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ACKNOWLEDGMENT STATEMENT

**Subject: 1395 MacArthur Boulevard, San Leandro, California
Remediation Status 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.



Mr. Sayed Hussain, agent for
ESC PARTNERS, L. P. and
Mr. William Matthew Brooks
4725 Thornton Avenue
Fremont, CA, 94536

Remediation Status Report – Second Quarter 2017
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

27 July 2017
AGE-Project No. 12-2461

PREPARED FOR:

Mr. William Mathews Brooks
ARDENBROOK

PREPARED BY:



Environmental • Compliance • Industrial Hygiene • Geotechnical

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www.advgeoenv.com

"Working in Partnership with People, Business and the Environment"

Remediation Status Report – Second Quarter 2017
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

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AdvancedGeo
Environmental



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PREPARED BY:

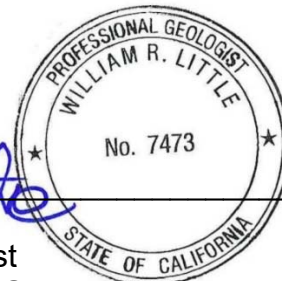
Daniel J. Villanueva
Senior Project Geologist

PROJECT MANAGER:

Daniel J. Villanueva
Senior Project Geologist

REVIEWED BY:

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



Remediation Status Report – Second Quarter 2017
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

<u>SECTION</u>	<u>PAGE</u>
1.0. INTRODUCTION.....	1
2.0. REMEDIAL OPERATION PROCEDURES	1
3.0. REMEDIAL OPERATION FINDINGS	2
4.0. CONCLUSIONS.....	3
5.0. RECOMMENDATIONS.....	3
6.0. LIMITATIONS	4

FIGURES

Figure 1 – *Location Map*

Figure 2 – *Soil-Vapor Well Locations & Trenching Locations*

TABLES

Table 1 – *Well Construction Details*

Table 2 – *SVE Field Parameters*

Table 3 – *Analytical Results of Vapor Samples*

APPENDICES

Appendix A – *Laboratory Analytical Data*

Appendix B – *Soil-Vapor Extracted Volume-Mass Calculations*

Appendix C – *Trend Graph*

Remediation Status Report – Second Quarter 2017
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

1.0. INTRODUCTION

At the request of Mr. William Mathews Brooks of Ardenbrook, Inc., Advanced GeoEnvironmental, Inc. (AGE) has prepared this, *Remediation Status Report – Second Quarter 2017*, for the Swiss Valley Cleaners site located at 1395 MacArthur Boulevard, San Leandro, California (site). This report documents remedial operation and maintenance of the soil-vapor extraction during the Second Quarter 2017. The location of the site is illustrated in Figure 1. A plot plan of the site, SVE wells and trenching locations are illustrated in Figure 2. Well construction details are included as Table 1.

On 11 November 2016, the SVE system began operation under Bay Area Air Quality Management District (BAAQMD) permit application number 28042, plant number 23608. SVE commenced on 11 November 2016 utilizing a network of soil-vapor wells VW-1 through VW-21.

2.0. REMEDIAL OPERATION PROCEDURES

Remedial piping is routed to a moisture knockout vessel and two 1,000-pound granular activated carbon (GAC) vessels and then to a positive displacement blower capable of producing 150 standard cubic feet per minute (scfm). Sampling ports have been installed upstream of the vacuum blower inlet to recover influent soil-vapor stream samples, and downstream of the GAC vessels to recover effluent vapor stream samples to monitor the efficiency of contaminant destruction.

The SVE system was typically monitored on a weekly basis and sampled on a monthly basis. During startup activities the remedial system was monitored daily for the first week of operation.

In order to monitor efficiency of the SVE petroleum vapor recovery system, the following steps were taken: 1) a Magnehelic® vacuum gauge and Dwyer® DS-200 differential pressure sensor were installed before the blower so that the total air flow rate was monitored; the flow rate was determined from the measured differential pressure and the piping diameter using a nomograph; 2) SVE air flow of the influent and effluent streams were monitored routinely for the presence of organic vapor using a Rae® Systems MiniRae3000 organic vapor meter (OVM) equipped with a photo ionization detector (PID-10.6 eV lamp); and 3) influent and effluent vapor flow vapor stream samples were collected from sampling ports installed upstream (influent) of the SVE blower and downstream (effluent) of the carbon treatment system and submitted for laboratory analysis as required by the BAAQMD Permit to Operate (PTO).

Numerous operational parameters are recorded or displayed on the system, including: operational and cumulative system hours (SVE); air temperature after the blower; vacuum generated by the blower; flow of SVE vapor stream; influent OVM readings taken before and after the blower, at each of the carbon vessels, and effluent readings downstream of the carbon treatment system. Table 2 lists each of the parameters measured evaluate system performance and trends.

Additionally, the SVE well network consists of twenty-one shallow screened SVE wells (VW-1 through VW-21) screened from 2 feet to 7 feet bsg. Each well is fitted with a ball valve to allow individual well adjustments. During this operational period all wells were utilized for SVE remediation (Table 2).

During this operational period influent and effluent vapor samples were collected on 19 April and 26 June 2017. Samples were collected using a vacuum pump and lung box into Tedlar bags. Samples were submitted to a California Department of Public Health certified laboratory for analysis of full-scan Volatile Organic Compounds (VOCs) in accordance with EPA Method 8260. Analytical results are included as Appendix A.

3.0. REMEDIAL OPERATION FINDINGS

Data collected during the second quarter 2017 operation and monitoring events as well as vapor stream sampling was used to determine the efficiency and effectiveness of the on-site remedial SVE system. The following is a summary of findings from the second quarter 2017 operational period.

As of 26 June 2017, the SVE system has been in operation for 3,438.7 hours (equivalent to 143 days). During the second quarter 2017 (05 April and 26 June), the system operated for 434.1 hours.

The SVE system flow ranged from 172 standard cubic feet per min (scfm) to 180 scfm. System vacuum has been regulated between 6 inches of water to 9.4 inches of water during the quarter. PID system influent readings were collected from sampling ports before (influent) and after (effluent) the blower during this quarter. Influent readings ranged from 0 parts per million by volume (ppmv) to 1.3 ppmv. Effluent readings were measured at 0.0 ppmv. SVE system parameters are summarized in Table 2.

Influent and effluent vapor samples were collected on 19 April and 26 June 2017. Tetrachloroethene (PCE) was detected in both influent samples at concentrations ranging from 1,600 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 2,100 $\mu\text{g}/\text{m}^3$. Constituents of concern were not reported above laboratory reporting limits in any of the effluent samples collected during the second quarter 2017.

No other analytes of concern were reported above laboratory detection limits in the samples collected during the second quarter 2017 operational period. SVE influent and effluent samples collected this quarter are summarized in Table 3. The laboratory reports

(McC Campbell Analytical Work Order Nos. 1704852 and 1706C23), QA/QC report and chain of custody form are included in Appendix A. The laboratory electronic deliverable format files were QA/QC checked and uploaded to the State Water Board GeoTracker site under confirmation numbers 3679275751 and 9030234992.

MASS REMOVAL

Between 05 April and 26 June 2017, the SVE unit operated a total of 434.1 hours, for the estimation of contaminate mass removal (Table 2). The average analytical results of the influent SVE flow samples, average influent flow rates and the operational periods (i.e. between sampling events) were used to calculate the approximate mass of extracted PCE during this period. During the second quarter 2017, approximately 0.05 pounds of PCE were removed from the soil vapor at the site using SVE remediation. Mass and volume calculations are included in Appendix B.

