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ACKNOWLEDGMENT STATEMENT

**Subject: 1395 MacArthur Boulevard, San Leandro, California
Indoor Air & Sub-Slab Sampling Report – Second Quarter 2017**

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's Geotracker Website.



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Indoor Air & Sub-Slab Monitoring Report – Second Quarter 2017
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

03 July 2017
AGE-Project No. 12-2461

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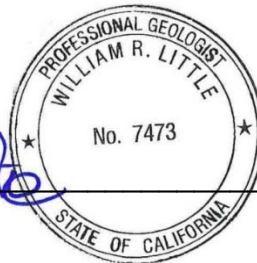
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Indoor Air & Sub-Slab Monitoring Report – Second Quarter 2017
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

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Indoor Air & Sub-Slab Monitoring Report – Second Quarter 2017
SWISS VALLEY CLEANERS
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1.0. INTRODUCTION

Advanced GeoEnvironmental, Inc. has prepared this, *Indoor Air and Sub-Slab Monitoring Report – Second Quarter 2017*, for the above-referenced site. The scope of work included the sampling of indoor air in the subject (1395 MacArthur Boulevard) and adjacent suite (1383 MacArthur Boulevard) and the sampling of three sub-slab vapor wells (SS-2 through SS-4) at the subject site; SS-1 was not accessible during the sampling event. This scope of work was performed as required by the Alameda County Environmental Health Department to evaluate if significant rebound of the chlorinated solvent concentrations, has occurred in the subsurface and indoor air as a result of the on-site remediation system being non-operational.

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

The purpose of this sampling event was to evaluate the performance of the on-site soil-vapor extraction system and to continue to monitor chlorinated hydrocarbon concentrations in indoor air and sub-slab vapor. Additionally, results from this monitoring event were intended to evaluate if significant rebound has occurred that would result in non-favorable conditions for reoccupation of the subject suite by a new dry cleaning business.

Indoor air and sub-slab soil-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.

2.1.1. Pre-Field Work Preparations

On 12 June 2017, prior to the start of indoor air sample collection, all suites sampled (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 June 2017, indoor air sampling event, passive integrated air samples were collected from inside the suites of 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 3.5 milliliters/minute (ml/min) in order to collect air samples over a 24-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 vacuums were measured at 29 and 30 in/Hg prior to air sample collection. Upon can retrieval final vacuum measurements were observed between 3 and 4 in/Hg.

The air samples were transported under chain-of-custody procedures to McCampbell Analytical Inc. (MAI) located in Pittsburg, California. The indoor air samples were analyzed for VOCs in accordance with EPA Method TO-15.

2.2. SUB-SLAB VAPOR WELL SAMPLING

On 12 June 2017, sub-slab vapor points SS-2, SS-3 and SS-4 were sampled; SS-1 was not accessible during the sampling event. 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 (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 MAI. 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 June 2017 investigations.

3.1. ANALYTICAL RESULTS OF INDOOR AIR SAMPLES

Two indoor air samples (IA-1383 MacArthur and IA-1395 MacArthur) were collected at the site during the 12 June 2017 sampling event. All samples were analyzed for VOCs in accordance with EPA method TO-15. Results are summarized below:

IA-1383 MacArthur:

- Acetone was detected at a concentration of 3,700 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$);
- Benzene was detected at a concentration of $0.39 \mu\text{g}/\text{m}^3$;
- Bromomethane was detected at concentration of $0.46 \mu\text{g}/\text{m}^3$;
- 2-Butanone (MEK) was detected a concentration of $6.1 \mu\text{g}/\text{m}^3$;
- Chloroethane was detected at a concentration of $12 \mu\text{g}/\text{m}^3$;
- Chloroform was detected at a concentration of $0.69 \mu\text{g}/\text{m}^3$;
- 1,4-dichlorobenzene was detected at a concentration of $0.093 \mu\text{g}/\text{m}^3$;
- Dichlorodifluoromethane (DCDFM) was detected at a concentration of $2.1 \mu\text{g}/\text{m}^3$;
- 1,2-dichloroethane (1,2-DCA) was detected at a concentration of $0.28 \mu\text{g}/\text{m}^3$;
- 1,2-dichloro-1,1,2,2-tetrafluoroethane (1,2-D,1,1,2,2-TFA) was detected at a concentration of $0.13 \mu\text{g}/\text{m}^3$;
- Ethyl acetate was detected at a concentration of $290 \mu\text{g}/\text{m}^3$;
- Ethylbenzene was detected at a concentration of $0.23 \mu\text{g}/\text{m}^3$;
- Freon 113 was detected at a concentration of $0.37 \mu\text{g}/\text{m}^3$;
- Hexane was detected at a concentration of $0.99 \mu\text{g}/\text{m}^3$;
- 4-methyl-2-pentanone (MIBK) was detected at a concentration of $0.27 \mu\text{g}/\text{m}^3$;
- Methyl methacrylate was detected at a concentration of $970 \mu\text{g}/\text{m}^3$;
- Naphthalene was detected at a concentration of $0.18 \mu\text{g}/\text{m}^3$;
- Styrene was detected at a concentration of $0.23 \mu\text{g}/\text{m}^3$;
- Tetrachloroethene (PCE) was detected at a concentration of $1.9 \mu\text{g}/\text{m}^3$;
- Tetrahydrofuran was detected at a concentration of $0.75 \mu\text{g}/\text{m}^3$;
- Toluene was detected at a concentration of $8.2 \mu\text{g}/\text{m}^3$;
- Trichlorofluoromethane was detected at a concentration of $0.96 \mu\text{g}/\text{m}^3$;

- 1,2,4-trimethylbenzene (1,2,4-TMB) was detected at a concentration of 0.22 $\mu\text{g}/\text{m}^3$; and
- Total xylenes were detected at a concentration of 0.89 $\mu\text{g}/\text{m}^3$.

IA-1395 MacArthur:

- Acetone was detected at a concentration of 48 $\mu\text{g}/\text{m}^3$;
- Benzene was detected at a concentration of 0.22 $\mu\text{g}/\text{m}^3$;
- Bromomethane was detected at a concentration of 0.53 $\mu\text{g}/\text{m}^3$;
- MEK was detected a concentration of 3.2 $\mu\text{g}/\text{m}^3$;
- Chloroform was detected at a concentration of 0.33 $\mu\text{g}/\text{m}^3$;
- Chloromethane was detected at a concentration of 0.61 $\mu\text{g}/\text{m}^3$;
- Cyclohexane was detected at a concentration of 0.17 $\mu\text{g}/\text{m}^3$;
- 1,4-dichlorobenzene was detected at a concentration of 0.065 $\mu\text{g}/\text{m}^3$;
- DCDFM was detected at a concentration of 2.4 $\mu\text{g}/\text{m}^3$;
- 1,2-DCA was detected at a concentration of 0.061 $\mu\text{g}/\text{m}^3$;
- 1,2-DCP was detected at a concentration of 0.015 $\mu\text{g}/\text{m}^3$;
- 1,2-D,1,1,2,2-TFA was detected at a concentration of 0.14 $\mu\text{g}/\text{m}^3$;
- Ethyl acetate was detected at a concentration of 6.2 $\mu\text{g}/\text{m}^3$;
- Ethylbenzene was detected at a concentration of 0.16 $\mu\text{g}/\text{m}^3$;
- Freon 113 was detected at a concentration of 0.51 $\mu\text{g}/\text{m}^3$;
- Heptane was detected at a concentration of 0.84 $\mu\text{g}/\text{m}^3$;
- Hexane was detected at a concentration of 0.65 $\mu\text{g}/\text{m}^3$;
- 2-Hexanone was detected at a concentration of 0.19 $\mu\text{g}/\text{m}^3$;
- MIBK was detected at a concentration of 0.13 $\mu\text{g}/\text{m}^3$;
- Methyl methacrylate was detected at a concentration of 13 $\mu\text{g}/\text{m}^3$;
- Naphthalene was detected at a concentration of 0.13 $\mu\text{g}/\text{m}^3$;
- Styrene was detected at a concentration of 0.052 $\mu\text{g}/\text{m}^3$;
- 1,1,1,2-Tetrachloroethane was detected at a concentration of 0.0048 $\mu\text{g}/\text{m}^3$;
- PCE was detected at a concentration of 3.2 $\mu\text{g}/\text{m}^3$;

- Tetrahydrofuran was detected at a concentration of 13 $\mu\text{g}/\text{m}^3$;
- Toluene was detected at a concentration of 4.6 $\mu\text{g}/\text{m}^3$;
- TCE was detected at a concentration of 0.020 $\mu\text{g}/\text{m}^3$;
- Trichlorofluoromethane was detected at a concentration of 1.0 $\mu\text{g}/\text{m}^3$;
- 1,2,4-TMB was detected at a concentration of 0.40 $\mu\text{g}/\text{m}^3$;
- 1,2,5-TMB was detected at a concentration of 0.24 $\mu\text{g}/\text{m}^3$;
- 1,3,5-Trimethylbenzene was detected at a concentration of 0.73 $\mu\text{g}/\text{m}^3$;
- Total xylenes were detected at a concentration of 0.67 $\mu\text{g}/\text{m}^3$.

A summary of analytical results from samples collected during the February 2017 sampling event are included in Table 1. The laboratory report (MAI work order number 1706704), quality assurance/quality control report, and chain-of-custody form are included in Appendix B. Laboratory analytical data was uploaded to the State GeoTracker database under confirmation number 1331595063.

