1,300	<2.0	<2.6	5.2	<1.4	<1.4	1.7	-	-	-	<1.6
IA-1377 MacArthur	04-10-2014	2.1	0.027	0.76	<0.0078	0.22	0.10	110	0.39	0.54	2.8	0.69	3.0	0.54	1.8	7.4	0.78	0.18
	05-08-2014	5.1	0.033	1.10	<0.0078	0.38	0.37	38	0.45	0.37	6.9	1.1	4.4	0.67	2.1	4.9	1	0.2
	10-30-2015	3.2	<1.8	<1.3	<2.5	-	<2.0	97	<2.1	<2.6	4.8	<1.4	<1.4	<1.7	-	-	-	<1.6

TABLE 1
INDOOR AIR ANALYTICAL RESULTS
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard,
San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	TO-15																
		PCE	TCE	1,2-DCA	EDB	Naphthalene	1,4-DCB	Acetone	CT	B	T	E	X	Chloromethane	DCDFM	Ethyl Acetate	TCFM	Chloroform
IA-1369 MacArthur	05-08-2014	0.045	0.020	2.2	<0.0078	0.26	0.17	18	0.47	0.60	2.1	<0.44	<1.3	0.68	2.0	2.2	1.3	0.25
Outside 1395 MacArthur	05-08-2014	0.042	0.014	0.067	<0.0078	0.12	0.023	13	0.47	0.20	0.41	<0.44	<1.3	0.64	2.0	2.1	1.1	0.24
SFBRWCB ESL (Commercial)		2.1	3.0	0.58	0.17	0.36	1.1	140,000	0.29	0.42	1,300	4.9	440	390	-	-	-	2.3

Notes:

SFBRWCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for indoor Air.

<: Indicates constituents were not detected at a concentration greater than the reporting limit shown.

PCE: Tetrachloroethene

TCE: Trichloroethene

1,2-DCA: 1,2-Dichloroethane

EDB: 1,2-Dibromoethane

1,4-DCB: 1,4-dichlorobenzene

VC: Vinyl Chloride

CT: Carbon Tetrachloride

DCDFM: Dichlorodifluoromethane

TCFM: Trichlorofluoromethane

IPA: Isopropyl Alcohol

B: Benzene; T: Toluene; E: Ethyl-benzene; X: Total Xylenes

*Concentrations denoted with orange fill are above ambient and indoor air screening levels for a commercial setting.

TABLE 4
SUB-SLAB VAPOR ANALYTICAL RESULTS
 Swiss Valley Cleaners
 1395 MacArthur Boulevard, San Leandro, California
 (micrograms per cubic meter)

Sample ID	Location	Date	TO-15																				
			Dry Cleaning Constituents							Chemicals from other sources													
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	IPA	1,2-DCA	B	T	E	X	1,2-DCP	Ethanol	4-ET	1,2,4-TMB	Ethyl Acetate	Naphthalene	1,3,5-TMB	Acetone	2-Butanone
SS-1	1369 MacArthur Boulevard	03-23-2015	5,700	3.3	<2.0	<2.0	<2.0	<1.3	<50	<2.0	42	58	39	190	<2.4	<96	53	98	<1.8	<5.3	64	<60	<75
		10-30-2015	1,700	<5.9	<4.4	<4.4	<4.4	<2.8	<11	<4.5	<3.5	<4.2	<4.8	<4.8	<5.1	<8.3	<5.4	<33	-	-	<5.4	<26	<13
SS-2	1383 MacArthur Boulevard	03-23-2015	5,400	<2.8	<2.0	<2.0	<2.0	<1.3	<50	<2.0	8.6	2.2	<2.2	<6.6	<2.4	<96	<2.5	9.8	4.7	<5.3	2.7	<60	<75
		10-30-2015	12,000	<41	<30	<30	<30	<20	<76	<31	<24	<29	<33	<33	<36	<58	<38	<38	-	-	<38	<180	<91
SS-3	1395 MacArthur Boulevard (Front of Suite)	03-23-2015	8,300	19	<2.0	<2.0	<2.0	<1.3	<50	<2.0	13	5.1	3.9	24	<2.4	<96	6.2	29	<1.8	<5.3	6.8	<60	<75
		10-30-2015	24,000	67	<46	<46	<46	<29	<110	<46	<37	<43	<50	<50	<53	<87	<56	<56	-	-	<56	<270	<140

TABLE 4
SUB-SLAB VAPOR ANALYTICAL RESULTS
 Swiss Valley Cleaners
 1395 MacArthur Boulevard, San Leandro, California
 (micrograms per cubic meter)

Sample ID	Location	Date	TO-15																				
			Dry Cleaning Constituents						Chemicals from other sources														
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	IPA	1,2-DCA	B	T	E	X	1,2-DCP	Ethanol	4-ET	1,2,4-TMB	Ethyl Acetate	Naphthalene	1,3,5-TMB	Acetone	2-Butanone
SS-4	1395 MacArthur Boulevard (Rear of Suite)	03-23-2015	7,600	5.6	<2.0	<2.0	<2.0	<1.3	<50	2.2	17	14	9.4	44	<2.4	<96	9.6	29	<1.8	<5.3	5.7	<60	<75
		10-30-2015	21,000	<48	<48	<47	<47	<30	<120	<48	<38	<45	<51	<51	<55	<89	<58	<58	-	-	<58	<280	<140
CHHSLs (Commercial)			1,600	1,300	-	240,000	120,000	95.0	-	360	280	890,000	3,600	6,700,000	-	-	-	-	-	310	-	-	-
SFBRWCB ESL (Commercial)			2,100	3,000	880,000	2,600,000	-	160	-	580	420	1,300,000	4,900	440,000	1,200	-	-	-	-	360	-	140,000,000	22,000,000

Notes:

SFBRWCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for shallow soil gas

<: Indicates constituents were not detected at a concentration greater than the reporting limit shown.

CHHSLs: California Human Health Screening Levels (Soil Gas Screening for VOC's below buildings constructed with engineer fill below sub-slab gravel)

PCE: Tetrachloroethene

TCE: Trichloroethene

1,1-DCE: 1,1-Dichloroethene

Trans 1,2-DCE: Trans 1,2-Dichloroethene

Cis 1,2-DCE: Cis 1,2-Dichloroethene

VC: Vinyl Chloride

IPA: Isopropyl Alcohol

B: Benzene; T: Toluene; E: Ethyl-benzene; X: Total Xylenes

1,2-DCA: 1,2-Dichloroethane

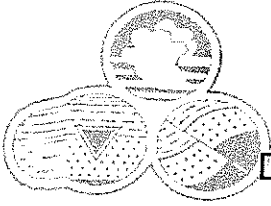
1,2-DCP: 1,2-Dichloropropane

4-ET: 4-Ethyltoluene

1,2,4-TMB: 1,2,4-Trimethylbenzene

1,3,5-TMB: 1,3,5-Trimethylbenzene

APPENDIX A



Soil Vapor Sampling Field Log

Date: 10-30-15 Field Personnel: ILL

Purge Apparatus:	200ml/min low flow pump
Purge Volume:	
Purge Time:	36 sec
Sample Canister Total Volume:	6.0L 1.0L