4.0. CONCLUSIONS

Based upon the data presented in this report, AGE concludes:

- SVE remediation generally operated without down-time during the second quarter 2017 (Table 2); however, the system was shut down to evaluate rebound in indoor air and sub-slab vapor following a significant period of non-operation;
- PCE was detected at low concentrations in both influent samples during the second quarter 2017 remediation period. Influent concentrations still appear to be reaching asymptotic levels (see trend graph in Appendix C). However, slight rebound was observed in recently performed indoor air and sub-slab samples and the system should continue to be run until constituents of concern are mitigated.
- The total system flow and vacuum observed during the second quarter 2017 is adequate to remove the chlorinated hydrocarbon mass present at the site; and
- Between 15 March and 26 June 2017, approximately 0.0506 pounds of PCE were removed from the shallow subsurface (Appendix B).
- Field measurements of influent sampling and from individual soil-vapor wells indicate that a sufficient PCE mass has been removed as a result of SVE operations conducted at the site since its initiation.

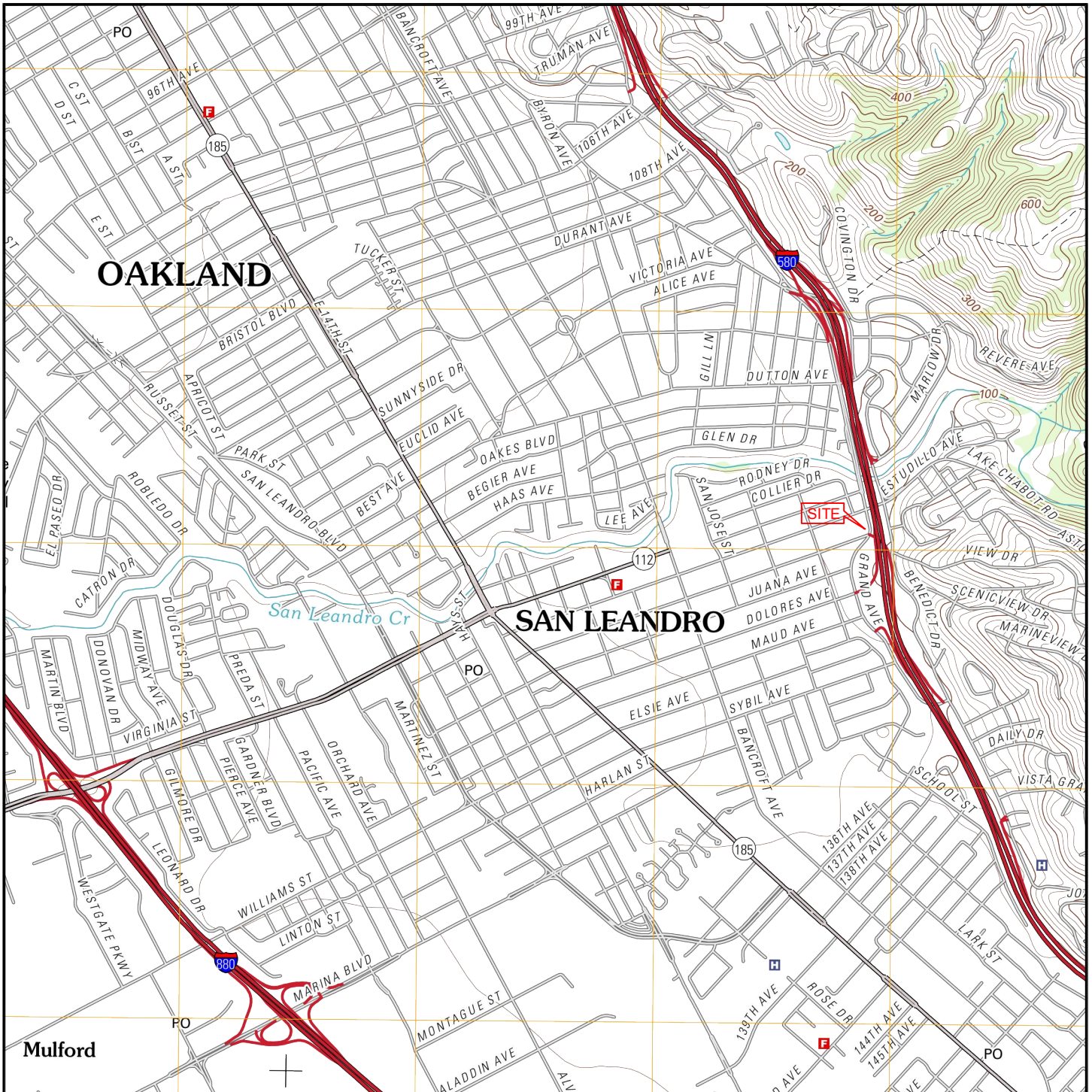
5.0. RECOMMENDATIONS

Based on the findings of the environmental activities performed to date at the site, AGE recommends continued operation of the SVE system, until indoor air and sub-slab concentrations have been adequately mitigated.

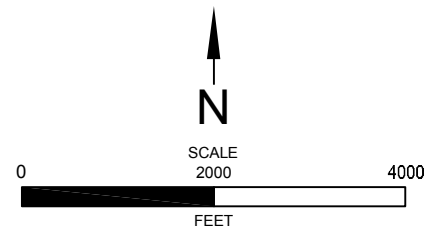
6.0. LIMITATIONS

Our professional services were performed using that degree of care and skill ordinarily exercised by environmental consultants practicing in this or similar localities. Findings were based upon analytical results provided by an independent laboratory. Evaluation of the geologic/hydrogeologic conditions at the site for the purpose of this investigation was made from a limited number of available data points (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 interpretations, opinions, and 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



Advanced
GeoEnvironmental, Inc.
 www.advgeoenv.com

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



TABLES

TABLE 1
WELL CONSTRUCTION DETAILS
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California

Well ID	Installation Date	Borehole Diameter (inch)	Total Drilled Depth (feet bsg)	Total Well Depth (feet bsg)	Casing Elevation (ft MSL)	Well Casing Material	Slot Size (inch)	Screen Interval (feet)	Filter Pack Interval (feet bsg)	Bentonite Interval (feet bsg)	Grout Interval (feet bsg)	Well Location
VW-1	08-21-2014	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1395 MacArthur (Swiss Valley Cleaners)
VW-2	08-21-2014	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Front of Facility
VW-3	08-22-2014	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1395 MacArthur (Swiss Valley Cleaners)
VW-4	08-22-2014	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Front of Facility
VW-5	05-08-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1369 MacArthur (Former Jazzercise)
VW-6	05-08-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1369 MacArthur (Former Jazzercise)
VW-7	05-08-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1369 MacArthur (Former Jazzercise)
VW-8	05-08-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1369 MacArthur (Former Jazzercise)
VW-9	08-25-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-10	08-25-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-11	08-25-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-12	08-25-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Front of Facility
VW-13	08-25-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Front of Facility
VW-14	08-26-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-15	08-26-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-16	08-26-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-17	08-26-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Front of Facility
VW-18	08-26-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1395 MacArthur (Swiss Valley Cleaners)
VW-19	08-26-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	Rear of Facility
VW-20	08-27-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1395 MacArthur (Swiss Valley Cleaners)
VW-21	08-27-2015	7	7	7	NM	PVC	0.020	2 to 7	2 to 7	0.5 to 2	none	1395 MacArthur (Swiss Valley Cleaners)

Notes:

bsg: below surface grade

NM: Not measured

TABLE 2
SVE FIELD PARAMETERS
 Swiss Valley Cleaners
 1395 MacArthur Boulevard, San Leandro, California