3.2. ANALYTICAL RESULTS OF SUB-SLAB VAPOR SAMPLES

A total of three (3) sub-slab vapor samples were collected at the site in February 2017 and analyzed for VOCs and IPA. The following is a summary of the results:

- Bromomethane was detected in all three samples at a maximum concentration of 3.7 $\mu\text{g}/\text{m}^3$;
- DCDFM in all three samples a maximum concentration of 3.2 $\mu\text{g}/\text{m}^3$;
- Ethylbenzene was detected in the samples collected from SS-3 and SS-4 at a maximum concentration of 7.4 $\mu\text{g}/\text{m}^3$;
- 4-Ethyltoluene was detected in SS-3 and SS-4 at a maximum concentration of 8.8 $\mu\text{g}/\text{m}^3$;
- Napthalene was detected in the sample collected at SS-4 at a concentration of 5.7 $\mu\text{g}/\text{m}^3$;
- PCE was detected in all three sub-slab vapor samples at a maximum concentration of 2,800 $\mu\text{g}/\text{m}^3$ (SS-4);
- Toluene was detected in the samples collected from SS-3 and SS-4 at a maximum concentration of 16 $\mu\text{g}/\text{m}^3$;
- 1,2,4 TMB was detected in SS-3 and SS-4 at a maximum concentration of 30 $\mu\text{g}/\text{m}^3$;

- 1,3,5 TMB was detected in SS-3 and SS-4 at a maximum concentration of 6.8 $\mu\text{g}/\text{m}^3$;
- Total xylenes was detected in SS-3 and SS-4 at a maximum concentration of 47 $\mu\text{g}/\text{m}^3$; and
- Tracer gas isopropyl alcohol (IPA) was not detected above the detection limit in any of the samples collected during the sampling event.

No other constituents of concern were detected in the sub-slab samples collected during the February 2017 monitoring event. A summary of the analytical results from the sampling event are included in Table 2. The laboratory report (MAI work order number 1706705), 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 3223626911.

4.0. SUMMARY/CONCLUSIONS

Based upon the findings of this investigation, AGE concludes:

- Based on sub-slab vapor samples and a comparison to indoor air samples collected during all sampling events (pre- and post-startup of remediation system and following the rebound period), observable decreases of the PCE concentrations from five feet bsg to just beneath the concrete slab and into the indoor air have been achieved (Tables 1 and 2).
- PCE concentrations detected during this event in sub-slab soil-vapor samples SS-2 through SS-4 are generally below San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for a commercial setting, with the exception of the sample collected at SS-4. Accumulation of chlorinated solvent impact below the sub-slab, appears to be decreasing as a result of remedial system operation and subsurface de-pressurization of the area under the building foundation.
- PCE concentrations detected in indoor air samples showed a slight rebound in comparison to samples collected during remedial operation. However, concentrations are well below human health risk model concentrations that were included in the AGE-prepared, *Risk Characterization and Uncertainty Analysis Report*, dated 05 August 2014.
- Correction action has significantly reduced concentration of PCE in both the sub-slab and indoor air samples. As evident in the declining concentrations of the influent vapor stream during monthly monitoring, a significant amount of the original solvent mass has been removed as a result of the operation of the SVE system. Slight rebounds indicate that the system should be turned back on and run until concentrations remain below established commercial screening levels.

5.0. RECOMMENDATIONS

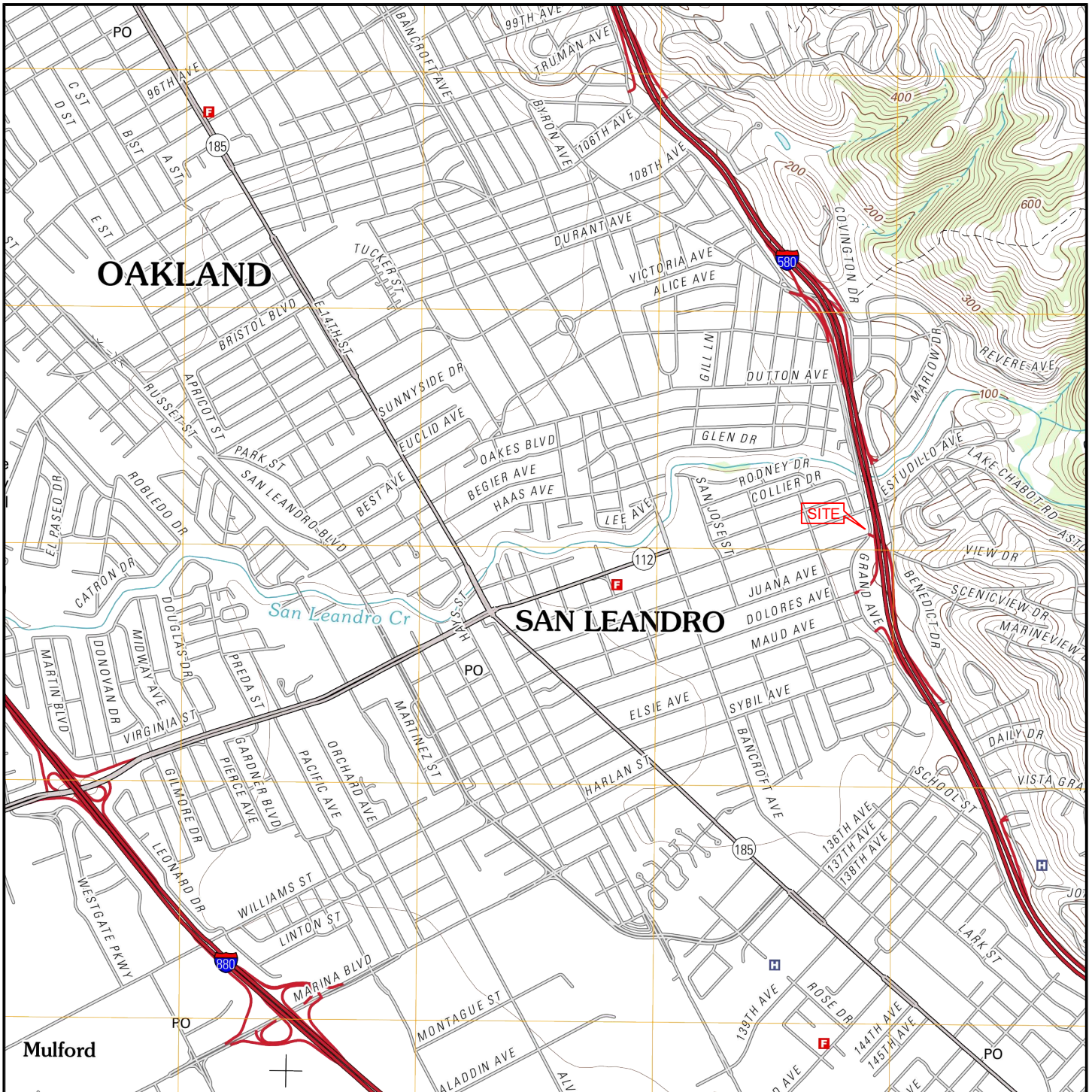
Based on the results of this and historical investigations, AGE recommends the following:

- Continuation of active remediation using all wells at the subject site. In an effort to continue to remediate residual chlorinated solvent impact to the subsurface, additional remediation is warranted at this time. The remediation should be operated for an additional three months and then shut off for another rebound response evaluation and testing, following the operation period. A period of one month hiatus, should be observed prior to collection of rebound samples.
- Concurrence, with AGE's recommendation that the subject suite can be occupied by a new tenant and dry cleaning operation. Currently, a hydrocarbon based dry cleaning machine is installed within the subject suite. Additional penetrations of the concrete flooring, are not likely to occur with the new proposed cleaners; thus minimizing additional pathways for soil-vapor intrusion. Lastly, the proposed cleaners will not impact currently installed remedial wells and will be operated in way that the wells will be accessible for continued remedial operation and future abandonments.

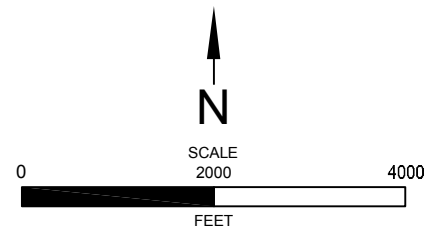
6.0. LIMITATIONS

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 conditions at the site for the purpose of this investigation are made from a limited number of available data points (i.e. soil-vapor samples and indoor air 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

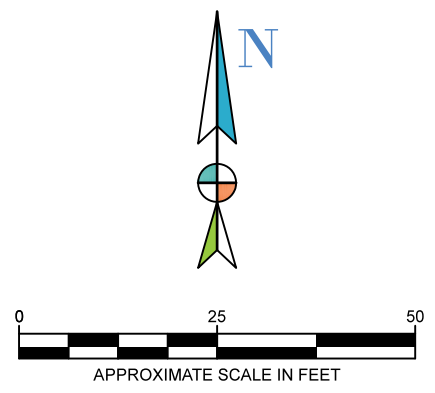


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PROJECT NO. AGE-NC-12-2461	FILE: LOCATION	FIGURE:
DATE: 21 MAY, 2013	DRAWN BY: MAC	1

LEGEND

- V1 ▲ SOIL VAPOR LOCATIONS (Historical)
- V1 ▲ SOIL-VAPOR SAMPLING LOCATIONS
- 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
- ▲ PROPOSED SHALLOW SOIL-VAPOR SAMPLING WELL
- ▲ PROPOSED DEEP SOIL-VAPOR SAMPLING WELL



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 (Subject Suite)	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
	10-13-2016	40	<0.17	<0.13	<0.25	-	<0.19	<1.9	0.35	0.42	3.1	0.24	1.05	-	-	-	-	0.39
	02-20-2017	0.38	0.019	0.20	<0.0023	0.12	0.20	76	0.45	0.57	3.5	0.25	0.90	0.92	2.5	7.0	1.4	0.21
	06-12-2017	3.2	0.020	0.061	<0.0023	0.13	0.065	48	<0.0026	0.22	4.6	0.16	0.67	0.61	<0.0035	6.2	1.0	0.33
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