Field Point:

Sample ID: SS-1

Canister #:	<u>37768</u>	Purge		Sample	
Manifold #:	<u>20200</u>	Initial	Post	Initial	Post
Time		<u>36 sec</u>		<u>1038</u>	<u>1050</u>
Pressure (in Hg)				<u>30</u>	<u>4</u>
Manifold Leak Test (10 Minutes):					
Start Time:	<u>1020</u>	End Time:	<u>1030</u>		

Field Point:

Sample ID: SS-2

Canister #:	<u>12378</u>	Purge		Sample	
Manifold #:	<u>20955</u>	Initial	Post	Initial	Post
Time		<u>36 sec</u>		1114	<u>1123</u>
Pressure (in Hg)				<u>29.5</u>	<u>4</u>
Manifold Leak Test (10 Minutes):					
Start Time:	<u>1100</u>	End Time:	<u>1110</u>		

Field Point:

Sample ID: SS-3

Canister #:	27476 <u>2733</u>	Purge		Sample	
Manifold #:	<u>100437</u>	Initial	Post	Initial	Post
Time		<u>36 sec</u>		<u>1206</u>	1215
Pressure (in Hg)				<u>30</u>	<u>4</u>
Manifold Leak Test (10 Minutes):					
Start Time:	<u>1145</u>	End Time:	<u>1155</u>		

Field Point:

Sample ID: SS-4

Canister #:	<u>1008</u>	Purge		Sample	
Manifold #:	<u>20590</u>	Initial	Post	Initial	Post
Time		<u>36 sec</u>		<u>1245</u>	<u>1253</u>
Pressure (in Hg)				<u>29</u>	<u>4</u>
Manifold Leak Test (10 Minutes):					
Start Time:	<u>1231</u>	End Time:	<u>1241</u>		

APPENDIX B

11/10/2015
Mr. Daniel Villanueva
Advanced GeoEnvironmental
837 Shaw Road

Stockton CA 95215

Project Name: Swiss Valley Cleaners
Project #:
Workorder #: 1511054

Dear Mr. Daniel Villanueva

The following report includes the data for the above referenced project for sample(s) received on 11/3/2015 at Air Toxics Ltd.

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

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

Regards,



Kyle Vagadori
Project Manager

WORK ORDER #: 1511054

Work Order Summary

CLIENT:	Mr. Daniel Villanueva Advanced GeoEnvironmental 837 Shaw Road Stockton, CA 95215	BILL TO:	Mr. Daniel Villanueva Advanced GeoEnvironmental 837 Shaw Road Stockton, CA 95215
PHONE:	209-467-1006	P.O. #	
FAX:	209-467-1118	PROJECT #	Swiss Valley Cleaners
DATE RECEIVED:	11/03/2015	CONTACT:	Kyle Vagadori
DATE COMPLETED:	11/10/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	1377 McArthur	Modified TO-15	5.7 "Hg	4.9 psi
01B	1377 McArthur	Modified TO-15	5.7 "Hg	4.9 psi
02A	1395 McArthur	Modified TO-15	5.3 "Hg	4.9 psi
02B	1395 McArthur	Modified TO-15	5.3 "Hg	4.9 psi
03A	1383 McArthur	Modified TO-15	5.3 "Hg	4.8 psi
03B	1383 McArthur	Modified TO-15	5.3 "Hg	4.8 psi
04A	Lab Blank	Modified TO-15	NA	NA
04B	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
05B	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCS	Modified TO-15	NA	NA
06B	LCS	Modified TO-15	NA	NA
06BB	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 
 Technical Director

DATE: 11/10/15

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.
 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9562
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Advanced GeoEnvironmental
Workorder# 1511054

Two 6 Liter Summa Canister (SIM Certified Calscience) and one 6 Liter Summa Canister (SIM Certified) samples were received on November 03, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

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

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	For Full Scan: 30% RSD with 4 compounds allowed out to $< 40\%$ RSD For SIM: Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	For Full Scan: $\leq 30\%$ Difference with four allowed out up to $\leq 40\%$.; flag and narrate outliers For SIM: Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

Dilution was performed on samples 1377 McArthur and 1383 McArthur due to the presence of high level target species.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

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

Client Sample ID: 1377 McArthur

Lab ID#: 1511054-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	8.2	440	16	830
Acetone	8.2	41	20	97
2-Propanol	8.2	1200 E	20	2800 E
4-Methyl-2-pentanone	1.6	4.0	6.8	16

Client Sample ID: 1377 McArthur

Lab ID#: 1511054-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.33	0.50	1.6	2.5
Toluene	0.33	1.3	1.2	4.8
Tetrachloroethene	0.33	0.47	2.2	3.2
m,p-Xylene	0.66	0.85	2.9	3.7

Client Sample ID: 1395 McArthur

Lab ID#: 1511054-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.24	0.91	1.4
Ethanol	0.81	7.0	1.5	13
Acetone	0.81	9.4	1.9	22
2-Propanol	0.81	2.0	2.0	4.9
Tetrahydrofuran	0.81	1.0	2.4	3.1
Heptane	0.16	0.18	0.66	0.74

Client Sample ID: 1395 McArthur

Lab ID#: 1511054-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.032	0.45	0.16	2.2
Chloromethane	0.081	0.49	0.17	1.0
Chloroform	0.032	0.036	0.16	0.18

Summary of Detected Compounds

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

Client Sample ID: 1395 McArthur

Lab ID#: 1511054-02B

Carbon Tetrachloride	0.032	0.064	0.20	0.40
Benzene	0.081	0.27	0.26	0.85
Toluene	0.032	0.78	0.12	3.0
Tetrachloroethene	0.032	0.11	0.22	0.77
Ethyl Benzene	0.032	0.10	0.14	0.44
m,p-Xylene	0.065	0.32	0.28	1.4
o-Xylene	0.032	0.14	0.14	0.63
1,1,2,2-Tetrachloroethane	0.032	0.19	0.22	1.3

Client Sample ID: 1383 McArthur

Lab ID#: 1511054-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	8.0	800 E	15	1500 E
Acetone	8.0	560	19	1300
2-Propanol	8.0	1600 E	20	3900 E
Heptane	1.6	7.2	6.6	30

Client Sample ID: 1383 McArthur

Lab ID#: 1511054-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.32	0.44	1.6	2.2
Chloromethane	0.80	0.83	1.7	1.7
Toluene	0.32	1.4	1.2	5.2
Tetrachloroethene	0.32	0.52	2.2	3.5