Date	Time	System Hours	Flow (IOW in 3" Pipe)	Flow (SCFM)	Vacuum (IOW)	Influent PID (ppm)	Effluent PID (ppm)	Wells Operational	Total Air Temp (F°)	Total Air Pressure (IOW)
11/11/2016	10:00	22835.8	1.6	164	7.6	16	0	VW-1 through VW-21	121	24
11/14/2016	13:30	22910.5	1.75	170	8.0	4	0	VW-1 through VW-21	123	23
11/15/2016	13:40	22934.4	1.8	172	8.7	10	0	VW-1 through VW-21	120	24
11/16/2016	13:05	22957.8	1.8	172	9.4	10	0	VW-1 through VW-21	120	24
11/17/2016	12:10	22981.0	1.8	172	9.8	11	0	VW-1 through VW-21	118	24
11/22/2016	12:10	23100.9	1.8	172	9.8	8	0	VW-1 through VW-21	118	24
12/1/2016	10:40	23315.5	1.8	172	9.8	9	0	VW-1 through VW-21	116	24
12/6/2016	10:25	23435.9	1.8	172	9.8	8	0	VW-1 through VW-21	112	23
12/15/2016	11:00	23651.9	1.8	172	9.8	5.1	0	VW-1 through VW-21	114	23
12/20/2016	9:10	23767.1	-	-	-	-	-	-	-	-
12/27/2016	11:40	23767.1	1.6	164	-	5.4	0	VW-1 through VW-21	-	25
1/5/2017	9:30	23982.0	1.7	168	14	5	0	VW-1 through VW-21	114	26
1/10/2017	15:50	24101.8	1.75	170	15	4	0	VW-1 through VW-21	112	25
1/19/2017	10:10	24114.0	2.1	185	13	8	0	VW-1 through VW-21	112	28
2/1/2017	10:35	24426.4	2.4	200	12	1.3	0	VW-1 through VW-21	120	-
2/13/2017	12:15	24715.9	2.4	200	6	1.7	0	VW-1 through VW-21	120	-
2/21/2017	10:30	24906.2	2.4	200	6	1.5	0	VW-1 through VW-21	120	-
2/24/2017	11:17	24979.0	2.1	185	10	1.6	0	VW-1 through VW-21	115	28
3/1/2017	10:15	25097.5	2.1	185	10	1.6	0	VW-1 through VW-21	117	26
3/7/2017	11:15	25146.3	2.1	185	8	2.7	0	VW-1 through VW-21	112	25
3/15/2017	11:01	25337.0	2.1	185	8.4	1.1	0	VW-1 through VW-21	124	27
3/22/2017	10:20	25504.3	2.1	185	8	2.8	0	VW-1 through VW-21	116	26
4/5/2017	10:58	25840.4	2.0	180	9.4	0.2	0	VW-1 through VW-21	128	26
4/19/2017	10:10	25962.0	2.0	180	9.5	1	0	VW-1 through VW-21	-	24
5/2/2017	11:25	26274.3	2.0	180	6	0	0	VW-1 through VW-21	145	-
6/26/2017	12:40	26274.5	1.8	172	8.8	0	0	VW-1 through VW-21	135	23

Notes:

IOW: Inches of Water

SCFM: standard cubic feet per minute

ppm: parts per million

F°: Degrees Fahrenheit

TABLE 3
SOIL VAPOR EXTRACTION ANALYTICAL DATA
 Swiss Valley Cleaners
 1395 MacArthur Boulevard, San Leandro, California

Sample ID	Date	EPA 8260B					
		Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1- Dichloroethene (1,1-DCE)	Trans 1,2- Dichloroethene (Trans 1,2-DCE)	Cis 1,2- Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
Influent/Vapor	11-11-2016	20,000	<250	<250	<250	<250	<250
	11-14-2016	13,000	<1,000	<1,000	<1,000	<1,000	<1,000
	11-15-2016	5,000	<1,000	<1,000	<1,000	<1,000	<1,000
	11-16-2016	6,000	<1,000	<1,000	<1,000	<1,000	<1,000
	11-17-2016	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
	12-15-2016	3,400	<250	<250	<250	<250	<250
	01-19-2017	8,900	<250	<250	<250	<250	<250
	02-21-2017	2,100	<250	<250	<250	<250	<250
	03-15-2017	2,000	<250	<250	<250	<250	<250
	04-19-2017	1,600	<250	<250	<250	<250	<250
06-26-2017	2,100	<250	<10,000	<10,000	<10,000	<10,000	
Effluent	11-11-2016	<250	<250	<250	<250	<250	<250
	11-14-2016	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
	11-15-2016	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
	11-16-2016	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
	11-17-2016	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
	12-15-2016	<250	<250	<250	<250	<250	<250
	01-19-2017	<250	<250	<250	<250	<250	<250
	02-21-2017	<250	<250	<250	<250	<250	<250
	03-15-2017	<250	<250	<250	<250	<250	<250
	04-19-2017	<250	<250	<250	<250	<250	<250
06-26-2017	<250	<250	<250	<250	<250	<250	

Notes:

All sample concentrations reported in micrograms per cubic meter

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

APPENDIX A



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1706C23 **Amended:** 07/10/2017

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: 06/26/2017

Analytical Report reviewed & approved for release on 06/29/2017 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: 1706C23

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

H Samples were analyzed out of holding time



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/26/17 14:10
Date Prepared: 6/27/17
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Influent/Vapor	1706C23-001A	Air	06/26/2017 13:09	GC18	141185
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	250	1	06/27/2017 14:02
Benzene	ND	H	250	1	06/27/2017 14:02
Bromobenzene	ND	H	250	1	06/27/2017 14:02
Bromochloromethane	ND	H	250	1	06/27/2017 14:02
Bromodichloromethane	ND	H	250	1	06/27/2017 14:02
Bromoform	ND	H	250	1	06/27/2017 14:02
Bromomethane	ND	H	250	1	06/27/2017 14:02
t-Butyl alcohol (TBA)	ND	H	2500	1	06/27/2017 14:02
n-Butyl benzene	ND	H	250	1	06/27/2017 14:02
sec-Butyl benzene	ND	H	250	1	06/27/2017 14:02
tert-Butyl benzene	ND	H	250	1	06/27/2017 14:02
Carbon Disulfide	ND	H	250	1	06/27/2017 14:02
Carbon Tetrachloride	ND	H	250	1	06/27/2017 14:02
Chlorobenzene	ND	H	250	1	06/27/2017 14:02
Chloroethane	ND	H	250	1	06/27/2017 14:02
Chloroform	ND	H	250	1	06/27/2017 14:02
Chloromethane	ND	H	250	1	06/27/2017 14:02
2-Chlorotoluene	ND	H	250	1	06/27/2017 14:02
4-Chlorotoluene	ND	H	250	1	06/27/2017 14:02
Dibromochloromethane	ND	H	250	1	06/27/2017 14:02
1,2-Dibromo-3-chloropropane	ND	H	250	1	06/27/2017 14:02
1,2-Dibromoethane (EDB)	ND	H	250	1	06/27/2017 14:02
Dibromomethane	ND	H	250	1	06/27/2017 14:02
1,2-Dichlorobenzene	ND	H	250	1	06/27/2017 14:02
1,3-Dichlorobenzene	ND	H	250	1	06/27/2017 14:02
1,4-Dichlorobenzene	ND	H	250	1	06/27/2017 14:02
Dichlorodifluoromethane	ND	H	250	1	06/27/2017 14:02
1,1-Dichloroethane	ND	H	250	1	06/27/2017 14:02
1,2-Dichloroethane (1,2-DCA)	ND	H	250	1	06/27/2017 14:02
1,1-Dichloroethene	ND	H	250	1	06/27/2017 14:02
cis-1,2-Dichloroethene	ND	H	250	1	06/27/2017 14:02
trans-1,2-Dichloroethene	ND	H	250	1	06/27/2017 14:02
1,2-Dichloropropane	ND	H	250	1	06/27/2017 14:02
1,3-Dichloropropane	ND	H	250	1	06/27/2017 14:02
2,2-Dichloropropane	ND	H	250	1	06/27/2017 14:02
1,1-Dichloropropene	ND	H	250	1	06/27/2017 14:02
cis-1,3-Dichloropropene	ND	H	250	1	06/27/2017 14:02

(Cont.)