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-1383 MacArthur (Sothea's Beauty Salon; First Adjacent Unit to North of Subject Suite)	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
	10-13-2016	7.2	<1.7	<1.3	<2.4	-	<1.9	6,300	<2.0	<2.5	14	<1.4	<1.4	-	-	-	-	<1.5
	02-20-2017	0.83	0.077	0.41	<0.0023	0.17	0.22	2,000	0.46	0.71	11	0.38	1.2	0.96	<0.0035	200	1.4	0.53
	06-12-2017	1.9	<0.0055	0.28	<0.0023	0.18	0.093	3,700	<0.0026	0.36	8.2	0.38	1.2	<0.025	<0.0035	290	0.96	0.69
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

TABLE 1
INDOOR AIR ANALYTICAL RESULTS
SWISS VALLEY CLEANERS
 1395 MacArthur Boulevard,
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 (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-1377 MacArthur (Estudillo Plaza Optometry; Second Adjacent Unit)	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
	10-13-2016	5.3	<0.38	<0.28	<0.54	-	<0.42	310	<0.44	<0.56	2.1	0.88	3.8	-	-	-	-	<0.34
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

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 (Former Jazzercise)	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 (Ambiant Air)	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 2
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
		10-13-2016	15,000	<31	<23	<22	<22	<14	79	<23	<18	<21	<25	<25	<26	<43	<28	<170	-	-	<28	<140	<67
		02-20-2017	37	<2.8	<2.0	<2.0	<2.3	<1.3	91	<2.0	<1.6	1.9	<2.2	<6.6	<2.4	<96	<2.5	<2.5	2.7	<5.3	<2.5	160	<67
		06-12-2017	950	<2.8	<2.0	<2.0	<2.0	<1.3	<50	<2.0	<1.6	<1.9	<2.2	<6.6	<2.4	<96	<2.5	<2.5	<1.8	<5.3	<2.5	<60	<67
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
		10-13-2016	20,000	<73	<55	<54	<54	<35	<130	<55	<43	<51	<59	<59	<63	<100	<67	<67	-	-	<67	<320	<160
		02-20-2017	99	<2.8	<2.0	<2.0	<2.3	<1.3	<50	<2.0	<1.6	<1.9	<2.2	<6.6	<2.4	<96	<2.5	<2.5	<1.8	<5.3	<2.5	<60	<75
		06-12-2017	600	<2.8	<2.0	<2.0	<2.0	<1.3	<50	<2.0	<1.6	47	7.4	47	<2.4	<96	8.8	30	<1.8	<5.3	6.8	<60	<75

TABLE 2
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
		10-13-2016	19,000	<40	<30	<29	<29	<19	<72	<48	<23	<28	<32	<32	<34	<55	<36	<36	-	-	<36	<170	<87
		02-20-2017	420	<2.8	<2.0	<2.0	<2.3	<1.3	1300	<2.0	<1.6	<1.9	<2.2	<6.6	<2.4	<96	<2.5	<2.5	<1.8	<5.3	<2.5	<60	<75
		06-12-2017	2,800	<2.8	<2.0	<2.0	<2.0	<1.3	<50	<2.0	<1.6	16	2.6	16	<2.4	<96	3.5	<2.5	<1.8	5.7	2.6	<60	<75
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 engineered 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

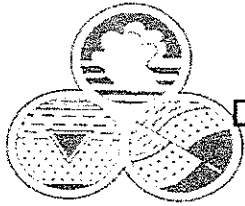
1,2-DCP: 1,2-Dichloropropane

4-ET: 4-Ethyltoluene

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

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

APPENDIX A



SWISS Valley Cleaners

Date: 6-12-17 Field Personnel: JK

Purge Apparatus:	
Purge Volume:	
Purge Time:	35.6 sec
Sample Canister Total Volume:	1 liter

Field Point: SS-2 Sample ID: SS-2 Skroud PID-19 PPM

Canister #: <u>R1226-2559</u>	Purge		Sample	
Manifold#: <u>316-1320</u>	Initial	Post	Initial	Post
Time			1053	1102
Pressure (in Hg)			30	4
Manifold Leak Test (10 Minutes): <u>PID - 0 PPB</u>				
Start Time:	<u>1030</u>	End Time:	<u>1040</u>	

Field Point: SS-3 Sample ID: SS-3 Skroud PID-22 PPM

Canister #: <u>1516 6164-750</u>	Purge		Sample	
Manifold#: <u>316-1316</u>	Initial	Post	Initial	Post
Time	<u>B</u>		1142	1149
Pressure (in Hg)			30	4
Manifold Leak Test (10 Minutes): <u>PID - 0 PPB</u>				
Start Time:	<u>1115</u>	End Time:	<u>1125</u>	

Field Point: ~~SS-4~~ SS-4 Sample ID: SS-4 Skroud PID-20 PPM

Canister #: <u>R1216-2549</u>	Purge		Sample	
Manifold#: <u>316-827</u>	Initial	Post	Initial	Post
Time			1228	1235
Pressure (in Hg)			30	4
Manifold Leak Test (10 Minutes): <u>PID - 0 PPB</u>				
Start Time:	<u>1210</u>	End Time:	<u>1220</u>	

Field Point: _____ Sample ID: _____

Canister #:	Purge		Sample	
Manifold#:	Initial	Post	Initial	Post
Time				
Pressure (in Hg)				
Manifold Leak Test (10 Minutes): _____				
Start Time:		End Time:		

APPENDIX B



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1706704

Report Created for: Advanced GeoEnvironmental, Inc.

837 Shaw Road
Stockton, CA 95215

Project Contact: Daniel Villanueva

Project P.O.:

Project Name: Swiss Valley Cleaners

Project Received: 06/14/2017

Analytical Report reviewed & approved for release on 06/21/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Advanced GeoEnvironmental, Inc.
Project: Swiss Valley Cleaners
WorkOrder: 1706704

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

J Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.



Glossary of Terms & Qualifier Definitions

Client: Advanced GeoEnvironmental, Inc.
Project: Swiss Valley Cleaners
WorkOrder: 1706704

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Case Narrative

Client: Advanced GeoEnvironmental, Inc.
Project: Swiss Valley Cleaners

Work Order: 1706704
June 21, 2017

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Active Soil Gas Advisory of July 2015.



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/20/17-6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706704
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-1395 MacArthur	1706704-001A	Indoor Air	06/12/2017 09:20	GC24	140825

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.08	14.08	AK

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	48		1.0	6.0	1	06/20/2017 21:21
Acrolein	ND		0.047	0.58	1	06/20/2017 21:21
Acrylonitrile	ND		0.035	0.22	1	06/20/2017 21:21
tert-Amyl methyl ether (TAME)	ND		0.21	0.42	1	06/20/2017 21:21
Benzene	0.22		0.0030	0.032	1	06/20/2017 21:21
Benzyl chloride	ND		0.053	0.53	1	06/20/2017 21:21
Bromodichloromethane	ND		0.0028	0.0070	1	06/20/2017 21:21
Bromoform	ND		0.12	1.1	1	06/20/2017 21:21
Bromomethane	0.53		0.058	0.39	1	06/20/2017 21:21
1,3-Butadiene	ND		0.048	0.22	1	06/20/2017 21:21
2-Butanone (MEK)	3.2	J	1.0	7.5	1	06/20/2017 21:21
t-Butyl alcohol (TBA)	ND		5.7	6.2	1	06/20/2017 21:21
Carbon Disulfide	ND		0.045	0.32	1	06/20/2017 21:21
Carbon Tetrachloride	ND		0.0026	0.0064	1	06/20/2017 21:21
Chlorobenzene	ND		0.024	0.47	1	06/20/2017 21:21
Chloroethane	ND		0.046	0.27	1	06/20/2017 21:21
Chloroform	0.33		0.0034	0.025	1	06/20/2017 21:21
Chloromethane	0.61		0.025	0.21	1	06/20/2017 21:21
Cyclohexane	0.17	J	0.052	1.8	1	06/20/2017 21:21
Dibromochloromethane	ND		0.0035	0.87	1	06/20/2017 21:21
1,2-Dibromo-3-chloropropane	ND		0.0049	0.050	1	06/20/2017 21:21
1,2-Dibromoethane (EDB)	ND		0.0023	0.0078	1	06/20/2017 21:21
1,2-Dichlorobenzene	ND		0.079	0.61	1	06/20/2017 21:21
1,3-Dichlorobenzene	ND		0.061	0.61	1	06/20/2017 21:21
1,4-Dichlorobenzene	0.065		0.0031	0.030	1	06/20/2017 21:21
Dichlorodifluoromethane	2.4		0.050	0.50	1	06/20/2017 21:21
1,1-Dichloroethane	ND		0.14	0.41	1	06/20/2017 21:21
1,2-Dichloroethane (1,2-DCA)	0.061		0.0012	0.0041	1	06/20/2017 21:21
1,1-Dichloroethene	ND		0.076	0.10	1	06/20/2017 21:21
cis-1,2-Dichloroethene	ND		0.040	0.40	1	06/20/2017 21:21
trans-1,2-Dichloroethene	ND		0.028	0.40	1	06/20/2017 21:21
1,2-Dichloropropane	0.015		0.0020	0.0047	1	06/20/2017 21:21
cis-1,3-Dichloropropene	ND		0.0014	0.12	1	06/20/2017 21:21

(Cont.)

Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/20/17-6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706704
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-1395 MacArthur	1706704-001A	Indoor Air	06/12/2017 09:20	GC24	140825

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.08	14.08	AK

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND		0.092	0.12	1	06/20/2017 21:21
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	J	0.071	0.71	1	06/20/2017 21:21
Diisopropyl ether (DIPE)	ND		0.034	0.42	1	06/20/2017 21:21
1,4-Dioxane	ND		0.0011	0.018	1	06/20/2017 21:21
Ethyl acetate	6.2		0.030	0.92	1	06/20/2017 21:21
Ethyl tert-butyl ether (ETBE)	ND		0.13	0.42	1	06/20/2017 21:21
Ethylbenzene	0.16	J	0.035	0.44	1	06/20/2017 21:21
4-Ethyltoluene	ND		0.035	0.50	1	06/20/2017 21:21
Freon 113	0.51	J	0.062	0.78	1	06/20/2017 21:21
Heptane	0.84	J	0.029	2.1	1	06/20/2017 21:21
Hexachlorobutadiene	ND		0.076	1.1	1	06/20/2017 21:21
Hexane	0.65	J	0.047	1.8	1	06/20/2017 21:21
2-Hexanone	0.19	J	0.034	0.42	1	06/20/2017 21:21
4-Methyl-2-pentanone (MIBK)	0.13	J	0.042	0.42	1	06/20/2017 21:21
Methyl-t-butyl ether (MTBE)	ND		0.084	0.37	1	06/20/2017 21:21
Methylene chloride	ND		0.063	0.88	1	06/20/2017 21:21
Methyl methacrylate	13		0.042	0.42	1	06/20/2017 21:21
Naphthalene	0.13		0.0082	0.050	1	06/20/2017 21:21
Propene	ND		1.8	8.8	1	06/20/2017 21:21
Styrene	0.052	J	0.034	0.43	1	06/20/2017 21:21
1,1,1,2-Tetrachloroethane	0.0048	J	0.0021	0.0070	1	06/20/2017 21:21
1,1,2,2-Tetrachloroethane	ND		0.0063	0.0070	1	06/20/2017 21:21
Tetrachloroethene	3.2		0.0028	0.069	1	06/20/2017 21:21
Tetrahydrofuran	13		0.033	0.60	1	06/20/2017 21:21
Toluene	4.6		0.031	0.38	1	06/20/2017 21:21
1,2,4-Trichlorobenzene	ND		0.090	0.75	1	06/20/2017 21:21
1,1,1-Trichloroethane	ND		0.099	0.55	1	06/20/2017 21:21
1,1,2-Trichloroethane	ND		0.0030	0.0055	1	06/20/2017 21:21
Trichloroethene	0.020	J	0.0055	0.027	1	06/20/2017 21:21
Trichlorofluoromethane	1.0		0.068	0.57	1	06/20/2017 21:21
1,2,4-Trimethylbenzene	0.24	J	0.045	0.50	1	06/20/2017 21:21
1,3,5-Trimethylbenzene	0.073	J	0.060	0.50	1	06/20/2017 21:21
Vinyl Acetate	ND		0.12	1.8	1	06/20/2017 21:21

(Cont.)

Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/20/17-6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706704
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-1395 MacArthur	1706704-001A	Indoor Air	06/12/2017 09:20	GC24	140825

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.08	14.08	AK

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Vinyl Chloride	ND		0.0016	0.013	1	06/20/2017 21:21
Xylenes, Total	0.67	J	0.079	1.3	1	06/20/2017 21:21

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	82	70-130	06/20/2017 21:21
Toluene-d8	97	70-130	06/20/2017 21:21
4-BFB	91	70-130	06/20/2017 21:21



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/20/17-6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706704
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA1383 MacArthur	1706704-002A	Indoor Air	06/12/2017 09:30	GC24	140825

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.31	13.31	AK

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	3700		53	300	50	06/21/2017 10:29
Acrolein	ND		0.047	0.58	1	06/20/2017 22:17
Acrylonitrile	ND		0.035	0.22	1	06/20/2017 22:17
tert-Amyl methyl ether (TAME)	ND		0.21	0.42	1	06/20/2017 22:17
Benzene	0.39		0.0030	0.032	1	06/20/2017 22:17
Benzyl chloride	ND		0.053	0.53	1	06/20/2017 22:17
Bromodichloromethane	ND		0.0028	0.0070	1	06/20/2017 22:17
Bromoform	ND		0.12	1.1	1	06/20/2017 22:17
Bromomethane	0.46		0.058	0.39	1	06/20/2017 22:17
1,3-Butadiene	ND		0.048	0.22	1	06/20/2017 22:17
2-Butanone (MEK)	6.1	J	1.0	7.5	1	06/20/2017 22:17
t-Butyl alcohol (TBA)	ND		5.7	6.2	1	06/20/2017 22:17
Carbon Disulfide	ND		0.045	0.32	1	06/20/2017 22:17
Carbon Tetrachloride	ND		0.0026	0.0064	1	06/20/2017 22:17
Chlorobenzene	ND		0.024	0.47	1	06/20/2017 22:17
Chloroethane	0.12	J	0.046	0.27	1	06/20/2017 22:17
Chloroform	0.69		0.0034	0.025	1	06/20/2017 22:17
Chloromethane	ND		0.025	0.21	1	06/20/2017 22:17
Cyclohexane	ND		0.052	1.8	1	06/20/2017 22:17
Dibromochloromethane	ND		0.0035	0.87	1	06/20/2017 22:17
1,2-Dibromo-3-chloropropane	ND		0.0049	0.050	1	06/20/2017 22:17
1,2-Dibromoethane (EDB)	ND		0.0023	0.0078	1	06/20/2017 22:17
1,2-Dichlorobenzene	ND		0.079	0.61	1	06/20/2017 22:17
1,3-Dichlorobenzene	ND		0.061	0.61	1	06/20/2017 22:17
1,4-Dichlorobenzene	0.093		0.0031	0.030	1	06/20/2017 22:17
Dichlorodifluoromethane	2.1		0.050	0.50	1	06/20/2017 22:17
1,1-Dichloroethane	ND		0.14	0.41	1	06/20/2017 22:17
1,2-Dichloroethane (1,2-DCA)	0.28		0.0012	0.0041	1	06/20/2017 22:17
1,1-Dichloroethene	ND		0.076	0.10	1	06/20/2017 22:17
cis-1,2-Dichloroethene	ND		0.040	0.40	1	06/20/2017 22:17
trans-1,2-Dichloroethene	ND		0.028	0.40	1	06/20/2017 22:17
1,2-Dichloropropane	ND		0.0020	0.0047	1	06/20/2017 22:17
cis-1,3-Dichloropropene	ND		0.0014	0.12	1	06/20/2017 22:17

(Cont.)

 Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/20/17-6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706704
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA1383 MacArthur	1706704-002A	Indoor Air	06/12/2017 09:30	GC24	140825

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.31	13.31	AK

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND		0.092	0.12	1	06/20/2017 22:17
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.13	J	0.071	0.71	1	06/20/2017 22:17
Diisopropyl ether (DIPE)	ND		0.034	0.42	1	06/20/2017 22:17
1,4-Dioxane	ND		0.0011	0.018	1	06/20/2017 22:17
Ethyl acetate	290		0.74	23	25	06/21/2017 09:11
Ethyl tert-butyl ether (ETBE)	ND		0.13	0.42	1	06/20/2017 22:17
Ethylbenzene	0.23	J	0.035	0.44	1	06/20/2017 22:17
4-Ethyltoluene	ND		0.035	0.50	1	06/20/2017 22:17
Freon 113	0.37	J	0.062	0.78	1	06/20/2017 22:17
Heptane	ND		0.029	2.1	1	06/20/2017 22:17
Hexachlorobutadiene	ND		0.076	1.1	1	06/20/2017 22:17
Hexane	ND		0.047	1.8	1	06/20/2017 22:17
2-Hexanone	0.99		0.034	0.42	1	06/20/2017 22:17
4-Methyl-2-pentanone (MIBK)	0.27	J	0.042	0.42	1	06/20/2017 22:17
Methyl-t-butyl ether (MTBE)	ND		0.084	0.37	1	06/20/2017 22:17
Methylene chloride	ND		0.063	0.88	1	06/20/2017 22:17
Methyl methacrylate	970		1.0	10	25	06/21/2017 09:11
Naphthalene	0.18		0.0082	0.050	1	06/20/2017 22:17
Propene	ND		1.8	8.8	1	06/20/2017 22:17
Styrene	0.23	J	0.034	0.43	1	06/20/2017 22:17
1,1,1,2-Tetrachloroethane	ND		0.0021	0.0070	1	06/20/2017 22:17
1,1,2,2-Tetrachloroethane	ND		0.0063	0.0070	1	06/20/2017 22:17
Tetrachloroethene	1.9		0.0028	0.069	1	06/20/2017 22:17
Tetrahydrofuran	0.75		0.033	0.60	1	06/20/2017 22:17
Toluene	8.2		0.031	0.38	1	06/20/2017 22:17
1,2,4-Trichlorobenzene	ND		0.090	0.75	1	06/20/2017 22:17
1,1,1-Trichloroethane	ND		0.099	0.55	1	06/20/2017 22:17
1,1,2-Trichloroethane	ND		0.0030	0.0055	1	06/20/2017 22:17
Trichloroethene	ND		0.0055	0.027	1	06/20/2017 22:17
Trichlorofluoromethane	0.96		0.068	0.57	1	06/20/2017 22:17
1,2,4-Trimethylbenzene	0.22	J	0.045	0.50	1	06/20/2017 22:17
1,3,5-Trimethylbenzene	ND		0.060	0.50	1	06/20/2017 22:17
Vinyl Acetate	ND		0.12	1.8	1	06/20/2017 22:17

(Cont.)

Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/20/17-6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706704
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA1383 MacArthur	1706704-002A	Indoor Air	06/12/2017 09:30	GC24	140825

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.31	13.31	AK

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Vinyl Chloride	ND		0.0016	0.013	1	06/20/2017 22:17
Xylenes, Total	0.89	J	0.079	1.3	1	06/20/2017 22:17

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	79	70-130	06/20/2017 22:17
Toluene-d8	98	70-130	06/20/2017 22:17
4-BFB	90	70-130	06/20/2017 22:17

 Angela Rydelius, Lab Manager



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/20/17
Date Analyzed: 6/20/17
Instrument: GC24
Matrix: Indoor Air
Project: Swiss Valley Cleaners

WorkOrder: 1706704
BatchID: 140825
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-140825

QC Summary Report for TO15

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	11.0	1.0	6.0	12	-	92	60-140
Acrolein	ND	7.92	0.047	0.58	11.65	-	68	60-140
Acrylonitrile	ND	9.87	0.035	0.22	11	-	90	60-140
tert-Amyl methyl ether (TAME)	ND	18.9	0.21	0.42	21	-	90	60-140
Benzene	0.006065,J	13.5	0.0030	0.032	16	-	85	60-140
Benzyl chloride	ND	31.1	0.053	0.53	26.5	-	117	60-140
Bromodichloromethane	ND	34.1	0.0028	0.0070	35	-	97	60-140
Bromoform	ND	63.3	0.12	1.1	52.5	-	121	60-140
Bromomethane	0.1349,J	29.5	0.058	0.39	19.5	-	151, F2	60-140
1,3-Butadiene	ND	10.9	0.048	0.22	11	-	99	60-140
2-Butanone (MEK)	ND	13.0	1.0	7.5	15	-	86	60-140
t-Butyl alcohol (TBA)	ND	17.0	5.7	6.2	15.5	-	110	60-140
Carbon Disulfide	ND	15.3	0.045	0.32	16	-	96	60-140
Carbon Tetrachloride	ND	25.3	0.0026	0.0064	32	-	79	60-140
Chlorobenzene	ND	25.2	0.024	0.47	23.5	-	107	60-140
Chloroethane	ND	12.3	0.046	0.27	13.5	-	91	60-140
Chloroform	ND	21.4	0.0034	0.025	24.5	-	87	60-140
Chloromethane	ND	8.32	0.025	0.21	10.5	-	79	60-140
Cyclohexane	ND	14.9	0.052	1.8	17.5	-	85	60-140
Dibromochloromethane	ND	48.4	0.0035	0.87	43.5	-	111	60-140
1,2-Dibromo-3-chloropropane	ND	63.6	0.0049	0.050	49	-	130	60-140
1,2-Dibromoethane (EDB)	ND	40.5	0.0023	0.0078	39	-	104	60-140
1,2-Dichlorobenzene	ND	35.8	0.079	0.61	30.5	-	117	60-140
1,3-Dichlorobenzene	ND	35.6	0.061	0.61	30.5	-	117	60-140
1,4-Dichlorobenzene	0.004502,J	35.8	0.0031	0.030	30.5	-	118	60-140
Dichlorodifluoromethane	ND	23.2	0.050	0.50	25	-	93	60-140
1,1-Dichloroethane	ND	24.6	0.14	0.41	20.5	-	120	60-140
1,2-Dichloroethane (1,2-DCA)	0.001922,J	16.8	0.0012	0.0041	20.5	-	82	60-140
1,1-Dichloroethene	ND	15.9	0.076	0.10	20	-	79	60-140
cis-1,2-Dichloroethene	ND	18.8	0.040	0.40	20	-	94	60-140
trans-1,2-Dichloroethene	ND	18.9	0.028	0.40	20	-	95	60-140
1,2-Dichloropropane	ND	19.4	0.0020	0.0047	23.5	-	82	60-140
cis-1,3-Dichloropropene	ND	24.8	0.0014	0.12	23	-	108	60-140
trans-1,3-Dichloropropene	ND	24.6	0.092	0.12	23	-	107	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	33.3	0.071	0.71	35.5	-	94	60-140
Diisopropyl ether (DIPE)	ND	18.1	0.034	0.42	21	-	86	60-140
1,4-Dioxane	ND	18.9	0.0011	0.018	18.5	-	102	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/20/17
Date Analyzed: 6/20/17
Instrument: GC24
Matrix: Indoor Air
Project: Swiss Valley Cleaners

WorkOrder: 1706704
BatchID: 140825
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-140825

QC Summary Report for TO15

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethyl acetate	ND	16.0	0.030	0.92	18.5	-	87	60-140
Ethyl tert-butyl ether (ETBE)	ND	18.9	0.13	0.42	21	-	90	60-140
Ethylbenzene	ND	23.6	0.035	0.44	22	-	107	60-140
4-Ethyltoluene	ND	28.4	0.035	0.50	25	-	114	60-140
Freon 113	ND	37.0	0.062	0.78	39	-	95	60-140
Heptane	ND	17.0	0.029	2.1	21	-	81	60-140
Hexachlorobutadiene	ND	67.9	0.076	1.1	54	-	126	60-140
Hexane	ND	15.1	0.047	1.8	18	-	84	60-140
2-Hexanone	ND	30.0	0.034	0.42	21	-	143, F2	60-140
4-Methyl-2-pentanone (MIBK)	ND	19.9	0.042	0.42	21	-	95	60-140
Methyl-t-butyl ether (MTBE)	ND	17.4	0.084	0.37	18.5	-	94	60-140
Methylene chloride	ND	16.2	0.063	0.88	17.5	-	92	60-140
Methyl methacrylate	ND	18.7	0.042	0.42	20.8	-	90	60-140
Naphthalene	0.02768,J	72.1	0.0082	0.050	53	-	136	60-140
Propene	ND	7.44	1.8	8.8	8.5	-	88	60-140
Styrene	ND	24.0	0.034	0.43	21.5	-	112	60-140
1,1,1,2-Tetrachloroethane	ND	37.2	0.0021	0.0070	35	-	106	60-140
1,1,2,2-Tetrachloroethane	ND	36.3	0.0063	0.0070	35	-	104	60-140
Tetrachloroethene	ND	36.5	0.0028	0.069	34.5	-	106	60-140
Tetrahydrofuran	0.03481,J	12.2	0.033	0.60	15	-	82	60-140
Toluene	ND	19.6	0.031	0.38	19	-	103	60-140
1,2,4-Trichlorobenzene	ND	47.5	0.090	0.75	37.5	-	127	60-140
1,1,1-Trichloroethane	ND	29.5	0.099	0.55	27.5	-	107	60-140
1,1,2-Trichloroethane	ND	27.1	0.0030	0.0055	27.5	-	98	60-140
Trichloroethene	ND	26.5	0.0055	0.027	27.5	-	96	60-140
Trichlorofluoromethane	ND	26.2	0.068	0.57	28.5	-	92	60-140
1,2,4-Trimethylbenzene	ND	29.1	0.045	0.50	25	-	116	60-140
1,3,5-Trimethylbenzene	ND	29.1	0.060	0.50	25	-	116	60-140
Vinyl Acetate	ND	25.5	0.12	1.8	18	-	142, F2	60-140
Vinyl Chloride	ND	12.3	0.0016	0.013	13	-	94	60-140
Xylenes, Total	ND	64.4	0.079	1.3	66	-	97	60-140
Surrogate Recovery								
1,2-DCA-d4	85.2	81.7			100	85	82	70-130
Toluene-d8	96.9	98.0			100	97	98	70-130
4-BFB	95.73	100			100	96	100	70-130

QA/QC Officer



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1706704

ClientCode: AGES

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Daniel Villanueva
 Advanced GeoEnvironmental, Inc.
 837 Shaw Road
 Stockton, CA 95215
 (209) 467-1006 FAX: (209) 467-1118

Email: dvillanueva@advgeoenv.com
 cc/3rd Party:
 PO:
 ProjectNo: Swiss Valley Cleaners

Bill to:

Erica
 Advanced GeoEnvironmental, Inc.
 837 Shaw Road
 Stockton, CA 95215
 ap@advgeoenv.com; kburchard@advge

Requested TAT: 5 days;

Date Received: 06/14/2017

Date Logged: 06/15/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1706704-001	IA-1395 MacArthur	Indoor Air	6/12/2017 09:20	<input type="checkbox"/>	A												
1706704-002	IA1383 MacArthur	Indoor Air	6/12/2017 09:30	<input type="checkbox"/>	A												

Test Legend:

1	TO15_SCAN-SIM_Indoor(ug/m3) [J]	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Jena Alfaro

The following SampIDs: 001A, 002A contain testgroup TO15_INDOOR.

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: ADVANCED GEOENVIRONMENTAL, INC.

Project: Swiss Valley Cleaners

Work Order: 1706704

Client Contact: Daniel Villanueva

QC Level: LEVEL 2

Contact's Email: dvillanueva@advgeoenv.com

Comments:

Date Logged: 6/15/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1706704-001A	IA-1395 MacArthur	Indoor Air	TO15 for Indoor Air (Scan-SIM)	1	6L Summa	<input type="checkbox"/>	6/12/2017 9:20	5 days		<input type="checkbox"/>	
1706704-002A	IA1383 MacArthur	Indoor Air	TO15 for Indoor Air (Scan-SIM)	1	6L Summa	<input type="checkbox"/>	6/12/2017 9:30	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **Advanced GeoEnvironmental, Inc.**
 Project Name: **Swiss Valley Cleaners**

Date and Time Received: **6/14/2017 14:20**
 Date Logged: **6/15/2017**
 Received by: **Jena Alfaro**
 Logged by: **Jena Alfaro**

WorkOrder No: **1706704** Matrix: Indoor Air
 Carrier: David Shaver (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample/Temp Blank temperature	Temp:		NA <input checked="" type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

UCMR Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Comments:

APPENDIX C



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1706705

Report Created for: Advanced GeoEnvironmental, Inc.

837 Shaw Road
Stockton, CA 95215

Project Contact: Daniel Villanueva

Project P.O.:

Project Name: Swiss Valley Cleaners

Project Received: 06/14/2017

Analytical Report reviewed & approved for release on 06/21/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Advanced GeoEnvironmental, Inc.
Project: Swiss Valley Cleaners
WorkOrder: 1706705

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Case Narrative

Client: Advanced GeoEnvironmental, Inc.

Work Order: 1706705

Project: Swiss Valley Cleaners

June 21, 2017

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Active Soil Gas Advisory of July 2015.