Air Toxics

Client Sample ID: 1377 McArthur

Lab ID#: 1511054-01A

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

File Name:	e110912	Date of Collection:	10/30/15 8:45:00 AM
Dil. Factor:	16.5	Date of Analysis:	11/9/15 05:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.6	Not Detected	3.6	Not Detected
Bromomethane	8.2	Not Detected	32	Not Detected
Freon 11	1.6	Not Detected	9.3	Not Detected
Ethanol	8.2	440	16	830
Freon 113	1.6	Not Detected	13	Not Detected
Acetone	8.2	41	20	97
2-Propanol	8.2	1200 E	20	2800 E
Carbon Disulfide	8.2	Not Detected	26	Not Detected
3-Chloropropene	8.2	Not Detected	26	Not Detected
Methylene Chloride	3.3	Not Detected	11	Not Detected
Hexane	1.6	Not Detected	5.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	8.2	Not Detected	24	Not Detected
Tetrahydrofuran	8.2	Not Detected	24	Not Detected
Cyclohexane	1.6	Not Detected	5.7	Not Detected
2,2,4-Trimethylpentane	8.2	Not Detected	38	Not Detected
Heptane	1.6	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.6	Not Detected	7.6	Not Detected
1,4-Dioxane	1.6	Not Detected	5.9	Not Detected
Bromodichloromethane	1.6	Not Detected	11	Not Detected
cis-1,3-Dichloropropene	1.6	Not Detected	7.5	Not Detected
4-Methyl-2-pentanone	1.6	4.0	6.8	16
trans-1,3-Dichloropropene	1.6	Not Detected	7.5	Not Detected
2-Hexanone	8.2	Not Detected	34	Not Detected
Dibromochloromethane	1.6	Not Detected	14	Not Detected
Chlorobenzene	1.6	Not Detected	7.6	Not Detected
Styrene	1.6	Not Detected	7.0	Not Detected
Bromoform	1.6	Not Detected	17	Not Detected
Cumene	1.6	Not Detected	8.1	Not Detected
Propylbenzene	1.6	Not Detected	8.1	Not Detected
4-Ethyltoluene	1.6	Not Detected	8.1	Not Detected
1,3,5-Trimethylbenzene	1.6	Not Detected	8.1	Not Detected
1,2,4-Trimethylbenzene	1.6	Not Detected	8.1	Not Detected
1,3-Dichlorobenzene	1.6	Not Detected	9.9	Not Detected
alpha-Chlorotoluene	1.6	Not Detected	8.5	Not Detected
1,2-Dichlorobenzene	1.6	Not Detected	9.9	Not Detected
1,2,4-Trichlorobenzene	8.2	Not Detected	61	Not Detected
Hexachlorobutadiene	8.2	Not Detected	88	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (SIM Certified Calscience)

Surrogates	%Recovery	Method Limits
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Air Toxics

Client Sample ID: 1377 McArthur

Lab ID#: 1511054-01A

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

File Name:	e110912	Date of Collection: 10/30/15 8:45:00 AM
Dil. Factor:	16.5	Date of Analysis: 11/9/15 05:43 PM

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: 1377 McArthur

Lab ID#: 1511054-01B

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

File Name:	e110912sim	Date of Collection:	10/30/15 8:45:00 AM
Dil. Factor:	16.5	Date of Analysis:	11/9/15 05:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.33	0.50	1.6	2.5
Freon 114	0.33	Not Detected	2.3	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
trans-1,2-Dichloroethene	1.6	Not Detected	6.5	Not Detected
Methyl tert-butyl ether	1.6	Not Detected	5.9	Not Detected
1,1-Dichloroethane	0.33	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.33	Not Detected	1.3	Not Detected
Chloroform	0.33	Not Detected	1.6	Not Detected
1,1,1-Trichloroethane	0.33	Not Detected	1.8	Not Detected
Carbon Tetrachloride	0.33	Not Detected	2.1	Not Detected
Benzene	0.82	Not Detected	2.6	Not Detected
1,2-Dichloroethane	0.33	Not Detected	1.3	Not Detected
Trichloroethene	0.33	Not Detected	1.8	Not Detected
Toluene	0.33	1.3	1.2	4.8
1,1,2-Trichloroethane	0.33	Not Detected	1.8	Not Detected
Tetrachloroethene	0.33	0.47	2.2	3.2
1,2-Dibromoethane (EDB)	0.33	Not Detected	2.5	Not Detected
Ethyl Benzene	0.33	Not Detected	1.4	Not Detected
m,p-Xylene	0.66	0.85	2.9	3.7
o-Xylene	0.33	Not Detected	1.4	Not Detected
1,1,2,2-Tetrachloroethane	0.33	Not Detected	2.3	Not Detected
1,4-Dichlorobenzene	0.33	Not Detected	2.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified Calscience)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: 1395 McArthur

Lab ID#: 1511054-02A

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

File Name:	e110909	Date of Collection:	10/30/15 9:05:00 AM
Dil. Factor:	1.62	Date of Analysis:	11/9/15 03:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.81	Not Detected	3.1	Not Detected
Freon 11	0.16	0.24	0.91	1.4
Ethanol	0.81	7.0	1.5	13
Freon 113	0.16	Not Detected	1.2	Not Detected
Acetone	0.81	9.4	1.9	22
2-Propanol	0.81	2.0	2.0	4.9
Carbon Disulfide	0.81	Not Detected	2.5	Not Detected
3-Chloropropene	0.81	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Hexane	0.16	Not Detected	0.57	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.81	Not Detected	2.4	Not Detected
Tetrahydrofuran	0.81	1.0	2.4	3.1
Cyclohexane	0.16	Not Detected	0.56	Not Detected
2,2,4-Trimethylpentane	0.81	Not Detected	3.8	Not Detected
Heptane	0.16	0.18	0.66	0.74
1,2-Dichloropropane	0.16	Not Detected	0.75	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
2-Hexanone	0.81	Not Detected	3.3	Not Detected
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Styrene	0.16	Not Detected	0.69	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.80	Not Detected
Propylbenzene	0.16	Not Detected	0.80	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.80	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.84	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.81	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.81	Not Detected	8.6	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130



Air Toxics

Client Sample ID: 1395 McArthur

Lab ID#: 1511054-02A

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

File Name:	e110909	Date of Collection:	10/30/15 9:05:00 AM
Dil. Factor:	1.62	Date of Analysis:	11/9/15 03:09 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: 1395 McArthur

Lab ID#: 1511054-02B

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

File Name:	e110909sim	Date of Collection:	10/30/15 9:05:00 AM
Dil. Factor:	1.62	Date of Analysis:	11/9/15 03:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.032	0.45	0.16	2.2
Freon 114	0.032	Not Detected	0.23	Not Detected
Chloromethane	0.081	0.49	0.17	1.0
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
Chloroethane	0.081	Not Detected	0.21	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
Chloroform	0.032	0.036	0.16	0.18
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Carbon Tetrachloride	0.032	0.064	0.20	0.40
Benzene	0.081	0.27	0.26	0.85
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Toluene	0.032	0.78	0.12	3.0
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.11	0.22	0.77
1,2-Dibromoethane (EDB)	0.032	Not Detected	0.25	Not Detected
Ethyl Benzene	0.032	0.10	0.14	0.44
m,p-Xylene	0.065	0.32	0.28	1.4
o-Xylene	0.032	0.14	0.14	0.63
1,1,2,2-Tetrachloroethane	0.032	0.19	0.22	1.3
1,4-Dichlorobenzene	0.032	Not Detected	0.19	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: 1383 McArthur