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/26/17 14:10
Date Prepared: 6/27/17
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Influent/Vapor	1706C23-001A	Air	06/26/2017 13:09	GC18	141185
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
trans-1,3-Dichloropropene	ND	H	250	1	06/27/2017 14:02
Diisopropyl ether (DIPE)	ND	H	250	1	06/27/2017 14:02
Ethylbenzene	ND	H	250	1	06/27/2017 14:02
Ethyl tert-butyl ether (ETBE)	ND	H	250	1	06/27/2017 14:02
Freon 113	ND	H	5000	1	06/27/2017 14:02
Hexachlorobutadiene	ND	H	250	1	06/27/2017 14:02
Hexachloroethane	ND	H	250	1	06/27/2017 14:02
2-Hexanone	ND	H	250	1	06/27/2017 14:02
Isopropylbenzene	ND	H	250	1	06/27/2017 14:02
4-Isopropyl toluene	ND	H	250	1	06/27/2017 14:02
Methyl-t-butyl ether (MTBE)	ND	H	250	1	06/27/2017 14:02
Methylene chloride	ND	H	250	1	06/27/2017 14:02
n-Propyl benzene	ND	H	250	1	06/27/2017 14:02
Styrene	ND	H	250	1	06/27/2017 14:02
1,1,1,2-Tetrachloroethane	ND	H	250	1	06/27/2017 14:02
1,1,2,2-Tetrachloroethane	ND	H	250	1	06/27/2017 14:02
Tetrachloroethene	2100	H	250	1	06/27/2017 14:02
Toluene	ND	H	250	1	06/27/2017 14:02
1,2,3-Trichlorobenzene	ND	H	250	1	06/27/2017 14:02
1,2,4-Trichlorobenzene	ND	H	250	1	06/27/2017 14:02
1,1,1-Trichloroethane	ND	H	250	1	06/27/2017 14:02
1,1,2-Trichloroethane	ND	H	250	1	06/27/2017 14:02
Trichloroethene	ND	H	250	1	06/27/2017 14:02
Trichlorofluoromethane	ND	H	250	1	06/27/2017 14:02
1,2,3-Trichloropropane	ND	H	250	1	06/27/2017 14:02
1,2,4-Trimethylbenzene	ND	H	250	1	06/27/2017 14:02
1,3,5-Trimethylbenzene	ND	H	250	1	06/27/2017 14:02
Vinyl Chloride	ND	H	250	1	06/27/2017 14:02
Xylenes, Total	ND	H	250	1	06/27/2017 14:02
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	115	H	70-130		06/27/2017 14:02
Toluene-d8	101	H	70-130		06/27/2017 14:02
4-BFB	112	H	70-130		06/27/2017 14:02
Analyst(s): JEM					

(Cont.)



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/26/17 14:10
Date Prepared: 6/27/17
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Effluent/Vapor	1706C23-002A	Air	06/26/2017 13:10	GC18	141185
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	250	1	06/27/2017 14:41
Benzene	ND	H	250	1	06/27/2017 14:41
Bromobenzene	ND	H	250	1	06/27/2017 14:41
Bromochloromethane	ND	H	250	1	06/27/2017 14:41
Bromodichloromethane	ND	H	250	1	06/27/2017 14:41
Bromoform	ND	H	250	1	06/27/2017 14:41
Bromomethane	ND	H	250	1	06/27/2017 14:41
t-Butyl alcohol (TBA)	ND	H	2500	1	06/27/2017 14:41
n-Butyl benzene	ND	H	250	1	06/27/2017 14:41
sec-Butyl benzene	ND	H	250	1	06/27/2017 14:41
tert-Butyl benzene	ND	H	250	1	06/27/2017 14:41
Carbon Disulfide	ND	H	250	1	06/27/2017 14:41
Carbon Tetrachloride	ND	H	250	1	06/27/2017 14:41
Chlorobenzene	ND	H	250	1	06/27/2017 14:41
Chloroethane	ND	H	250	1	06/27/2017 14:41
Chloroform	ND	H	250	1	06/27/2017 14:41
Chloromethane	ND	H	250	1	06/27/2017 14:41
2-Chlorotoluene	ND	H	250	1	06/27/2017 14:41
4-Chlorotoluene	ND	H	250	1	06/27/2017 14:41
Dibromochloromethane	ND	H	250	1	06/27/2017 14:41
1,2-Dibromo-3-chloropropane	ND	H	250	1	06/27/2017 14:41
1,2-Dibromoethane (EDB)	ND	H	250	1	06/27/2017 14:41
Dibromomethane	ND	H	250	1	06/27/2017 14:41
1,2-Dichlorobenzene	ND	H	250	1	06/27/2017 14:41
1,3-Dichlorobenzene	ND	H	250	1	06/27/2017 14:41
1,4-Dichlorobenzene	ND	H	250	1	06/27/2017 14:41
Dichlorodifluoromethane	ND	H	250	1	06/27/2017 14:41
1,1-Dichloroethane	ND	H	250	1	06/27/2017 14:41
1,2-Dichloroethane (1,2-DCA)	ND	H	250	1	06/27/2017 14:41
1,1-Dichloroethene	ND	H	250	1	06/27/2017 14:41
cis-1,2-Dichloroethene	ND	H	250	1	06/27/2017 14:41
trans-1,2-Dichloroethene	ND	H	250	1	06/27/2017 14:41
1,2-Dichloropropane	ND	H	250	1	06/27/2017 14:41
1,3-Dichloropropane	ND	H	250	1	06/27/2017 14:41
2,2-Dichloropropane	ND	H	250	1	06/27/2017 14:41
1,1-Dichloropropene	ND	H	250	1	06/27/2017 14:41
cis-1,3-Dichloropropene	ND	H	250	1	06/27/2017 14:41

(Cont.)



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 6/26/17 14:10
Date Prepared: 6/27/17
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Effluent/Vapor	1706C23-002A	Air	06/26/2017 13:10	GC18	141185

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	H	250	1	06/27/2017 14:41
Diisopropyl ether (DIPE)	ND	H	250	1	06/27/2017 14:41
Ethylbenzene	ND	H	250	1	06/27/2017 14:41
Ethyl tert-butyl ether (ETBE)	ND	H	250	1	06/27/2017 14:41
Freon 113	ND	H	5000	1	06/27/2017 14:41
Hexachlorobutadiene	ND	H	250	1	06/27/2017 14:41
Hexachloroethane	ND	H	250	1	06/27/2017 14:41
2-Hexanone	ND	H	250	1	06/27/2017 14:41
Isopropylbenzene	ND	H	250	1	06/27/2017 14:41
4-Isopropyl toluene	ND	H	250	1	06/27/2017 14:41
Methyl-t-butyl ether (MTBE)	ND	H	250	1	06/27/2017 14:41
Methylene chloride	ND	H	250	1	06/27/2017 14:41
n-Propyl benzene	ND	H	250	1	06/27/2017 14:41
Styrene	ND	H	250	1	06/27/2017 14:41
1,1,1,2-Tetrachloroethane	ND	H	250	1	06/27/2017 14:41
1,1,2,2-Tetrachloroethane	ND	H	250	1	06/27/2017 14:41
Tetrachloroethene	ND	H	250	1	06/27/2017 14:41
Toluene	ND	H	250	1	06/27/2017 14:41
1,2,3-Trichlorobenzene	ND	H	250	1	06/27/2017 14:41
1,2,4-Trichlorobenzene	ND	H	250	1	06/27/2017 14:41
1,1,1-Trichloroethane	ND	H	250	1	06/27/2017 14:41
1,1,2-Trichloroethane	ND	H	250	1	06/27/2017 14:41
Trichloroethene	ND	H	250	1	06/27/2017 14:41
Trichlorofluoromethane	ND	H	250	1	06/27/2017 14:41
1,2,3-Trichloropropane	ND	H	250	1	06/27/2017 14:41
1,2,4-Trimethylbenzene	ND	H	250	1	06/27/2017 14:41
1,3,5-Trimethylbenzene	ND	H	250	1	06/27/2017 14:41
Vinyl Chloride	ND	H	250	1	06/27/2017 14:41
Xylenes, Total	ND	H	250	1	06/27/2017 14:41
Surrogates	REC (%)	Qualifiers	Limits		
Dibromofluoromethane	115	H	70-130		06/27/2017 14:41
Toluene-d8	99	H	70-130		06/27/2017 14:41
4-BFB	118	H	70-130		06/27/2017 14:41