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Leak Check Compound

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-2	1706705-001A	SoilGas	06/12/2017 11:02	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.19	26.35	AK

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/21/2017 03:40
Surrogates	REC (%)	Limits		
1,2-DCA-d4	99	70-130		06/21/2017 03:40

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-3	1706705-002A	SoilGas	06/12/2017 11:49	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.43	26.86	AK

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/21/2017 04:21
Surrogates	REC (%)	Limits		
1,2-DCA-d4	92	70-130		06/21/2017 04:21

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-4	1706705-003A	SoilGas	06/12/2017 12:35	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.61	27.17	AK

Analytes	Result	RL	DF	Date Analyzed
Isopropyl Alcohol	ND	50	1	06/21/2017 05:01
Surrogates	REC (%)	Limits		
1,2-DCA-d4	96	70-130		06/21/2017 05:01

 Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-2	1706705-001A	SoilGas	06/12/2017 11:02	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.19	26.35	AK

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	60	1	06/21/2017 03:40
Acrolein	ND	5.8	1	06/21/2017 03:40
Acrylonitrile	ND	1.1	1	06/21/2017 03:40
tert-Amyl methyl ether (TAME)	ND	2.1	1	06/21/2017 03:40
Benzene	ND	1.6	1	06/21/2017 03:40
Benzyl chloride	ND	2.6	1	06/21/2017 03:40
Bromodichloromethane	ND	3.5	1	06/21/2017 03:40
Bromoform	ND	5.2	1	06/21/2017 03:40
Bromomethane	3.6	2.0	1	06/21/2017 03:40
1,3-Butadiene	ND	1.1	1	06/21/2017 03:40
2-Butanone (MEK)	ND	75	1	06/21/2017 03:40
t-Butyl alcohol (TBA)	ND	31	1	06/21/2017 03:40
Carbon Disulfide	ND	1.6	1	06/21/2017 03:40
Carbon Tetrachloride	ND	3.2	1	06/21/2017 03:40
Chlorobenzene	ND	2.4	1	06/21/2017 03:40
Chloroethane	ND	1.3	1	06/21/2017 03:40
Chloroform	ND	2.4	1	06/21/2017 03:40
Chloromethane	ND	1.0	1	06/21/2017 03:40
Cyclohexane	ND	18	1	06/21/2017 03:40
Dibromochloromethane	ND	4.4	1	06/21/2017 03:40
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/21/2017 03:40
1,2-Dibromoethane (EDB)	ND	3.9	1	06/21/2017 03:40
1,2-Dichlorobenzene	ND	3.0	1	06/21/2017 03:40
1,3-Dichlorobenzene	ND	3.0	1	06/21/2017 03:40
1,4-Dichlorobenzene	ND	3.0	1	06/21/2017 03:40
Dichlorodifluoromethane	3.2	2.5	1	06/21/2017 03:40
1,1-Dichloroethane	ND	2.0	1	06/21/2017 03:40
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/21/2017 03:40
1,1-Dichloroethene	ND	2.0	1	06/21/2017 03:40
cis-1,2-Dichloroethene	ND	2.0	1	06/21/2017 03:40
trans-1,2-Dichloroethene	ND	2.0	1	06/21/2017 03:40
1,2-Dichloropropane	ND	2.4	1	06/21/2017 03:40
cis-1,3-Dichloropropene	ND	2.3	1	06/21/2017 03:40

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Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-2	1706705-001A	SoilGas	06/12/2017 11:02	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.19	26.35	AK

Analytes	Result	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	2.3	1	06/21/2017 03:40
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/21/2017 03:40
Diisopropyl ether (DIPE)	ND	2.1	1	06/21/2017 03:40
1,4-Dioxane	ND	1.8	1	06/21/2017 03:40
Ethanol	ND	96	1	06/21/2017 03:40
Ethyl acetate	ND	1.8	1	06/21/2017 03:40
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	06/21/2017 03:40
Ethylbenzene	ND	2.2	1	06/21/2017 03:40
4-Ethyltoluene	ND	2.5	1	06/21/2017 03:40
Freon 113	ND	3.9	1	06/21/2017 03:40
Heptane	ND	21	1	06/21/2017 03:40
Hexachlorobutadiene	ND	5.4	1	06/21/2017 03:40
Hexane	ND	18	1	06/21/2017 03:40
2-Hexanone	ND	2.1	1	06/21/2017 03:40
4-Methyl-2-pentanone (MIBK)	ND	2.1	1	06/21/2017 03:40
Methyl-t-butyl ether (MTBE)	ND	1.8	1	06/21/2017 03:40
Methylene chloride	ND	8.8	1	06/21/2017 03:40
Methyl methacrylate	ND	2.1	1	06/21/2017 03:40
Naphthalene	ND	5.3	1	06/21/2017 03:40
Propene	ND	88	1	06/21/2017 03:40
Styrene	ND	2.2	1	06/21/2017 03:40
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/21/2017 03:40
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/21/2017 03:40
Tetrachloroethene	950	3.4	1	06/21/2017 03:40
Tetrahydrofuran	ND	3.0	1	06/21/2017 03:40
Toluene	ND	1.9	1	06/21/2017 03:40
1,2,4-Trichlorobenzene	ND	3.8	1	06/21/2017 03:40
1,1,1-Trichloroethane	ND	2.8	1	06/21/2017 03:40
1,1,2-Trichloroethane	ND	2.8	1	06/21/2017 03:40
Trichloroethene	ND	2.8	1	06/21/2017 03:40
Trichlorofluoromethane	ND	2.8	1	06/21/2017 03:40
1,2,4-Trimethylbenzene	ND	2.5	1	06/21/2017 03:40
1,3,5-Trimethylbenzene	ND	2.5	1	06/21/2017 03:40

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-2	1706705-001A	SoilGas	06/12/2017 11:02	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.19	26.35	AK

Analytes	Result	RL	DF	Date Analyzed
Vinyl Acetate	ND	18	1	06/21/2017 03:40
Vinyl Chloride	ND	1.3	1	06/21/2017 03:40
Xylenes, Total	ND	6.6	1	06/21/2017 03:40
Surrogates	REC (%)	Limits		
1,2-DCA-d4	99	70-130		06/21/2017 03:40
Toluene-d8	98	70-130		06/21/2017 03:40
4-BFB	97	70-130		06/21/2017 03:40



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-3	1706705-002A	SoilGas	06/12/2017 11:49	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.43	26.86	AK

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	60	1	06/21/2017 04:21
Acrolein	ND	5.8	1	06/21/2017 04:21
Acrylonitrile	ND	1.1	1	06/21/2017 04:21
tert-Amyl methyl ether (TAME)	ND	2.1	1	06/21/2017 04:21
Benzene	ND	1.6	1	06/21/2017 04:21
Benzyl chloride	ND	2.6	1	06/21/2017 04:21
Bromodichloromethane	ND	3.5	1	06/21/2017 04:21
Bromoform	ND	5.2	1	06/21/2017 04:21
Bromomethane	3.5	2.0	1	06/21/2017 04:21
1,3-Butadiene	ND	1.1	1	06/21/2017 04:21
2-Butanone (MEK)	ND	75	1	06/21/2017 04:21
t-Butyl alcohol (TBA)	ND	31	1	06/21/2017 04:21
Carbon Disulfide	ND	1.6	1	06/21/2017 04:21
Carbon Tetrachloride	ND	3.2	1	06/21/2017 04:21
Chlorobenzene	ND	2.4	1	06/21/2017 04:21
Chloroethane	ND	1.3	1	06/21/2017 04:21
Chloroform	ND	2.4	1	06/21/2017 04:21
Chloromethane	ND	1.0	1	06/21/2017 04:21
Cyclohexane	ND	18	1	06/21/2017 04:21
Dibromochloromethane	ND	4.4	1	06/21/2017 04:21
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/21/2017 04:21
1,2-Dibromoethane (EDB)	ND	3.9	1	06/21/2017 04:21
1,2-Dichlorobenzene	ND	3.0	1	06/21/2017 04:21
1,3-Dichlorobenzene	ND	3.0	1	06/21/2017 04:21
1,4-Dichlorobenzene	ND	3.0	1	06/21/2017 04:21
Dichlorodifluoromethane	2.8	2.5	1	06/21/2017 04:21
1,1-Dichloroethane	ND	2.0	1	06/21/2017 04:21
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/21/2017 04:21
1,1-Dichloroethene	ND	2.0	1	06/21/2017 04:21
cis-1,2-Dichloroethene	ND	2.0	1	06/21/2017 04:21
trans-1,2-Dichloroethene	ND	2.0	1	06/21/2017 04:21
1,2-Dichloropropane	ND	2.4	1	06/21/2017 04:21
cis-1,3-Dichloropropene	ND	2.3	1	06/21/2017 04:21

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Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-3	1706705-002A	SoilGas	06/12/2017 11:49	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.43	26.86	AK

Analytes	Result	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	2.3	1	06/21/2017 04:21
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/21/2017 04:21
Diisopropyl ether (DIPE)	ND	2.1	1	06/21/2017 04:21
1,4-Dioxane	ND	1.8	1	06/21/2017 04:21
Ethanol	ND	96	1	06/21/2017 04:21
Ethyl acetate	ND	1.8	1	06/21/2017 04:21
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	06/21/2017 04:21
Ethylbenzene	7.4	2.2	1	06/21/2017 04:21
4-Ethyltoluene	8.8	2.5	1	06/21/2017 04:21
Freon 113	ND	3.9	1	06/21/2017 04:21
Heptane	ND	21	1	06/21/2017 04:21
Hexachlorobutadiene	ND	5.4	1	06/21/2017 04:21
Hexane	ND	18	1	06/21/2017 04:21
2-Hexanone	ND	2.1	1	06/21/2017 04:21
4-Methyl-2-pentanone (MIBK)	ND	2.1	1	06/21/2017 04:21
Methyl-t-butyl ether (MTBE)	ND	1.8	1	06/21/2017 04:21
Methylene chloride	ND	8.8	1	06/21/2017 04:21
Methyl methacrylate	ND	2.1	1	06/21/2017 04:21
Naphthalene	ND	5.3	1	06/21/2017 04:21
Propene	ND	88	1	06/21/2017 04:21
Styrene	ND	2.2	1	06/21/2017 04:21
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/21/2017 04:21
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/21/2017 04:21
Tetrachloroethene	600	3.4	1	06/21/2017 04:21
Tetrahydrofuran	ND	3.0	1	06/21/2017 04:21
Toluene	16	1.9	1	06/21/2017 04:21
1,2,4-Trichlorobenzene	ND	3.8	1	06/21/2017 04:21
1,1,1-Trichloroethane	ND	2.8	1	06/21/2017 04:21
1,1,2-Trichloroethane	ND	2.8	1	06/21/2017 04:21
Trichloroethene	ND	2.8	1	06/21/2017 04:21
Trichlorofluoromethane	ND	2.8	1	06/21/2017 04:21
1,2,4-Trimethylbenzene	30	2.5	1	06/21/2017 04:21
1,3,5-Trimethylbenzene	6.8	2.5	1	06/21/2017 04:21