Lab ID#: 1511054-03A

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

File Name:	e110913	Date of Collection:	10/30/15 9:15:00 AM
Dil. Factor:	16.1	Date of Analysis:	11/9/15 06:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.6	Not Detected	3.6	Not Detected
Bromomethane	8.0	Not Detected	31	Not Detected
Freon 11	1.6	Not Detected	9.0	Not Detected
Ethanol	8.0	800 E	15	1500 E
Freon 113	1.6	Not Detected	12	Not Detected
Acetone	8.0	560	19	1300
2-Propanol	8.0	1600 E	20	3900 E
Carbon Disulfide	8.0	Not Detected	25	Not Detected
3-Chloropropene	8.0	Not Detected	25	Not Detected
Methylene Chloride	3.2	Not Detected	11	Not Detected
Hexane	1.6	Not Detected	5.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	8.0	Not Detected	24	Not Detected
Tetrahydrofuran	8.0	Not Detected	24	Not Detected
Cyclohexane	1.6	Not Detected	5.5	Not Detected
2,2,4-Trimethylpentane	8.0	Not Detected	38	Not Detected
Heptane	1.6	7.2	6.6	30
1,2-Dichloropropane	1.6	Not Detected	7.4	Not Detected
1,4-Dioxane	1.6	Not Detected	5.8	Not Detected
Bromodichloromethane	1.6	Not Detected	11	Not Detected
cis-1,3-Dichloropropene	1.6	Not Detected	7.3	Not Detected
4-Methyl-2-pentanone	1.6	Not Detected	6.6	Not Detected
trans-1,3-Dichloropropene	1.6	Not Detected	7.3	Not Detected
2-Hexanone	8.0	Not Detected	33	Not Detected
Dibromochloromethane	1.6	Not Detected	14	Not Detected
Chlorobenzene	1.6	Not Detected	7.4	Not Detected
Styrene	1.6	Not Detected	6.8	Not Detected
Bromoform	1.6	Not Detected	17	Not Detected
Cumene	1.6	Not Detected	7.9	Not Detected
Propylbenzene	1.6	Not Detected	7.9	Not Detected
4-Ethyltoluene	1.6	Not Detected	7.9	Not Detected
1,3,5-Trimethylbenzene	1.6	Not Detected	7.9	Not Detected
1,2,4-Trimethylbenzene	1.6	Not Detected	7.9	Not Detected
1,3-Dichlorobenzene	1.6	Not Detected	9.7	Not Detected
alpha-Chlorotoluene	1.6	Not Detected	8.3	Not Detected
1,2-Dichlorobenzene	1.6	Not Detected	9.7	Not Detected
1,2,4-Trichlorobenzene	8.0	Not Detected	60	Not Detected
Hexachlorobutadiene	8.0	Not Detected	86	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (SIM Certified Calscience)

Surrogates	%Recovery	Method Limits
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Air Toxics

Client Sample ID: 1383 McArthur

Lab ID#: 1511054-03A

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

File Name:	e110913	Date of Collection: 10/30/15 9:15:00 AM
Dil. Factor:	16.1	Date of Analysis: 11/9/15 06:27 PM

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: 1383 McArthur

Lab ID#: 1511054-03B

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

File Name:	e110913sim	Date of Collection: 10/30/15 9:15:00 AM
Dil. Factor:	16.1	Date of Analysis: 11/9/15 06:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.32	0.44	1.6	2.2
Freon 114	0.32	Not Detected	2.2	Not Detected
Chloromethane	0.80	0.83	1.7	1.7
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	1.6	Not Detected	6.4	Not Detected
Methyl tert-butyl ether	1.6	Not Detected	5.8	Not Detected
1,1-Dichloroethane	0.32	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.32	Not Detected	1.3	Not Detected
Chloroform	0.32	Not Detected	1.6	Not Detected
1,1,1-Trichloroethane	0.32	Not Detected	1.8	Not Detected
Carbon Tetrachloride	0.32	Not Detected	2.0	Not Detected
Benzene	0.80	Not Detected	2.6	Not Detected
1,2-Dichloroethane	0.32	Not Detected	1.3	Not Detected
Trichloroethene	0.32	Not Detected	1.7	Not Detected
Toluene	0.32	1.4	1.2	5.2
1,1,2-Trichloroethane	0.32	Not Detected	1.8	Not Detected
Tetrachloroethene	0.32	0.52	2.2	3.5
1,2-Dibromoethane (EDB)	0.32	Not Detected	2.5	Not Detected
Ethyl Benzene	0.32	Not Detected	1.4	Not Detected
m,p-Xylene	0.64	Not Detected	2.8	Not Detected
o-Xylene	0.32	Not Detected	1.4	Not Detected
1,1,2,2-Tetrachloroethane	0.32	Not Detected	2.2	Not Detected
1,4-Dichlorobenzene	0.32	Not Detected	1.9	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified Calscience)

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



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1511054-04A

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

File Name:	e110906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 12:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1511054-04A

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

File Name:	e110906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 12:01 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1511054-04B

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

File Name:	e110906sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 12:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.020	Not Detected	0.099	Not Detected
Freon 114	0.020	Not Detected	0.14	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Chloroform	0.020	Not Detected	0.098	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,2-Dibromoethane (EDB)	0.020	Not Detected	0.15	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
1,4-Dichlorobenzene	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1511054-05A

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

File Name:	e110902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 08:42 AM

Compound	%Recovery
1,3-Butadiene	91
Bromomethane	94
Freon 11	97
Ethanol	90
Freon 113	92
Acetone	93
2-Propanol	95
Carbon Disulfide	100
3-Chloropropene	92
Methylene Chloride	88
Hexane	97
2-Butanone (Methyl Ethyl Ketone)	98
Tetrahydrofuran	105
Cyclohexane	91
2,2,4-Trimethylpentane	95
Heptane	95
1,2-Dichloropropane	91
1,4-Dioxane	100
Bromodichloromethane	102
cis-1,3-Dichloropropene	97
4-Methyl-2-pentanone	93
trans-1,3-Dichloropropene	102
2-Hexanone	100
Dibromochloromethane	108
Chlorobenzene	97
Styrene	102
Bromoform	103
Cumene	101
Propylbenzene	98
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	100
alpha-Chlorotoluene	103
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	72
Hexachlorobutadiene	76

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1511054-05A

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

File Name:	e110902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 08:42 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: CCV

Lab ID#: 1511054-05B

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

File Name:	e110902sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 08:42 AM

Compound	%Recovery
Freon 12	100
Freon 114	99
Chloromethane	96
Vinyl Chloride	94
Chloroethane	89
1,1-Dichloroethene	94
trans-1,2-Dichloroethene	98
Methyl tert-butyl ether	106
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	95
Chloroform	90
1,1,1-Trichloroethane	102
Carbon Tetrachloride	103
Benzene	86
1,2-Dichloroethane	100
Trichloroethene	88
Toluene	96
1,1,2-Trichloroethane	102
Tetrachloroethene	103
1,2-Dibromoethane (EDB)	106
Ethyl Benzene	98
m,p-Xylene	102
o-Xylene	104
1,1,2,2-Tetrachloroethane	90
1,4-Dichlorobenzene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: LCS