Analyst(s): JEM



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/27/17
Date Analyzed: 6/27/17
Instrument: GC18
Matrix: Air
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
BatchID: 141185
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-141185

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
tert-Amyl methyl ether (TAME)	ND	250	-	-	-
Benzene	ND	250	-	-	-
Bromobenzene	ND	250	-	-	-
Bromochloromethane	ND	250	-	-	-
Bromodichloromethane	ND	250	-	-	-
Bromoform	ND	250	-	-	-
Bromomethane	ND	250	-	-	-
t-Butyl alcohol (TBA)	ND	2500	-	-	-
n-Butyl benzene	ND	250	-	-	-
sec-Butyl benzene	ND	250	-	-	-
tert-Butyl benzene	ND	250	-	-	-
Carbon Disulfide	ND	250	-	-	-
Carbon Tetrachloride	ND	250	-	-	-
Chlorobenzene	ND	250	-	-	-
Chloroethane	ND	250	-	-	-
Chloroform	ND	250	-	-	-
Chloromethane	ND	250	-	-	-
2-Chlorotoluene	ND	250	-	-	-
4-Chlorotoluene	ND	250	-	-	-
Dibromochloromethane	ND	250	-	-	-
1,2-Dibromo-3-chloropropane	ND	250	-	-	-
1,2-Dibromoethane (EDB)	ND	250	-	-	-
Dibromomethane	ND	250	-	-	-
1,2-Dichlorobenzene	ND	250	-	-	-
1,3-Dichlorobenzene	ND	250	-	-	-
1,4-Dichlorobenzene	ND	250	-	-	-
Dichlorodifluoromethane	ND	250	-	-	-
1,1-Dichloroethane	ND	250	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	250	-	-	-
1,1-Dichloroethene	ND	250	-	-	-
cis-1,2-Dichloroethene	ND	250	-	-	-
trans-1,2-Dichloroethene	ND	250	-	-	-
1,2-Dichloropropane	ND	250	-	-	-
1,3-Dichloropropane	ND	250	-	-	-
2,2-Dichloropropane	ND	250	-	-	-
1,1-Dichloropropene	ND	250	-	-	-
cis-1,3-Dichloropropene	ND	250	-	-	-
trans-1,3-Dichloropropene	ND	250	-	-	-
Diisopropyl ether (DIPE)	ND	250	-	-	-

(Cont.)



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/27/17
Date Analyzed: 6/27/17
Instrument: GC18
Matrix: Air
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
BatchID: 141185
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-141185

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Ethylbenzene	ND	250	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	250	-	-	-
Freon 113	ND	5000	-	-	-
Hexachlorobutadiene	ND	250	-	-	-
Hexachloroethane	ND	250	-	-	-
2-Hexanone	ND	250	-	-	-
Isopropylbenzene	ND	250	-	-	-
4-Isopropyl toluene	ND	250	-	-	-
Methyl-t-butyl ether (MTBE)	ND	250	-	-	-
Methylene chloride	ND	250	-	-	-
n-Propyl benzene	ND	250	-	-	-
Styrene	ND	250	-	-	-
1,1,1,2-Tetrachloroethane	ND	250	-	-	-
1,1,2,2-Tetrachloroethane	ND	250	-	-	-
Tetrachloroethene	ND	250	-	-	-
Toluene	ND	250	-	-	-
1,2,3-Trichlorobenzene	ND	250	-	-	-
1,2,4-Trichlorobenzene	ND	250	-	-	-
1,1,1-Trichloroethane	ND	250	-	-	-
1,1,2-Trichloroethane	ND	250	-	-	-
Trichloroethene	ND	250	-	-	-
Trichlorofluoromethane	ND	250	-	-	-
1,2,3-Trichloropropane	ND	250	-	-	-
1,2,4-Trimethylbenzene	ND	250	-	-	-
1,3,5-Trimethylbenzene	ND	250	-	-	-
Vinyl Chloride	ND	250	-	-	-
Xylenes, Total	ND	250	-	-	-
Surrogate Recovery					
Dibromofluoromethane	14260		12500	114	70-130
Toluene-d8	12520		12500	100	70-130
4-BFB	1489		1250	119	70-130

(Cont.)



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 6/27/17
Date Analyzed: 6/27/17
Instrument: GC18
Matrix: Air
Project: Swiss Valley Cleaners

WorkOrder: 1706C23
BatchID: 141185
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-141185

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	4290	4330	5000	86	87	56-133	0.925	30
Benzene	4850	4690	5000	97	94	72-122	3.31	30
t-Butyl alcohol (TBA)	16,400	15,000	20000	82	75	35-121	8.87	30
Chlorobenzene	4650	4470	5000	93	89	69-112	3.88	30
1,2-Dibromoethane (EDB)	4600	4400	5000	92	88	62-117	4.37	30
1,2-Dichloroethane (1,2-DCA)	4820	4730	5000	96	95	61-126	1.84	30
1,1-Dichloroethene	5210	5060	5000	104	101	67-122	3.02	30
Diisopropyl ether (DIPE)	4700	4560	5000	94	91	61-131	2.93	30
Ethyl tert-butyl ether (ETBE)	4580	4410	5000	92	88	63-132	3.81	30
Methyl-t-butyl ether (MTBE)	4820	4730	5000	96	95	63-127	1.99	30
Toluene	4420	4170	5000	88	83	64-115	5.77	30
Trichloroethene	5180	4970	5000	104	99	66-127	4.11	30
Xylenes, Total	12,600	12,100	15000	84	80	53-131	4.12	30

Surrogate Recovery

Dibromofluoromethane	14,300	14,400	12500	114	115	83-124	0.885	30
Toluene-d8	12,900	12,600	12500	103	101	80-120	2.28	30
4-BFB	1510	1580	1250	121	126	70-129	4.48	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1706C23

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; admin@adv
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: 06/26/2017

Date Logged: 06/26/2017

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	
1706C23-001	Influent/Vapor	Air	6/26/2017 13:09	<input type="checkbox"/>	A	A											
1706C23-002	Effluent/Vapor	Air	6/26/2017 13:10	<input type="checkbox"/>	A												

Test Legend:

1	8260B_A(UG/M3)	2	PREDF REPORT	3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Jena Alfaro

The following SampleIDs: 001A, 002A contain testgroup 8260B_A.

Comments: When Liter provided for TPH always do a Liter Extraction (Large Volume)

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: 1706C23

Client Contact: Daniel Villanueva

QC Level: LEVEL 2

Contact's Email: dvillanueva@advgeoenv.com; admin@advgeoenv.com; kburchard@advgeoenv.com

Comments: When Liter provided for TPH always do a Liter Extraction (Large Volume)

Date Logged: 6/26/2017

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
1706C23-001A	Influent/Vapor	Air	VOCs by PT & GCMS	1	Tedlar	<input type="checkbox"/>	6/26/2017 13:09	5 days		<input type="checkbox"/>	
1706C23-002A	Effluent/Vapor	Air	VOCs by PT & GCMS	1	Tedlar	<input type="checkbox"/>	6/26/2017 13:10	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.



Advanced GeoEnvironmental, Inc.

www.advgeoenv.com

- 837 Shaw Road, Stockton, California 95215 • Phone (209) 467-1006 • Fax (209) 467-1118
- 381 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) 570-1461
- 395 Del Monte Center, #111, Monterey, California 93940 • Phone (800) 511-9300 • Fax (831) 394-5979
-

CHAIN OF CUSTODY RECORD

Date: 6/26/17 Page 1 of 1

Analysis Required

Project Name: Swiss Valley Cleaners

Project Manager: Daniel Villanueva

Client: _____

Sampler (initials & signature): KW

Invoice to: AGE Client

Lab Project No.: _____

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes
<u>Influent / vapor</u>	<u>6/26/17</u>	<u>1309</u>	<u>A</u>	<u>1</u>	
<u>Effluent / vapor</u>	<u>6/26/17</u>	<u>1310</u>	<u>A</u>	<u>1</u>	

X VOC'S 8260

Relinquished by: Rick Mart

Date: 6/26/17 Time: 1315

Laboratory: McCampbell

Courier: Delivered

Received by: [Signature]

Date: 6/26/17 Time: 1410

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: _____

Matrix Codes: A = Air W = Water S = Solid

Special Instructions to lab: _____

I hereby authorize the performance of the above indicated work.

Geotracker EDF to: geotracker@advgeoenv.com _____

Global ID: _____

Rick Mart



Sample Receipt Checklist

Client Name: **Advanced GeoEnvironmental, Inc.**
 Project Name: **Swiss Valley Cleaners**
 WorkOrder No: **1706C23** Matrix: Air
 Carrier: Client Drop-In

Date and Time Received: **6/26/2017 14:10**
 Date Logged: **6/26/2017**
 Received by: Jena Alfaro
 Logged by: Jena Alfaro

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: Method SW8260B (VOCs) was received past its 0.25-day holding time.



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1704852

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: 04/19/2017

Analytical Report reviewed & approved for release on 04/25/2017 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: 1704852

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
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

H samples were analyzed out of holding time



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 4/19/17 12:35
Date Prepared: 4/19/17
Project: Swiss Valley Cleaners

WorkOrder: 1704852
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Influent/Vapor	1704852-001A	Air	04/19/2017 11:34	GC16	137589
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	250	1	04/19/2017 20:50
Benzene	ND	H	250	1	04/19/2017 20:50
Bromobenzene	ND	H	250	1	04/19/2017 20:50
Bromochloromethane	ND	H	250	1	04/19/2017 20:50
Bromodichloromethane	ND	H	250	1	04/19/2017 20:50
Bromoform	ND	H	250	1	04/19/2017 20:50
Bromomethane	ND	H	250	1	04/19/2017 20:50
t-Butyl alcohol (TBA)	ND	H	2500	1	04/19/2017 20:50
n-Butyl benzene	ND	H	250	1	04/19/2017 20:50
sec-Butyl benzene	ND	H	250	1	04/19/2017 20:50
tert-Butyl benzene	ND	H	250	1	04/19/2017 20:50
Carbon Disulfide	ND	H	250	1	04/19/2017 20:50
Carbon Tetrachloride	ND	H	250	1	04/19/2017 20:50
Chlorobenzene	ND	H	250	1	04/19/2017 20:50
Chloroethane	ND	H	250	1	04/19/2017 20:50
Chloroform	ND	H	250	1	04/19/2017 20:50
Chloromethane	ND	H	250	1	04/19/2017 20:50
2-Chlorotoluene	ND	H	250	1	04/19/2017 20:50
4-Chlorotoluene	ND	H	250	1	04/19/2017 20:50
Dibromochloromethane	ND	H	250	1	04/19/2017 20:50
1,2-Dibromo-3-chloropropane	ND	H	250	1	04/19/2017 20:50
1,2-Dibromoethane (EDB)	ND	H	250	1	04/19/2017 20:50
Dibromomethane	ND	H	250	1	04/19/2017 20:50
1,2-Dichlorobenzene	ND	H	250	1	04/19/2017 20:50
1,3-Dichlorobenzene	ND	H	250	1	04/19/2017 20:50
1,4-Dichlorobenzene	ND	H	250	1	04/19/2017 20:50
Dichlorodifluoromethane	ND	H	250	1	04/19/2017 20:50
1,1-Dichloroethane	ND	H	250	1	04/19/2017 20:50
1,2-Dichloroethane (1,2-DCA)	ND	H	250	1	04/19/2017 20:50
1,1-Dichloroethene	ND	H	250	1	04/19/2017 20:50
cis-1,2-Dichloroethene	ND	H	250	1	04/19/2017 20:50
trans-1,2-Dichloroethene	ND	H	250	1	04/19/2017 20:50
1,2-Dichloropropane	ND	H	250	1	04/19/2017 20:50
1,3-Dichloropropane	ND	H	250	1	04/19/2017 20:50
2,2-Dichloropropane	ND	H	250	1	04/19/2017 20:50
1,1-Dichloropropene	ND	H	250	1	04/19/2017 20:50
cis-1,3-Dichloropropene	ND	H	250	1	04/19/2017 20:50

(Cont.)



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 4/19/17 12:35
Date Prepared: 4/19/17
Project: Swiss Valley Cleaners

WorkOrder: 1704852
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Influent/Vapor	1704852-001A	Air	04/19/2017 11:34	GC16	137589

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	H	250	1	04/19/2017 20:50
Diisopropyl ether (DIPE)	ND	H	250	1	04/19/2017 20:50
Ethylbenzene	ND	H	250	1	04/19/2017 20:50
Ethyl tert-butyl ether (ETBE)	ND	H	250	1	04/19/2017 20:50
Freon 113	ND	H	5000	1	04/19/2017 20:50
Hexachlorobutadiene	ND	H	250	1	04/19/2017 20:50
Hexachloroethane	ND	H	250	1	04/19/2017 20:50
2-Hexanone	ND	H	250	1	04/19/2017 20:50
Isopropylbenzene	ND	H	250	1	04/19/2017 20:50
4-Isopropyl toluene	ND	H	250	1	04/19/2017 20:50
Methyl-t-butyl ether (MTBE)	ND	H	250	1	04/19/2017 20:50
Methylene chloride	ND	H	250	1	04/19/2017 20:50
n-Propyl benzene	ND	H	250	1	04/19/2017 20:50
Styrene	ND	H	250	1	04/19/2017 20:50
1,1,1,2-Tetrachloroethane	ND	H	250	1	04/19/2017 20:50
1,1,2,2-Tetrachloroethane	ND	H	250	1	04/19/2017 20:50
Tetrachloroethene	1600	H	250	1	04/19/2017 20:50
Toluene	ND	H	250	1	04/19/2017 20:50
1,2,3-Trichlorobenzene	ND	H	250	1	04/19/2017 20:50
1,2,4-Trichlorobenzene	ND	H	250	1	04/19/2017 20:50
1,1,1-Trichloroethane	ND	H	250	1	04/19/2017 20:50
1,1,2-Trichloroethane	ND	H	250	1	04/19/2017 20:50
Trichloroethene	ND	H	250	1	04/19/2017 20:50
Trichlorofluoromethane	ND	H	250	1	04/19/2017 20:50
1,2,3-Trichloropropane	ND	H	250	1	04/19/2017 20:50
1,2,4-Trimethylbenzene	ND	H	250	1	04/19/2017 20:50
1,3,5-Trimethylbenzene	ND	H	250	1	04/19/2017 20:50
Vinyl Chloride	ND	H	250	1	04/19/2017 20:50
Xylenes, Total	ND	H	250	1	04/19/2017 20:50
Surrogates	REC (%)	Qualifiers	Limits		
Dibromofluoromethane	89	H	70-130		04/19/2017 20:50
Toluene-d8	96	H	70-130		04/19/2017 20:50
4-BFB	97	H	70-130		04/19/2017 20:50

Analyst(s): HK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 4/19/17 12:35
Date Prepared: 4/19/17
Project: Swiss Valley Cleaners

WorkOrder: 1704852
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Effluent/Vapor	1704852-002A	Air	04/19/2017 11:36	GC16	137589
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	250	1	04/19/2017 21:29
Benzene	ND	H	250	1	04/19/2017 21:29
Bromobenzene	ND	H	250	1	04/19/2017 21:29
Bromochloromethane	ND	H	250	1	04/19/2017 21:29
Bromodichloromethane	ND	H	250	1	04/19/2017 21:29
Bromoform	ND	H	250	1	04/19/2017 21:29
Bromomethane	ND	H	250	1	04/19/2017 21:29
t-Butyl alcohol (TBA)	ND	H	2500	1	04/19/2017 21:29
n-Butyl benzene	ND	H	250	1	04/19/2017 21:29
sec-Butyl benzene	ND	H	250	1	04/19/2017 21:29
tert-Butyl benzene	ND	H	250	1	04/19/2017 21:29
Carbon Disulfide	ND	H	250	1	04/19/2017 21:29
Carbon Tetrachloride	ND	H	250	1	04/19/2017 21:29
Chlorobenzene	ND	H	250	1	04/19/2017 21:29
Chloroethane	ND	H	250	1	04/19/2017 21:29
Chloroform	ND	H	250	1	04/19/2017 21:29
Chloromethane	ND	H	250	1	04/19/2017 21:29
2-Chlorotoluene	ND	H	250	1	04/19/2017 21:29
4-Chlorotoluene	ND	H	250	1	04/19/2017 21:29
Dibromochloromethane	ND	H	250	1	04/19/2017 21:29
1,2-Dibromo-3-chloropropane	ND	H	250	1	04/19/2017 21:29
1,2-Dibromoethane (EDB)	ND	H	250	1	04/19/2017 21:29
Dibromomethane	ND	H	250	1	04/19/2017 21:29
1,2-Dichlorobenzene	ND	H	250	1	04/19/2017 21:29
1,3-Dichlorobenzene	ND	H	250	1	04/19/2017 21:29
1,4-Dichlorobenzene	ND	H	250	1	04/19/2017 21:29
Dichlorodifluoromethane	ND	H	250	1	04/19/2017 21:29
1,1-Dichloroethane	ND	H	250	1	04/19/2017 21:29
1,2-Dichloroethane (1,2-DCA)	ND	H	250	1	04/19/2017 21:29
1,1-Dichloroethene	ND	H	250	1	04/19/2017 21:29
cis-1,2-Dichloroethene	ND	H	250	1	04/19/2017 21:29
trans-1,2-Dichloroethene	ND	H	250	1	04/19/2017 21:29
1,2-Dichloropropane	ND	H	250	1	04/19/2017 21:29
1,3-Dichloropropane	ND	H	250	1	04/19/2017 21:29
2,2-Dichloropropane	ND	H	250	1	04/19/2017 21:29
1,1-Dichloropropene	ND	H	250	1	04/19/2017 21:29
cis-1,3-Dichloropropene	ND	H	250	1	04/19/2017 21:29

(Cont.)



Analytical Report

Client: Advanced GeoEnvironmental, Inc.
Date Received: 4/19/17 12:35
Date Prepared: 4/19/17
Project: Swiss Valley Cleaners

WorkOrder: 1704852
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Effluent/Vapor	1704852-002A	Air	04/19/2017 11:36	GC16	137589

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	H	250	1	04/19/2017 21:29
Diisopropyl ether (DIPE)	ND	H	250	1	04/19/2017 21:29
Ethylbenzene	ND	H	250	1	04/19/2017 21:29
Ethyl tert-butyl ether (ETBE)	ND	H	250	1	04/19/2017 21:29
Freon 113	ND	H	5000	1	04/19/2017 21:29
Hexachlorobutadiene	ND	H	250	1	04/19/2017 21:29
Hexachloroethane	ND	H	250	1	04/19/2017 21:29
2-Hexanone	ND	H	250	1	04/19/2017 21:29
Isopropylbenzene	ND	H	250	1	04/19/2017 21:29
4-Isopropyl toluene	ND	H	250	1	04/19/2017 21:29
Methyl-t-butyl ether (MTBE)	ND	H	250	1	04/19/2017 21:29
Methylene chloride	ND	H	250	1	04/19/2017 21:29
n-Propyl benzene	ND	H	250	1	04/19/2017 21:29
Styrene	ND	H	250	1	04/19/2017 21:29
1,1,1,2-Tetrachloroethane	ND	H	250	1	04/19/2017 21:29
1,1,2,2-Tetrachloroethane	ND	H	250	1	04/19/2017 21:29
Tetrachloroethene	ND	H	250	1	04/19/2017 21:29
Toluene	ND	H	250	1	04/19/2017 21:29
1,2,3-Trichlorobenzene	ND	H	250	1	04/19/2017 21:29
1,2,4-Trichlorobenzene	ND	H	250	1	04/19/2017 21:29
1,1,1-Trichloroethane	ND	H	250	1	04/19/2017 21:29
1,1,2-Trichloroethane	ND	H	250	1	04/19/2017 21:29
Trichloroethene	ND	H	250	1	04/19/2017 21:29
Trichlorofluoromethane	ND	H	250	1	04/19/2017 21:29
1,2,3-Trichloropropane	ND	H	250	1	04/19/2017 21:29
1,2,4-Trimethylbenzene	ND	H	250	1	04/19/2017 21:29
1,3,5-Trimethylbenzene	ND	H	250	1	04/19/2017 21:29
Vinyl Chloride	ND	H	250	1	04/19/2017 21:29
Xylenes, Total	ND	H	250	1	04/19/2017 21:29
Surrogates	REC (%)	Qualifiers	Limits		
Dibromofluoromethane	89	H	70-130		04/19/2017 21:29
Toluene-d8	96	H	70-130		04/19/2017 21:29
4-BFB	98	H	70-130		04/19/2017 21:29

Analyst(s): HK



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 4/19/17
Date Analyzed: 4/19/17
Instrument: GC16
Matrix: Air
Project: Swiss Valley Cleaners


WorkOrder: 1704852
BatchID: 137589
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-137589

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
tert-Amyl methyl ether (TAME)	ND	250	-	-	-
Benzene	ND	250	-	-	-
Bromobenzene	ND	250	-	-	-
Bromochloromethane	ND	250	-	-	-
Bromodichloromethane	ND	250	-	-	-
Bromoform	ND	250	-	-	-
Bromomethane	ND	250	-	-	-
t-Butyl alcohol (TBA)	ND	2500	-	-	-
n-Butyl benzene	ND	250	-	-	-
sec-Butyl benzene	ND	250	-	-	-
tert-Butyl benzene	ND	250	-	-	-
Carbon Disulfide	ND	250	-	-	-
Carbon Tetrachloride	ND	250	-	-	-
Chlorobenzene	ND	250	-	-	-
Chloroethane	ND	250	-	-	-
Chloroform	ND	250	-	-	-
Chloromethane	ND	250	-	-	-
2-Chlorotoluene	ND	250	-	-	-
4-Chlorotoluene	ND	250	-	-	-
Dibromochloromethane	ND	250	-	-	-
1,2-Dibromo-3-chloropropane	ND	250	-	-	-
1,2-Dibromoethane (EDB)	ND	250	-	-	-
Dibromomethane	ND	250	-	-	-
1,2-Dichlorobenzene	ND	250	-	-	-
1,3-Dichlorobenzene	ND	250	-	-	-
1,4-Dichlorobenzene	ND	250	-	-	-
Dichlorodifluoromethane	ND	250	-	-	-
1,1-Dichloroethane	ND	250	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	250	-	-	-
1,1-Dichloroethene	ND	250	-	-	-
cis-1,2-Dichloroethene	ND	250	-	-	-
trans-1,2-Dichloroethene	ND	250	-	-	-
1,2-Dichloropropane	ND	250	-	-	-
1,3-Dichloropropane	ND	250	-	-	-
2,2-Dichloropropane	ND	250	-	-	-
1,1-Dichloropropene	ND	250	-	-	-
cis-1,3-Dichloropropene	ND	250	-	-	-
trans-1,3-Dichloropropene	ND	250	-	-	-
Diisopropyl ether (DIPE)	ND	250	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 4/19/17
Date Analyzed: 4/19/17
Instrument: GC16
Matrix: Air
Project: Swiss Valley Cleaners

WorkOrder: 1704852
BatchID: 137589
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-137589