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-3	1706705-002A	SoilGas	06/12/2017 11:49	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.43	26.86	AK

Analytes	Result	RL	DF	Date Analyzed
Vinyl Acetate	ND	18	1	06/21/2017 04:21
Vinyl Chloride	ND	1.3	1	06/21/2017 04:21
Xylenes, Total	47	6.6	1	06/21/2017 04:21
Surrogates	REC (%)	Limits		
1,2-DCA-d4	92	70-130		06/21/2017 04:21
Toluene-d8	97	70-130		06/21/2017 04:21
4-BFB	97	70-130		06/21/2017 04:21



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-4	1706705-003A	SoilGas	06/12/2017 12:35	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.61	27.17	AK

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	60	1	06/21/2017 05:01
Acrolein	ND	5.8	1	06/21/2017 05:01
Acrylonitrile	ND	1.1	1	06/21/2017 05:01
tert-Amyl methyl ether (TAME)	ND	2.1	1	06/21/2017 05:01
Benzene	ND	1.6	1	06/21/2017 05:01
Benzyl chloride	ND	2.6	1	06/21/2017 05:01
Bromodichloromethane	ND	3.5	1	06/21/2017 05:01
Bromoform	ND	5.2	1	06/21/2017 05:01
Bromomethane	3.7	2.0	1	06/21/2017 05:01
1,3-Butadiene	ND	1.1	1	06/21/2017 05:01
2-Butanone (MEK)	ND	75	1	06/21/2017 05:01
t-Butyl alcohol (TBA)	ND	31	1	06/21/2017 05:01
Carbon Disulfide	ND	1.6	1	06/21/2017 05:01
Carbon Tetrachloride	ND	3.2	1	06/21/2017 05:01
Chlorobenzene	ND	2.4	1	06/21/2017 05:01
Chloroethane	ND	1.3	1	06/21/2017 05:01
Chloroform	ND	2.4	1	06/21/2017 05:01
Chloromethane	ND	1.0	1	06/21/2017 05:01
Cyclohexane	ND	18	1	06/21/2017 05:01
Dibromochloromethane	ND	4.4	1	06/21/2017 05:01
1,2-Dibromo-3-chloropropane	ND	0.12	1	06/21/2017 05:01
1,2-Dibromoethane (EDB)	ND	3.9	1	06/21/2017 05:01
1,2-Dichlorobenzene	ND	3.0	1	06/21/2017 05:01
1,3-Dichlorobenzene	ND	3.0	1	06/21/2017 05:01
1,4-Dichlorobenzene	ND	3.0	1	06/21/2017 05:01
Dichlorodifluoromethane	2.8	2.5	1	06/21/2017 05:01
1,1-Dichloroethane	ND	2.0	1	06/21/2017 05:01
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	06/21/2017 05:01
1,1-Dichloroethene	ND	2.0	1	06/21/2017 05:01
cis-1,2-Dichloroethene	ND	2.0	1	06/21/2017 05:01
trans-1,2-Dichloroethene	ND	2.0	1	06/21/2017 05:01
1,2-Dichloropropane	ND	2.4	1	06/21/2017 05:01
cis-1,3-Dichloropropene	ND	2.3	1	06/21/2017 05:01

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-4	1706705-003A	SoilGas	06/12/2017 12:35	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.61	27.17	AK

Analytes	Result	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	2.3	1	06/21/2017 05:01
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	06/21/2017 05:01
Diisopropyl ether (DIPE)	ND	2.1	1	06/21/2017 05:01
1,4-Dioxane	ND	1.8	1	06/21/2017 05:01
Ethanol	ND	96	1	06/21/2017 05:01
Ethyl acetate	ND	1.8	1	06/21/2017 05:01
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	06/21/2017 05:01
Ethylbenzene	2.6	2.2	1	06/21/2017 05:01
4-Ethyltoluene	3.5	2.5	1	06/21/2017 05:01
Freon 113	ND	3.9	1	06/21/2017 05:01
Heptane	ND	21	1	06/21/2017 05:01
Hexachlorobutadiene	ND	5.4	1	06/21/2017 05:01
Hexane	ND	18	1	06/21/2017 05:01
2-Hexanone	ND	2.1	1	06/21/2017 05:01
4-Methyl-2-pentanone (MIBK)	ND	2.1	1	06/21/2017 05:01
Methyl-t-butyl ether (MTBE)	ND	1.8	1	06/21/2017 05:01
Methylene chloride	ND	8.8	1	06/21/2017 05:01
Methyl methacrylate	ND	2.1	1	06/21/2017 05:01
Naphthalene	5.7	5.3	1	06/21/2017 05:01
Propene	ND	88	1	06/21/2017 05:01
Styrene	ND	2.2	1	06/21/2017 05:01
1,1,1,2-Tetrachloroethane	ND	3.5	1	06/21/2017 05:01
1,1,2,2-Tetrachloroethane	ND	3.5	1	06/21/2017 05:01
Tetrachloroethene	2800	34	10	06/21/2017 09:50
Tetrahydrofuran	ND	3.0	1	06/21/2017 05:01
Toluene	6.1	1.9	1	06/21/2017 05:01
1,2,4-Trichlorobenzene	ND	3.8	1	06/21/2017 05:01
1,1,1-Trichloroethane	ND	2.8	1	06/21/2017 05:01
1,1,2-Trichloroethane	ND	2.8	1	06/21/2017 05:01
Trichloroethene	ND	2.8	1	06/21/2017 05:01
Trichlorofluoromethane	ND	2.8	1	06/21/2017 05:01
1,2,4-Trimethylbenzene	13	2.5	1	06/21/2017 05:01
1,3,5-Trimethylbenzene	2.6	2.5	1	06/21/2017 05:01

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Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/14/17 14:20
Date Prepared: 6/21/17
Project: Swiss Valley Cleaners

WorkOrder: 1706705
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS-4	1706705-003A	SoilGas	06/12/2017 12:35	GC24	140826

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.61	27.17	AK

Analytes	Result	RL	DF	Date Analyzed
Vinyl Acetate	ND	18	1	06/21/2017 05:01
Vinyl Chloride	ND	1.3	1	06/21/2017 05:01
Xylenes, Total	16	6.6	1	06/21/2017 05:01

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	96	70-130	06/21/2017 05:01
Toluene-d8	99	70-130	06/21/2017 05:01
4-BFB	98	70-130	06/21/2017 05:01

 Angela Rydelius, Lab Manager



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/20/17
Date Analyzed: 6/20/17
Instrument: GC24
Matrix: SoilGas
Project: Swiss Valley Cleaners

WorkOrder: 1706705
BatchID: 140826
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-140826

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	ND	30	60	-	92	60-140
Acrolein	ND	39.6	2.9	58.25	-	68	60-140
Acrylonitrile	ND	49.4	0.55	55	-	90	60-140
tert-Amyl methyl ether (TAME)	ND	94.4	1.0	105	-	90	60-140
Benzene	ND	67.6	0.80	80	-	85	60-140
Benzyl chloride	ND	155	1.3	132.5	-	117	60-140
Bromodichloromethane	ND	170	1.8	175	-	97	60-140
Bromoform	ND	317	2.6	262.5	-	121	60-140
Bromomethane	ND	148	1.0	97.5	-	151, F2	60-140
1,3-Butadiene	ND	54.4	0.55	55	-	99	60-140
2-Butanone (MEK)	ND	ND	38	75	-	86	60-140
t-Butyl alcohol (TBA)	ND	84.9	16	77.5	-	110	60-140
Carbon Disulfide	ND	76.7	0.80	80	-	96	60-140
Carbon Tetrachloride	ND	126	1.6	160	-	79	60-140
Chlorobenzene	ND	126	1.2	117.5	-	107	60-140
Chloroethane	ND	61.7	0.65	67.5	-	91	60-140
Chloroform	ND	107	1.2	122.5	-	87	60-140
Chloromethane	ND	41.6	0.50	52.5	-	79	60-140
Cyclohexane	ND	74.7	9.0	87.5	-	85	60-140
Dibromochloromethane	ND	242	2.2	217.5	-	111	60-140
1,2-Dibromo-3-chloropropane	ND	318	0.060	245	-	130	60-140
1,2-Dibromoethane (EDB)	ND	202	2.0	195	-	104	60-140
1,2-Dichlorobenzene	ND	179	1.5	152.5	-	117	60-140
1,3-Dichlorobenzene	ND	178	1.5	152.5	-	117	60-140
1,4-Dichlorobenzene	ND	179	1.5	152.5	-	118	60-140
Dichlorodifluoromethane	ND	116	1.2	125	-	93	60-140
1,1-Dichloroethane	ND	123	1.0	102.5	-	120	60-140
1,2-Dichloroethane (1,2-DCA)	ND	84.2	1.0	102.5	-	82	60-140
1,1-Dichloroethene	ND	79.5	1.0	100	-	79	60-140
cis-1,2-Dichloroethene	ND	93.8	1.0	100	-	94	60-140
trans-1,2-Dichloroethene	ND	94.5	1.0	100	-	95	60-140
1,2-Dichloropropane	ND	96.7	1.2	117.5	-	82	60-140
cis-1,3-Dichloropropene	ND	124	1.2	115	-	108	60-140
trans-1,3-Dichloropropene	ND	123	1.2	115	-	107	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	166	1.8	177.5	-	94	60-140
Diisopropyl ether (DIPE)	ND	90.5	1.0	105	-	86	60-140
1,4-Dioxane	ND	94.6	0.90	92.5	-	102	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/20/17
Date Analyzed: 6/20/17
Instrument: GC24
Matrix: SoilGas
Project: Swiss Valley Cleaners