Lab ID#: 1511054-06A

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

File Name:	e110903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 09:29 AM

Compound	%Recovery	Method Limits
1,3-Butadiene	96	70-130
Bromomethane	98	70-130
Freon 11	107	70-130
Ethanol	100	70-130
Freon 113	113	70-130
Acetone	104	70-130
2-Propanol	104	70-130
Carbon Disulfide	85	70-130
3-Chloropropene	89	70-130
Methylene Chloride	96	70-130
Hexane	104	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
Tetrahydrofuran	109	70-130
Cyclohexane	99	70-130
2,2,4-Trimethylpentane	94	70-130
Heptane	99	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	107	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	94	70-130
4-Methyl-2-pentanone	102	70-130
trans-1,3-Dichloropropene	101	70-130
2-Hexanone	105	70-130
Dibromochloromethane	110	70-130
Chlorobenzene	100	70-130
Styrene	108	70-130
Bromoform	110	70-130
Cumene	103	70-130
Propylbenzene	105	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	101	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3-Dichlorobenzene	105	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	105	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1511054-06A

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

File Name:	e110903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 09:29 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1511054-06AA

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

File Name:	e110904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 10:19 AM

Compound	%Recovery	Method Limits
1,3-Butadiene	94	70-130
Bromomethane	97	70-130
Freon 11	104	70-130
Ethanol	97	70-130
Freon 113	112	70-130
Acetone	104	70-130
2-Propanol	101	70-130
Carbon Disulfide	81	70-130
3-Chloropropene	86	70-130
Methylene Chloride	94	70-130
Hexane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
Tetrahydrofuran	110	70-130
Cyclohexane	100	70-130
2,2,4-Trimethylpentane	90	70-130
Heptane	96	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	100	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	91	70-130
4-Methyl-2-pentanone	99	70-130
trans-1,3-Dichloropropene	102	70-130
2-Hexanone	104	70-130
Dibromochloromethane	112	70-130
Chlorobenzene	102	70-130
Styrene	110	70-130
Bromoform	113	70-130
Cumene	105	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	105	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	108	70-130
alpha-Chlorotoluene	112	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	90	70-130
Hexachlorobutadiene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1511054-06AA

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

File Name:	e110904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 10:19 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCS

Lab ID#: 1511054-06B

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

File Name:	e110903sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 09:29 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	109	70-130
Chloromethane	99	70-130
Vinyl Chloride	100	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	99	70-130
trans-1,2-Dichloroethene	89	70-130
Methyl tert-butyl ether	107	70-130
1,1-Dichloroethane	106	70-130
cis-1,2-Dichloroethene	109	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	108	70-130
Carbon Tetrachloride	104	60-140
Benzene	92	70-130
1,2-Dichloroethane	107	70-130
Trichloroethene	93	70-130
Toluene	102	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	109	70-130
1,2-Dibromoethane (EDB)	112	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	107	70-130
o-Xylene	112	70-130
1,1,2,2-Tetrachloroethane	98	70-130
1,4-Dichlorobenzene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCSD

Lab ID#: 1511054-06BB

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

File Name:	e110904sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/9/15 10:19 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	109	70-130
Chloromethane	98	70-130
Vinyl Chloride	98	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	98	70-130
trans-1,2-Dichloroethene	88	70-130
Methyl tert-butyl ether	106	70-130
1,1-Dichloroethane	105	70-130
cis-1,2-Dichloroethene	110	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	107	70-130
Carbon Tetrachloride	103	60-140
Benzene	91	70-130
1,2-Dichloroethane	106	70-130
Trichloroethene	92	70-130
Toluene	101	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	108	70-130
1,2-Dibromoethane (EDB)	113	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	107	70-130
o-Xylene	112	70-130
1,1,2,2-Tetrachloroethane	98	70-130
1,4-Dichlorobenzene	110	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130



Advanced GeoEnvironmental, Inc.

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CHAIN OF CUSTODY RECORD

- 837 Shaw Road, Stockton, California 95215 • Phone (209) 467-1006 • Fax (209) 467-1118
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- 2218 Fourth Street, Santa Rosa, California 95404 • Phone (707) 570-1418 • Fax (707) 570-1461
- 305 Del Monte Center, #111, Manteca, California 95940 • Phone (800) 513-9300 • Fax (531) 394-2979

Date: 10-30-15 Page 1 of 1

Project Name: Swiss Valley Cleaners
 Client: _____
 Project Manager: Daniel Villanueva
 Sampler (initials & signature): _____
 Invoice to: AGE Client
 Lab Project No.: _____

Analysis Required									

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes
1377 MacArthur	10-30-15	0845	A	1	
1395 MacArthur		0905			
1383 MacArthur		2415			

Relinquished by: _____ Date: 11-2-15 Time: 1700 Laboratory: Air toxics
 Courier: Postnet Received by: Madeline McCarty Date: 11/3/15 Time: 0900
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Requested Turn Around Time (circle): 24 hours 48 hours 72 hours 5 days (standard) Other: _____
 Special Instructions to lab: _____
 Matrix Codes: A = Air W = Water S = Solid
 I hereby authorize the performance of the above indicated work.
 1511054
 Contact/EDF to: esotracker@advgeoenv.com _____
 Client ID: _____

10/30/15
 10/30/15
 10/30/15

Custody Seal Intact?
 Y N None Temp N/A

APPENDIX C

11/10/2015
Mr. Daniel Villanueva
Advanced GeoEnvironmental
837 Shaw Road

Stockton CA 95215

Project Name: Swiss Valley Cleaners
Project #:
Workorder #: 1511055

Dear Mr. Daniel Villanueva

The following report includes the data for the above referenced project for sample(s) received on 11/3/2015 at Air Toxics Ltd.

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

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

Regards,



Kyle Vagadori
Project Manager

WORK ORDER #: 1511055

Work Order Summary

CLIENT:	Mr. Daniel Villanueva Advanced GeoEnvironmental 837 Shaw Road Stockton, CA 95215	BILL TO:	Mr. Daniel Villanueva Advanced GeoEnvironmental 837 Shaw Road Stockton, CA 95215
PHONE:	209-467-1006	P.O. #	
FAX:	209-467-1118	PROJECT #	Swiss Valley Cleaners
DATE RECEIVED:	11/03/2015	CONTACT:	Kyle Vagadori
DATE COMPLETED:	11/10/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SS-1	TO-15	2.4 "Hg	15.2 psi
02A	SS-2	TO-15	3.7 "Hg	15.1 psi
03A	SS-3	TO-15	3.7 "Hg	15 psi
04A	SS-4	TO-15	4.3 "Hg	15.1 psi
05A	Lab Blank	TO-15	NA	NA
06A	CCV	TO-15	NA	NA
07A	LCS	TO-15	NA	NA
07AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 11/10/15

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

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 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9562
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Advanced GeoEnvironmental
Workorder# 1511055

Four 1 Liter Summa Canister samples were received on November 03, 2015. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples SS-2, SS-3 and SS-4 due to the presence of high level target species.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

Client Sample ID: SS-1

Lab ID#: 1511055-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrahydrofuran	1.1	16	3.2	48
Tetrachloroethene	1.1	250	7.5	1700

Client Sample ID: SS-2

Lab ID#: 1511055-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	7.7	1800	52	12000

Client Sample ID: SS-3

Lab ID#: 1511055-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	12	12	62	67
Tetrachloroethene	12	3500	78	24000

Client Sample ID: SS-4

Lab ID#: 1511055-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	12	3100	80	21000



Air Toxics

Client Sample ID: SS-1

Lab ID#: 1511055-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110630	Date of Collection:	10/30/15 10:38:00 AM
Dil. Factor:	2.21	Date of Analysis:	11/7/15 12:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.7	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.2	Not Detected
Ethanol	4.4	Not Detected	8.3	Not Detected
Freon 113	1.1	Not Detected	8.5	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	Not Detected	26	Not Detected
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	16	3.2	48
Chloroform	1.1	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	250	7.5	1700
2-Hexanone	4.4	Not Detected	18	Not Detected



Air Toxics

Client Sample ID: SS-1

Lab ID#: 1511055-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110630	Date of Collection: 10/30/15 10:38:00 AM
Dil. Factor:	2.21	Date of Analysis: 11/7/15 12:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.5	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	1.1	Not Detected	4.8	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	110	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	84	70-130



Air Toxics

Client Sample ID: SS-2

Lab ID#: 1511055-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110631	Date of Collection:	10/30/15 11:14:00 AM
Dil. Factor:	15.4	Date of Analysis:	11/7/15 12:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.7	Not Detected	38	Not Detected
Freon 114	7.7	Not Detected	54	Not Detected
Chloromethane	77	Not Detected	160	Not Detected
Vinyl Chloride	7.7	Not Detected	20	Not Detected
1,3-Butadiene	7.7	Not Detected	17	Not Detected
Bromomethane	77	Not Detected	300	Not Detected
Chloroethane	31	Not Detected	81	Not Detected
Freon 11	7.7	Not Detected	43	Not Detected
Ethanol	31	Not Detected	58	Not Detected
Freon 113	7.7	Not Detected	59	Not Detected
1,1-Dichloroethene	7.7	Not Detected	30	Not Detected
Acetone	77	Not Detected	180	Not Detected
2-Propanol	31	Not Detected	76	Not Detected
Carbon Disulfide	31	Not Detected	96	Not Detected
3-Chloropropene	31	Not Detected	96	Not Detected
Methylene Chloride	77	Not Detected	270	Not Detected
Methyl tert-butyl ether	7.7	Not Detected	28	Not Detected
trans-1,2-Dichloroethene	7.7	Not Detected	30	Not Detected
Hexane	7.7	Not Detected	27	Not Detected
1,1-Dichloroethane	7.7	Not Detected	31	Not Detected
2-Butanone (Methyl Ethyl Ketone)	31	Not Detected	91	Not Detected
cis-1,2-Dichloroethene	7.7	Not Detected	30	Not Detected
Tetrahydrofuran	7.7	Not Detected	23	Not Detected
Chloroform	7.7	Not Detected	38	Not Detected
1,1,1-Trichloroethane	7.7	Not Detected	42	Not Detected
Cyclohexane	7.7	Not Detected	26	Not Detected
Carbon Tetrachloride	7.7	Not Detected	48	Not Detected
2,2,4-Trimethylpentane	7.7	Not Detected	36	Not Detected
Benzene	7.7	Not Detected	24	Not Detected
1,2-Dichloroethane	7.7	Not Detected	31	Not Detected
Heptane	7.7	Not Detected	32	Not Detected
Trichloroethene	7.7	Not Detected	41	Not Detected
1,2-Dichloropropane	7.7	Not Detected	36	Not Detected
1,4-Dioxane	31	Not Detected	110	Not Detected
Bromodichloromethane	7.7	Not Detected	52	Not Detected
cis-1,3-Dichloropropene	7.7	Not Detected	35	Not Detected
4-Methyl-2-pentanone	7.7	Not Detected	32	Not Detected
Toluene	7.7	Not Detected	29	Not Detected
trans-1,3-Dichloropropene	7.7	Not Detected	35	Not Detected
1,1,2-Trichloroethane	7.7	Not Detected	42	Not Detected
Tetrachloroethene	7.7	1800	52	12000
2-Hexanone	31	Not Detected	130	Not Detected



Air Toxics

Client Sample ID: SS-2

Lab ID#: 1511055-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110631	Date of Collection: 10/30/15 11:14:00 AM
Dil. Factor:	15.4	Date of Analysis: 11/7/15 12:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.7	Not Detected	66	Not Detected
1,2-Dibromoethane (EDB)	7.7	Not Detected	59	Not Detected
Chlorobenzene	7.7	Not Detected	35	Not Detected
Ethyl Benzene	7.7	Not Detected	33	Not Detected
m,p-Xylene	7.7	Not Detected	33	Not Detected
o-Xylene	7.7	Not Detected	33	Not Detected
Styrene	7.7	Not Detected	33	Not Detected
Bromoform	7.7	Not Detected	80	Not Detected
Cumene	7.7	Not Detected	38	Not Detected
1,1,2,2-Tetrachloroethane	7.7	Not Detected	53	Not Detected
Propylbenzene	7.7	Not Detected	38	Not Detected
4-Ethyltoluene	7.7	Not Detected	38	Not Detected
1,3,5-Trimethylbenzene	7.7	Not Detected	38	Not Detected
1,2,4-Trimethylbenzene	7.7	Not Detected	38	Not Detected
1,3-Dichlorobenzene	7.7	Not Detected	46	Not Detected
1,4-Dichlorobenzene	7.7	Not Detected	46	Not Detected
alpha-Chlorotoluene	7.7	Not Detected	40	Not Detected
1,2-Dichlorobenzene	7.7	Not Detected	46	Not Detected
1,2,4-Trichlorobenzene	31	Not Detected	230	Not Detected
Hexachlorobutadiene	31	Not Detected	330	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	111	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	82	70-130



Air Toxics

Client Sample ID: SS-3

Lab ID#: 1511055-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110632	Date of Collection:	10/30/15 12:06:00 PM
Dil. Factor:	23.0	Date of Analysis:	11/7/15 01:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	12	Not Detected	57	Not Detected
Freon 114	12	Not Detected	80	Not Detected
Chloromethane	120	Not Detected	240	Not Detected
Vinyl Chloride	12	Not Detected	29	Not Detected
1,3-Butadiene	12	Not Detected	25	Not Detected
Bromomethane	120	Not Detected	450	Not Detected
Chloroethane	46	Not Detected	120	Not Detected
Freon 11	12	Not Detected	65	Not Detected
Ethanol	46	Not Detected	87	Not Detected
Freon 113	12	Not Detected	88	Not Detected
1,1-Dichloroethene	12	Not Detected	46	Not Detected
Acetone	120	Not Detected	270	Not Detected
2-Propanol	46	Not Detected	110	Not Detected
Carbon Disulfide	46	Not Detected	140	Not Detected
3-Chloropropene	46	Not Detected	140	Not Detected
Methylene Chloride	120	Not Detected	400	Not Detected
Methyl tert-butyl ether	12	Not Detected	41	Not Detected
trans-1,2-Dichloroethene	12	Not Detected	46	Not Detected
Hexane	12	Not Detected	40	Not Detected
1,1-Dichloroethane	12	Not Detected	46	Not Detected
2-Butanone (Methyl Ethyl Ketone)	46	Not Detected	140	Not Detected
cis-1,2-Dichloroethene	12	Not Detected	46	Not Detected
Tetrahydrofuran	12	Not Detected	34	Not Detected
Chloroform	12	Not Detected	56	Not Detected
1,1,1-Trichloroethane	12	Not Detected	63	Not Detected
Cyclohexane	12	Not Detected	40	Not Detected
Carbon Tetrachloride	12	Not Detected	72	Not Detected
2,2,4-Trimethylpentane	12	Not Detected	54	Not Detected
Benzene	12	Not Detected	37	Not Detected
1,2-Dichloroethane	12	Not Detected	46	Not Detected
Heptane	12	Not Detected	47	Not Detected
Trichloroethene	12	12	62	67
1,2-Dichloropropane	12	Not Detected	53	Not Detected
1,4-Dioxane	46	Not Detected	160	Not Detected
Bromodichloromethane	12	Not Detected	77	Not Detected
cis-1,3-Dichloropropene	12	Not Detected	52	Not Detected
4-Methyl-2-pentanone	12	Not Detected	47	Not Detected
Toluene	12	Not Detected	43	Not Detected
trans-1,3-Dichloropropene	12	Not Detected	52	Not Detected
1,1,2-Trichloroethane	12	Not Detected	63	Not Detected
Tetrachloroethene	12	3500	78	24000
2-Hexanone	46	Not Detected	190	Not Detected



Air Toxics

Client Sample ID: SS-3

Lab ID#: 1511055-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110632	Date of Collection:	10/30/15 12:06:00 PM
Dil. Factor:	23.0	Date of Analysis:	11/7/15 01:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	12	Not Detected	98	Not Detected
1,2-Dibromoethane (EDB)	12	Not Detected	88	Not Detected
Chlorobenzene	12	Not Detected	53	Not Detected
Ethyl Benzene	12	Not Detected	50	Not Detected
m,p-Xylene	12	Not Detected	50	Not Detected
o-Xylene	12	Not Detected	50	Not Detected
Styrene	12	Not Detected	49	Not Detected
Bromoform	12	Not Detected	120	Not Detected
Cumene	12	Not Detected	56	Not Detected
1,1,2,2-Tetrachloroethane	12	Not Detected	79	Not Detected
Propylbenzene	12	Not Detected	56	Not Detected
4-Ethyltoluene	12	Not Detected	56	Not Detected
1,3,5-Trimethylbenzene	12	Not Detected	56	Not Detected
1,2,4-Trimethylbenzene	12	Not Detected	56	Not Detected
1,3-Dichlorobenzene	12	Not Detected	69	Not Detected
1,4-Dichlorobenzene	12	Not Detected	69	Not Detected
alpha-Chlorotoluene	12	Not Detected	60	Not Detected
1,2-Dichlorobenzene	12	Not Detected	69	Not Detected
1,2,4-Trichlorobenzene	46	Not Detected	340	Not Detected
Hexachlorobutadiene	46	Not Detected	490	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	83	70-130



Air Toxics

Client Sample ID: SS-4

Lab ID#: 1511055-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110633	Date of Collection:	10/30/15 12:45:00 PM
Dil. Factor:	23.7	Date of Analysis:	11/7/15 01:44 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	12	Not Detected	59	Not Detected
Freon 114	12	Not Detected	83	Not Detected
Chloromethane	120	Not Detected	240	Not Detected
Vinyl Chloride	12	Not Detected	30	Not Detected
1,3-Butadiene	12	Not Detected	26	Not Detected
Bromomethane	120	Not Detected	460	Not Detected
Chloroethane	47	Not Detected	120	Not Detected
Freon 11	12	Not Detected	66	Not Detected
Ethanol	47	Not Detected	89	Not Detected
Freon 113	12	Not Detected	91	Not Detected
1,1-Dichloroethene	12	Not Detected	47	Not Detected
Acetone	120	Not Detected	280	Not Detected
2-Propanol	47	Not Detected	120	Not Detected
Carbon Disulfide	47	Not Detected	150	Not Detected
3-Chloropropene	47	Not Detected	150	Not Detected
Methylene Chloride	120	Not Detected	410	Not Detected
Methyl tert-butyl ether	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	12	Not Detected	47	Not Detected
Hexane	12	Not Detected	42	Not Detected
1,1-Dichloroethane	12	Not Detected	48	Not Detected
2-Butanone (Methyl Ethyl Ketone)	47	Not Detected	140	Not Detected
cis-1,2-Dichloroethene	12	Not Detected	47	Not Detected
Tetrahydrofuran	12	Not Detected	35	Not Detected
Chloroform	12	Not Detected	58	Not Detected
1,1,1-Trichloroethane	12	Not Detected	65	Not Detected
Cyclohexane	12	Not Detected	41	Not Detected
Carbon Tetrachloride	12	Not Detected	74	Not Detected
2,2,4-Trimethylpentane	12	Not Detected	55	Not Detected
Benzene	12	Not Detected	38	Not Detected
1,2-Dichloroethane	12	Not Detected	48	Not Detected
Heptane	12	Not Detected	48	Not Detected
Trichloroethene	12	Not Detected	64	Not Detected
1,2-Dichloropropane	12	Not Detected	55	Not Detected
1,4-Dioxane	47	Not Detected	170	Not Detected
Bromodichloromethane	12	Not Detected	79	Not Detected
cis-1,3-Dichloropropene	12	Not Detected	54	Not Detected
4-Methyl-2-pentanone	12	Not Detected	48	Not Detected
Toluene	12	Not Detected	45	Not Detected
trans-1,3-Dichloropropene	12	Not Detected	54	Not Detected
1,1,2-Trichloroethane	12	Not Detected	65	Not Detected
Tetrachloroethene	12	3100	80	21000
2-Hexanone	47	Not Detected	190	Not Detected



Air Toxics

Client Sample ID: SS-4

Lab ID#: 1511055-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110633	Date of Collection:	10/30/15 12:45:00 PM
Dil. Factor:	23.7	Date of Analysis:	11/7/15 01:44 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	12	Not Detected	100	Not Detected
1,2-Dibromoethane (EDB)	12	Not Detected	91	Not Detected
Chlorobenzene	12	Not Detected	54	Not Detected
Ethyl Benzene	12	Not Detected	51	Not Detected
m,p-Xylene	12	Not Detected	51	Not Detected
o-Xylene	12	Not Detected	51	Not Detected
Styrene	12	Not Detected	50	Not Detected
Bromoform	12	Not Detected	120	Not Detected
Cumene	12	Not Detected	58	Not Detected
1,1,2,2-Tetrachloroethane	12	Not Detected	81	Not Detected
Propylbenzene	12	Not Detected	58	Not Detected
4-Ethyltoluene	12	Not Detected	58	Not Detected
1,3,5-Trimethylbenzene	12	Not Detected	58	Not Detected
1,2,4-Trimethylbenzene	12	Not Detected	58	Not Detected
1,3-Dichlorobenzene	12	Not Detected	71	Not Detected
1,4-Dichlorobenzene	12	Not Detected	71	Not Detected
alpha-Chlorotoluene	12	Not Detected	61	Not Detected
1,2-Dichlorobenzene	12	Not Detected	71	Not Detected
1,2,4-Trichlorobenzene	47	Not Detected	350	Not Detected
Hexachlorobutadiene	47	Not Detected	500	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	113	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	85	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1511055-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110610	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/6/15 12:49 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1511055-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110610	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/6/15 12:49 PM

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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	110	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	85	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1511055-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/6/15 09:10 AM

Compound	%Recovery
Freon 12	95
Freon 114	88
Chloromethane	96
Vinyl Chloride	96
1,3-Butadiene	94
Bromomethane	100
Chloroethane	100
Freon 11	93
Ethanol	95
Freon 113	86
1,1-Dichloroethene	81
Acetone	94
2-Propanol	91
Carbon Disulfide	97
3-Chloropropene	84
Methylene Chloride	107
Methyl tert-butyl ether	82
trans-1,2-Dichloroethene	92
Hexane	86
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	84
Tetrahydrofuran	92
Chloroform	96
1,1,1-Trichloroethane	92
Cyclohexane	86
Carbon Tetrachloride	92
2,2,4-Trimethylpentane	93
Benzene	105
1,2-Dichloroethane	107
Heptane	104
Trichloroethene	93
1,2-Dichloropropane	111
1,4-Dioxane	100
Bromodichloromethane	106
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	111
Toluene	100
trans-1,3-Dichloropropene	92
1,1,2-Trichloroethane	94
Tetrachloroethene	83
2-Hexanone	110

Client Sample ID: CCV

Lab ID#: 1511055-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/6/15 09:10 AM

Compound	%Recovery
Dibromochloromethane	91
1,2-Dibromoethane (EDB)	92
Chlorobenzene	90
Ethyl Benzene	90
m,p-Xylene	94
o-Xylene	91
Styrene	98
Bromoform	90
Cumene	92
1,1,2,2-Tetrachloroethane	104
Propylbenzene	96
4-Ethyltoluene	93
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	88
1,3-Dichlorobenzene	93
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	80
Hexachlorobutadiene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	118	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 1511055-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110606	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/6/15 10:43 AM

Compound	%Recovery	Method Limits
Freon 12	105	70-130
Freon 114	98	70-130
Chloromethane	109	70-130
Vinyl Chloride	108	70-130
1,3-Butadiene	100	70-130
Bromomethane	109	70-130
Chloroethane	111	70-130
Freon 11	103	70-130
Ethanol	102	70-130
Freon 113	91	70-130
1,1-Dichloroethene	86	70-130
Acetone	107	70-130
2-Propanol	97	70-130
Carbon Disulfide	92	70-130
3-Chloropropene	89	70-130
Methylene Chloride	114	70-130
Methyl tert-butyl ether	82	70-130
trans-1,2-Dichloroethene	85	70-130
Hexane	93	70-130
1,1-Dichloroethane	109	70-130
2-Butanone (Methyl Ethyl Ketone)	99	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	97	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	93	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	103	70-130
Benzene	113	70-130
1,2-Dichloroethane	114	70-130
Heptane	106	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	119	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	116	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	88	70-130
2-Hexanone	108	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1511055-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110606	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/6/15 10:43 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	95	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	101	70-130
o-Xylene	101	70-130
Styrene	100	70-130
Bromoform	97	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	115	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	120	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	116	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1511055-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110607	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/6/15 11:06 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	107	70-130
Chloromethane	113	70-130
Vinyl Chloride	111	70-130
1,3-Butadiene	104	70-130
Bromomethane	114	70-130
Chloroethane	116	70-130
Freon 11	106	70-130
Ethanol	105	70-130
Freon 113	97	70-130
1,1-Dichloroethene	89	70-130
Acetone	111	70-130
2-Propanol	102	70-130
Carbon Disulfide	95	70-130
3-Chloropropene	92	70-130
Methylene Chloride	117	70-130
Methyl tert-butyl ether	87	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	98	70-130
1,1-Dichloroethane	112	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	105	70-130
Tetrahydrofuran	101	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	102	70-130
2,2,4-Trimethylpentane	107	70-130
Benzene	109	70-130
1,2-Dichloroethane	111	70-130
Heptane	108	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	118	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	97	70-130
4-Methyl-2-pentanone	118	70-130
Toluene	107	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	89	70-130
2-Hexanone	108	70-130

Client Sample ID: LCSD

Lab ID#: 1511055-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17110607	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/6/15 11:06 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	96	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	102	70-130
o-Xylene	101	70-130
Styrene	99	70-130
Bromoform	97	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	112	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	118	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	121	70-130
1,2-Dichlorobenzene	105	70-130
1,2,4-Trichlorobenzene	103	70-130
Hexachlorobutadiene	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	114	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	95	70-130



Advanced GeoEnvironmental, Inc.

www.advgeoenv.com

- 827 Shaw Road, Stockton, California 95215 • Phone (209) 467-1006 • Fax (209) 467-1118
- 361 Thor Place, Brea, California 92821 • Phone (714) 529-0200 • Fax (714) 529-0203
- 2318 Fourth Street, Santa Rosa, California 95404 • Phone (707) 570-1418 • Fax (707) 570-1161
- 395 Del Monte Center, #111, Monterey, California 93940 • Phone (800) 511-9309 • Fax (831) 394-5979

CHAIN OF CUSTODY RECORD

Date: 10-30-15 Page 1 of 1

Analysis Required

Sample ID	Date	Time	Matrix	Number	Notes	VOCs	SVOCs	IPAs
SS-1	10-30-15	10:38	A	1	Can# 37768	X	X	X
SS-2		11:14			Can# 12378	X	X	X
SS-3		12:00			Can# 2733	X	X	X
SS-4		12:45			Can# 1908	X	X	X

Custody Seal Intact?
 Y X None Temp N/A
 On True

Project Name: Swiss Valley Cleanups
 Client: _____
 Project Manager: David Villanueva
 Sampler (initials & signature): [Signature]
 Invoice to: A/E/P Client
 Lab Project No.: _____

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes
SS-1	10-30-15	10:38	A	1	Can# 37768
SS-2		11:14			Can# 12378
SS-3		12:00			Can# 2733
SS-4		12:45			Can# 1908

Relinquished by: [Signature] Date: 11-2-15 Time: 1700 Laboratory: A/E/Taxits
 Received by: [Signature] Date: 11/3/15 Time: 0900
 Courier: On True
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Requested Turn Around Time (circle): 24 hours 48 hours 72 hours 5 days (standard) Other: _____
 Special instructions to lab: _____
 Matrix Codes: A = Air W = Water S = Solid
 I hereby authorize the performance of the above indicated work.
 Contractor P.O.P. to: geosarker@advgeoenv.com Global ID: 1511055
[Signature]