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Ethylbenzene	ND	250	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	250	-	-	-
Freon 113	ND	5000	-	-	-
Hexachlorobutadiene	ND	250	-	-	-
Hexachloroethane	ND	250	-	-	-
2-Hexanone	ND	250	-	-	-
Isopropylbenzene	ND	250	-	-	-
4-Isopropyl toluene	ND	250	-	-	-
Methyl-t-butyl ether (MTBE)	ND	250	-	-	-
Methylene chloride	ND	250	-	-	-
n-Propyl benzene	ND	250	-	-	-
Styrene	ND	250	-	-	-
1,1,1,2-Tetrachloroethane	ND	250	-	-	-
1,1,2,2-Tetrachloroethane	ND	250	-	-	-
Tetrachloroethene	ND	250	-	-	-
Toluene	ND	250	-	-	-
1,2,3-Trichlorobenzene	ND	250	-	-	-
1,2,4-Trichlorobenzene	ND	250	-	-	-
1,1,1-Trichloroethane	ND	250	-	-	-
1,1,2-Trichloroethane	ND	250	-	-	-
Trichloroethene	ND	250	-	-	-
Trichlorofluoromethane	ND	250	-	-	-
1,2,3-Trichloropropane	ND	250	-	-	-
1,2,4-Trimethylbenzene	ND	250	-	-	-
1,3,5-Trimethylbenzene	ND	250	-	-	-
Vinyl Chloride	ND	250	-	-	-
Xylenes, Total	ND	250	-	-	-
Surrogate Recovery					
Dibromofluoromethane	11390		12500	91	70-130
Toluene-d8	11870		12500	95	70-130
4-BFB	1176		1250	94	70-130



Quality Control Report

Client: Advanced GeoEnvironmental, Inc.
Date Prepared: 4/19/17
Date Analyzed: 4/19/17
Instrument: GC16
Matrix: Air
Project: Swiss Valley Cleaners

WorkOrder: 1704852
BatchID: 137589
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-137589

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	3850	3910	5000	77	78	56-133	1.42	30
Benzene	4260	4250	5000	85	85	72-122	0	30
t-Butyl alcohol (TBA)	11,800	11,900	20000	59	59	35-121	0	30
Chlorobenzene	3950	3940	5000	79	79	69-112	0	30
1,2-Dibromoethane (EDB)	4000	3980	5000	80	80	62-117	0	30
1,2-Dichloroethane (1,2-DCA)	3800	3840	5000	76	77	61-126	0.808	30
1,1-Dichloroethene	3980	3950	5000	80	79	67-122	0.752	30
Diisopropyl ether (DIPE)	4390	4430	5000	88	89	61-131	0.910	30
Ethyl tert-butyl ether (ETBE)	4180	4260	5000	84	85	63-132	1.89	30
Methyl-t-butyl ether (MTBE)	3660	3720	5000	73	74	63-127	1.74	30
Toluene	4140	4100	5000	83	82	64-115	1.16	30
Trichloroethene	4350	4350	5000	87	87	66-127	0	30
Xylenes, Total	12,400	12,300	15000	82	82	53-131	0	30
Surrogate Recovery								
Dibromofluoromethane	11,000	11,000	12500	88	88	83-124	0	30
Toluene-d8	12,000	12,000	12500	96	96	80-120	0	30
4-BFB	1150	1170	1250	92	93	70-129	1.08	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1704852

ClientCode: AGES

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 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: 04/19/2017

Date Logged: 04/19/2017

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	
1704852-001	Influent/Vapor	Air	4/19/2017 11:34	<input type="checkbox"/>	A												
1704852-002	Effluent/Vapor	Air	4/19/2017 11:36	<input type="checkbox"/>	A												

Test Legend:

1	8260B_A(UG/M3)	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

The following SamplIDs: 001A, 002A contain testgroup 8260B_A.

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: 1704852

Client Contact: Daniel Villanueva

QC Level: LEVEL 2

Contact's Email: dvillanueva@advgeoenv.com

Comments:

Date Logged: 4/19/2017

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
1704852-001A	Influent/Vapor	Air	VOCs by PT & GCMS	1	Tedlar	<input type="checkbox"/>	4/19/2017 11:34	5 days		<input type="checkbox"/>	
1704852-002A	Effluent/Vapor	Air	VOCs by PT & GCMS	1	Tedlar	<input type="checkbox"/>	4/19/2017 11:36	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.

1704852



Advanced GeoEnvironmental, Inc.

www.advgeoenv.com

CHAIN OF CUSTODY RECORD

Date: 4/19/17 Page 1 of 1

- 837 Shaw Road, Stockton, California 95215 • Phone (209) 467-1006 • Fax (209) 467-1118
- 381 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) 570-1461
- 395 Del Monte Center, #111, Monterey, California 93940 • Phone (800) 511-9300 • Fax (831) 394-5979
-

Analysis Required

XX VOC'S 8260																					

Project Name Swiss Valley Cleaners

Project Manager Daniel Villanueva

Client AGE Client

Sampler (initials & signature) Rm

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes
<u>Influent/vapor</u>	<u>4/19/17</u>	<u>1134</u>	<u>A</u>	<u>1</u>	
<u>Effluent/vapor</u>	<u>4/19/17</u>	<u>1136</u>	<u>A</u>	<u>1</u>	

Relinquished by: Raul Martz

Date: 4/19/17 Time: 1235

Laboratory: McCampbell Labs

Courier: Delivered Rm

Received by: Maria 20

Date: 4/19/17 Time: 1235

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:

Matrix Codes: A = Air W = Water S = Solid

Special Instructions to lab:

I hereby authorize the performance of the above indicated work.
Raul Martz

Geotracker EDF to: geotracker@advgeoenv.com

Global ID:



Sample Receipt Checklist

Client Name: **Advanced GeoEnvironmental, Inc.**
 Project Name: **Swiss Valley Cleaners**
 WorkOrder No: **1704852** Matrix: Air
 Carrier: Client Drop-In

Date and Time Received: **4/19/2017 12:35**
 Date Logged: **4/19/2017**
 Received by: **Maria Venegas**
 Logged by: **Agustina Venegas**

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

UCMR3 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:

APPENDIX B

APPENDIX B
MASS-VOLUME CALCULATIONS
 Swiss Valley Cleaners
 1395 MacArthur Boulevard
 San Leandro, California

$M = C \times Q \times t$

C = vapor concentration (kg/m³)

Q = extraction flow rate (m³/hr)

t = operational period (hrs)

To convert, multiply by: 0.000001

To convert, multiply by: 60 min/hr

and: 0.0283168 m³/ft³

$M(\text{kg}) = (\text{Avg concentration})(0.000001) \times [\text{flow}(\text{ft}^3/\text{min})](60 \text{ min/hr})(0.0283168 \text{ m}^3/\text{ft}^3) \times \text{time}(\text{hrs})$

Converting kg of M to lbs of M, multiply by: 2.2046 lbs/kg

Converting lbs of M to gal of M, multiply by: 0.074 gal/lb

Dates	Hours	Average Flow		PCE Concentration		PCE Extracted		
		scfm	m ³ /hr	µg/l	kg/m ³	kg	lbs	gallons
11/11/16 to 11/14/16	74.7	167	284	16.5	0.0000165	0.3497	0.7710	0.05705
11/14/16 to 11/15/16	23.9	171	291	9	0.000009	0.0625	0.1378	0.0102
11/15/16 to 11/16/16	23.4	171	291	6.5	0.0000065	0.0442	0.0974	0.0072
11/16/16 to 11/17/16	23.2	171	291	3.5	0.0000035	0.0236	0.0520	0.0038
11/17/16 to 12/15/16	670.9	171	291	2.2	0.0000022	0.4288	0.9454	0.0700
12/15/16 to 01/19/17	462.1	178.5	303	8.9	0.0000089	1.2473	2.7497	0.2035
01/19/17 to 02/21/17	792.2	192.5	327	2.1	0.0000021	0.5441	1.1995	0.0888
02/21/17 to 03/15/17	430.8	192.5	327	2.0	0.000002	0.2818	0.6212	0.0460
03/15/17 to 04/19/17	625.0	182.5	310	1.6	0.0000016	0.3101	0.6836	0.0506
04/19/17 to 06/26/17	0.2	176	299	2	0.0000021	0.0001	0.0003	0.00002
Total PCE removed:						3.2922	7.2579	0.5371

APPENDIX C

Influent PCE Vs. Time