WorkOrder: 1706705
BatchID: 140826
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-140826

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethanol	ND	ND	48	47.5	-	84	60-140
Ethyl acetate	ND	80.2	0.90	92.5	-	87	60-140
Ethyl tert-butyl ether (ETBE)	ND	94.4	1.0	105	-	90	60-140
Ethylbenzene	ND	118	1.1	110	-	107	60-140
4-Ethyltoluene	ND	142	1.2	125	-	114	60-140
Freon 113	ND	185	2.0	195	-	95	60-140
Heptane	ND	85.2	10	105	-	81	60-140
Hexachlorobutadiene	ND	340	2.7	270	-	126	60-140
Hexane	ND	75.4	9.0	90	-	84	60-140
2-Hexanone	ND	150	1.0	105	-	143, F2	60-140
Isopropyl Alcohol	ND	56.6	25	62.5	-	91	60-140
4-Methyl-2-pentanone (MIBK)	ND	99.6	1.0	105	-	95	60-140
Methyl-t-butyl ether (MTBE)	ND	87.2	0.90	92.5	-	94	60-140
Methylene chloride	ND	80.9	4.4	87.5	-	92	60-140
Methyl methacrylate	ND	93.6	1.0	104	-	90	60-140
Naphthalene	ND	361	2.6	265	-	136	60-140
Propene	ND	ND	44	42.5	-	88	60-140
Styrene	ND	120	1.1	107.5	-	112	60-140
1,1,1,2-Tetrachloroethane	ND	186	1.8	175	-	106	60-140
1,1,2,2-Tetrachloroethane	ND	181	1.8	175	-	104	60-140
Tetrachloroethene	ND	182	1.7	172	-	106	60-140
Tetrahydrofuran	ND	61.2	1.5	75	-	82	60-140
Toluene	ND	98.1	0.95	95	-	103	60-140
1,2,4-Trichlorobenzene	ND	238	1.9	187.5	-	127	60-140
1,1,1-Trichloroethane	ND	148	1.4	137.5	-	107	60-140
1,1,2-Trichloroethane	ND	135	1.4	137.5	-	98	60-140
Trichloroethene	ND	132	1.4	137.5	-	96	60-140
Trichlorofluoromethane	ND	131	1.4	142.5	-	92	60-140
1,2,4-Trimethylbenzene	ND	146	1.2	125	-	116	60-140
1,3,5-Trimethylbenzene	ND	146	1.2	125	-	116	60-140
Vinyl Acetate	ND	128	9.0	90	-	142, F2	60-140
Vinyl Chloride	ND	61.4	0.65	65	-	94	60-140
Xylenes, Total	ND	322	3.3	330	-	97	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/20/17
Date Analyzed: 6/20/17
Instrument: GC24
Matrix: SoilGas
Project: Swiss Valley Cleaners

WorkOrder: 1706705
BatchID: 140826
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-140826

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
1,2-DCA-d4	426	408		500	85	82	70-130
Toluene-d8	484.5	490		500	97	98	70-130
4-BFB	478.6	500		500	96	100	70-130

QA/QC Officer

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1706705

ClientCode: AGES

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Daniel Villanueva
 Advanced GeoEnvironmental, Inc.
 837 Shaw Road
 Stockton, CA 95215
 (209) 467-1006 FAX: (209) 467-1118

Email: dvillanueva@advgeoenv.com
 cc/3rd Party:
 PO:
 ProjectNo: Swiss Valley Cleaners

Bill to:
 Erica
 Advanced GeoEnvironmental, Inc.
 837 Shaw Road
 Stockton, CA 95215
 ap@advgeoenv.com; kburchard@advge

Requested TAT: 5 days;

Date Received: 06/14/2017
Date Logged: 06/15/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1706705-001	SS-2	SoilGas	6/12/2017 11:02	<input type="checkbox"/>			A	A	A	A	A					
1706705-002	SS-3	SoilGas	6/12/2017 11:49	<input type="checkbox"/>			A	A	A	A	A					
1706705-003	SS-4	SoilGas	6/12/2017 12:35	<input type="checkbox"/>			A	A	A	A	A					
1706705-004	Unused Summa	SoilGas	<Not Provided>	<input type="checkbox"/>	A	A						A				

Test Legend:

1	PREFD REPORT	2	PRUNUSEDSUMMA	3	TO15_HIGHLEVEL_SOIL(UG/M3)	4	TO15_HIGHLEVEL-LC_SOIL(UG/M3)
5	TO15_Scan-SIM_SOIL(UG/M3) [N]	6	TO15-8260_SOIL(UG/M3) [N]	7	TO15-LC_SOIL(UG/M3) [N]	8	UNUSED_SUMMA
9		10		11		12	

Prepared by: Jena Alfaro

The following SampIDs: 001A, 002A, 003A contain testgroup TO15_SG(UG/M3).

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: ADVANCED GEOENVIRONMENTAL, INC.

Project: Swiss Valley Cleaners

Work Order: 1706705

Client Contact: Daniel Villanueva

QC Level: LEVEL 2

Contact's Email: dvillanueva@advgeoenv.com

Comments:


Date Logged: 6/15/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1706705-001A	SS-2	SoilGas	TO15 for Soil Vapor (Scan-SIM)	1	1L Summa	<input type="checkbox"/>	6/12/2017 11:02	5 days		<input type="checkbox"/>	
1706705-002A	SS-3	SoilGas	TO15 for Soil Vapor (Scan-SIM)	1	1L Summa	<input type="checkbox"/>	6/12/2017 11:49	5 days		<input type="checkbox"/>	
1706705-003A	SS-4	SoilGas	TO15 for Soil Vapor (Scan-SIM)	1	1L Summa	<input type="checkbox"/>	6/12/2017 12:35	5 days		<input type="checkbox"/>	
1706705-004A	Unused Summa	SoilGas	Unused Summa	1	1L Summa	<input type="checkbox"/>	<Not Provided>	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

 McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701 Telephone: (877) 252-9262 / Fax: (925) 252-9269 www.mccampbell.com main@mccampbell.com						CHAIN OF CUSTODY RECORD											
						Turn Around Time: 1 Day Rush		2 Day Rush		3 Day Rush		STD <input checked="" type="checkbox"/>		Quote #			
J-Flag / MDL		ESL		Cleanup Approved				Bottle Order #									
Delivery Format: PDF		GeoTracker EDF <input checked="" type="checkbox"/>		EDD		Write On (DW)		EQuIS									
Report To: <u>Daniel Villanueva</u> Bill To:						Analysis Requested						Helium Shroud SN#					
Company: <u>Advanced Geo Environmental</u>						VOCs TO-15 (µg/m³) - See Notes 8010 by TO-15 (µg/m³) TPH(g) (µg/m³) LEED: (inc. 4PCH, Formaldehyde, CO, Total VOCs) Fixed Gas (CO, Methane, Ethane, Ethylene, Acetylene, Propane, CO) % Fixed Gas: (O₂, N₂) % APH: Aliphatic and/or Aromatic (circle one) µg/m³ Helium Leak Check % Leak Check (IPA, Norflorane, 1,1-difluoroethane) µg/m³						Leak Check Default is IPA					
Email: <u>DVillanueva@ADVGEENV.COM</u>												Notes: Please specify units if different than default: VOCs is reported in µg/m³, fixed is reported in %.					
Alt Email: Tele: <u>209-467-1006</u>												Matrix		Canister Pressure / Vacuum			
Project Name: <u>Swiss Valley Clean</u> Project#:												Soilgas		Indoor Air		Initial Final	
Project Location: PO #																	
Sampler Signature: <u>[Signature]</u>																	
SAMPLE ID Location / Field Point		Sampling Start Date Time		End Time		Canister SN#		Sample Kit / Manifold #									
<u>SS-2</u>		<u>6/12/17 1055</u>		<u>1102</u>		<u>R1226-2559</u>		<u>316-1320</u>		<u>X</u>							
<u>SS-3</u>		<u>" 1142</u>		<u>1149</u>		<u>6164-790</u>		<u>316-1316</u>		<u>X</u>							
<u>SS-4</u>		<u>" 1228</u>		<u>1235</u>		<u>R1216-2549</u>		<u>316-827</u>		<u>X</u>							
**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.																	

Relinquished By / Company Name		Date	Time	Received By / Company Name		Date	Time	Comments / Instructions
<u>[Signature] AGE</u>		<u>6-14-17</u>	<u>0700</u>	<u>[Signature]</u>		<u>6-14-17</u>	<u>815</u>	
<u>[Signature]</u>		<u>6-14-17</u>	<u>1420</u>	<u>[Signature]</u>		<u>6/14/17</u>	<u>1420</u>	



Sample Receipt Checklist

Client Name: **Advanced GeoEnvironmental, Inc.**
 Project Name: **Swiss Valley Cleaners**

Date and Time Received: **6/14/2017 14:20**
 Date Logged: **6/15/2017**
 Received by: **Jena Alfaro**
 Logged by: **Jena Alfaro**

WorkOrder No: **1706705** Matrix: SoilGas
 Carrier: David Shaver (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No NA
 Sample/Temp Blank temperature Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

UCMR Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

Comments: