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Alameda County
Environmental Health

PERJURY STATEMENT

Subject: Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, California
Soil Vapor Intrusion Work Plan - July 2010

"I declare under penalty of perjury, that the information and/or recommendations in the attached document or report is true or correct to the best of my knowledge."

Robert Strong

Mr. Robert Strong
500 Bollinger Canyon Way #A4
San Ramon, CA 94582

7/28/10
Date

Advanced
GeoEnvironmental, Inc.

23 July 2010
AGE-NC Project No. 08-1640

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

Subject: **Soil Vapor Intrusion Work Plan - July 2010**
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Dear Mr. Wickham:

On behalf of Mr. Robert Strong, *Advanced* GeoEnvironmental, Inc. has prepared this work plan for a limited soil vapor intrusion investigation at 224 Rickenbacker Circle, Livermore, California as required by Alameda County Environmental Health Services (ACEHS) by letter dating 10 May 2010.

A summary of remedial activities performed at the site during the second quarter 2010 has also been included in this work plan

Upon ACEHS approval of this work plan, AGE will submit all necessary permits to the appropriate regulatory agencies. If you have any questions or require further information, please contact our office at (209) 467-1006.

Sincerely,

***Advanced* GeoEnvironmental, Inc.**

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

837 Shaw Road • Stockton, CA 95215
Telephone (209) 467-1006 • Fax (209) 467-1118

Soil Vapor Intrusion Work Plan - July 2010
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

23 July 2010
AGE-NC Project No. 08-1640

PREPARED FOR:

Mr. Robert Strong
METRO VALLEY CLEANERS

PREPARED BY:

Advanced GeoEnvironmental, Inc.

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Soil Vapor Intrusion Work Plan - July 2010
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

23 July 2010
AGE-NC Project No. 08-1640

Advanced **GeoEnvironmental, Inc.**
837 Shaw Road, Stockton, California

PREPARED BY:

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Staff Geologist

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California Professional Geologist No. 7473

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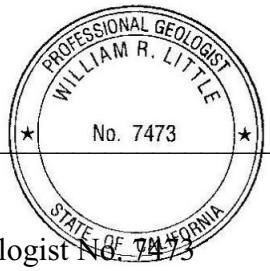

William R. Little
Senior Project Geologist
California Professional Geologist No. 7473

Soil Vapor Intrusion Work Plan - July 2010
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

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Soil Vapor Intrusion Work Plan - July 2010
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

1.0. INTRODUCTION

At the request of Mr. Robert Strong, *Advance* GeoEnvironmental, Inc. (AGE) has prepared this *Soil Vapor Intrusion Work Plan - July 2010* for the site located at 224 Rickenbacker Circle, Livermore, California (site). A summary of remedial activities performed at the site during the second quarter 2010 has also been included in this work plan. The work plan was prepared as required by Alameda County Environmental Health Services (ACEHS) by letter dating 10 May 2010 (Appendix A).

The work plan has been prepared in accordance with the Department of Toxic Substance Control (DTSC)/California Regional Water Quality Control Board - Los Angeles Region joint publication *Advisory - Active Soil Gas Investigation* dated 28 January 2003 and California Regional Water Quality Control Board - Los Angeles Region-prepared *Interim Guidance for Active Soil Gas Investigations* issued in 1997. Finally, where applicable guidance for this work plan has been derived from the draft *Advisory - Active Soil Gas Investigation* prepared by DTSC in March 2010.

AGE proposes to advance three temporary soil vapor sampling borings for the collection of shallow soil vapor samples. Data collected from the proposed borings will be used to evaluate the remaining chlorinated hydrocarbon vapor mass and to assess the risk of soil vapor intrusion to the on-site building and off-site adjacent buildings. The location of the site is illustrated on Figure 1. A current map of the site is illustrated on Figure 2. Site background information is provided in Appendix B. Well construction details, historical soil analytical data and historical soil vapor data have been included in Tables 1 through 3.

2.0. REMEDIATION STATUS UPDATE - 2ND QUARTER 2010

Between 01 April 2010 and 01 July 2010, the SVE unit intermittently operated for approximately 1,092 hours at an air flow rate ranging between 54 scfm and 135 scfm; due to declining concentration in the influent vapor stream, the system was shut down on 13 May 2010 for the performance of a 30-day vapor rebound test. The system was restarted on 14 June 2010 and then subsequently sampled one week following the restart on 21 June 2010. After confirming that influent vapor concentrations had not significantly increased the SVE system was permanently decommissioned and removed from the site in July 2010.

During system operation influent extracted organic vapor concentrations measured with the OVM ranged between 0 ppmv (multiple monitoring events) and 2.6 ppmv (23 April 2010). Each effluent extracted organic vapor concentration was measured at a concentration of 0 ppmv with the OVM.

A confirmation laboratory analytical sample was collected from the influent sampling port on 21 June 2010; following the 30-day soil vapor extraction rebound response testing period. Tetrachloroethene (PCE) was the reported in the sample collected from the influent vapor stream at 3.0 micrograms per liter (µg/l). No other constituents of concern were reported in the influent vapor stream.

Field measurements and analytical data collected during the 2nd Quarter 2010 operational period have been summarized in Table 4. The laboratory report (CTEL Project No. CT214- 1006195) and chain of custody form are included in Appendix C. The electronic deliverable file (EDF) was uploaded to the State GeoTracker database under confirmation number 3881150603. A trend graph illustrating PCE concentrations versus time has been included as Appendix D.

3.0. VAPOR INTRUSION SAMPLING WORK SCOPE

AGE proposes to collect three soil vapor samples to assess the remaining chlorinated hydrocarbon mass at the site and to evaluate the potential of soil vapor migration into existing on-site and adjacent off-site buildings.

The assessment will include the following tasks:

- Permitting and pre-field work activities;
- Soil probe boring advancement;
- Soil-vapor sample collection and analysis; and
- Report preparation

3.1. PERMITTING AND PRE-FIELD WORK TASKS

Applicable site assessment soil boring permits will be obtained from the Zone 7 Water Agency (Zone 7).

An update to the Site Health and Safety Plan (SHSP) currently on file will be made in accordance with *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (National Institute for Occupational Safety and Health Administration) and federal (29 CFR 1910.120) and state (Title 8, Cal. Code Reg., Section 5192) regulations. The SHSP will cover:

- Health and safety officer and key personnel, and personnel requirements and responsibilities;
- Field activities, overall work practices and standard operating procedures;
- On-site chemicals and potential hazardous substances as well as physical hazards;
- Risk analysis for existing site conditions, and description of personal protective equipment to be used by personnel;
- Site control measures, including work zones and security measures, and entry procedures for confined spaces; and
- Exposure monitoring plan with monitoring methods, emergency response plan addressing hazardous material/waste releases, and medical surveillance requirements.

All field personnel will be trained in hazardous materials communication and will have completed a 40-hour Health and Safety Course as specified in OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e)], and 8-hour annual refresher courses as necessary.

3.2. SOIL-VAPOR SAMPLE COLLECTION AND ANALYSIS

AGE proposes to advance three soil vapor probe borings to evaluate the residual mass and potential migration of chlorinated hydrocarbon vapors remaining in the subsurface at the site. One soil boring is proposed just outside of the on-site building approximately 10 feet from boring S-2. A second boring is proposed near the former location of the dry-cleaning machines approximately 10 feet from soil vapor sampling point SG-5. The third boring location is proposed northeast of the former dry-cleaning machines approximately 5 feet east of soil vapor extraction well SVE-3. Each soil boring will be advanced to a depth of 5 feet below surface grade (bsg) for collection of a single soil vapor sample.

The soil-vapor samples will be analyzed by a California Department of Public Health (CDPH)-certified laboratory for:

- Volatile Organic Compounds including Isopropyl alcohol (IPA) as a tracer gas in accordance with EPA method TO-15.

The proposed soil vapor boring locations are illustrated on Figure 2. Field procedures for advancement of borings and collection of soil vapor samples are presented in Section 4.1. Laboratory reports for soil vapor analyses, testing methods, laboratory QA/QC reports, and sample chain of custody documentation will be presented in a report with findings and recommendations.

3.3. REPORT PREPARATION

Upon completion of field work and receipt of final laboratory analysis, a report of findings will be prepared presenting the findings of the investigation. The report will include a description of the work performed and results of the sampling and analysis and be signed by a California Professional Geologist. Conclusions, applicable recommendations, and maps will be included in the report.

4.0. FIELD PROCEDURES

All field procedures will be overseen by an AGE representative under the supervision of a California Professional Geologist. Soil vapor boring advancement and sampling procedures are described utilizing stainless steel canisters (Summa) and manifold assemblies. Leak testing, purge volume calculations, tracer gas application, purge, sampling and soil boring abandonment procedures are also described below.

4.1. SOIL-VAPOR BORING ADVANCEMENT

Probe borings will be advanced using a van-mounted Geoprobe® 5400 direct-push probing unit equipped with 1.25-inch probing rods.

Clean and dry direct-push soil boring rods and a post-run tubing (PRT) system assembly will be prepared for advancement by installing new disposable O-rings on the PRT expendable point holder (the PRT adapter) and the disposable drive point. The boring rod with the PRT assembly will be advanced to the target sampling depth of 5 feet bsg for each soil vapor sampling location, then the boring rod will be retracted approximately 12 inches.

The PRT adaptor will then be connected to a chemically resistant and disposable polyethylene ¼-inch tubing. The PRT adaptor and tubing will be inserted through the hollow boring rods down to the PRT assembly attached to the lead probe rod and seated to the adaptor into the top of the PRT probe assembly.

Hydrated bentonite will be placed around the drive rod at ground surface to prevent ambient air intrusion. A minimum of 20 minutes equilibrium time will be allowed at each soil vapor boring location prior to sample collection.

4.2 SOIL-VAPOR SAMPLE COLLECTION AND ANALYSIS

Six-liter Summa sampling and purge canisters will be used to collect each soil-vapor sample. The sampling and purge canisters will be connected together with a dedicated and serialized sampling inlet manifold. The sampling inlet manifold will consist of a vapor-tight valve; a particulate filter; a calibrated flow restricter, calibrated to 200 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 will be attached to the tubing from the direct-push soil probe rods. The purge canister will be attached to the end of the sampling manifold while the sample canisters will be attached to the tee-fitting between the PRT and purge container. Teflon® tape will be placed on the threads of each open fitting of the manifold assembly prior to attaching the PRT and sampling and purge canisters.

Each canister's initial vacuum will be measured and recorded between negative 29 and negative 5 inches of mercury (in hg).

Leak tests will be 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 will be performed for approximately 10 minutes on each assembly.

Each soil-vapor boring location will be isolated from ambient air by enclosing the borehole, tubing and manifold/canister assembly in clear plastic sheeting supported by one-inch PVC piping within a one cubic meter area and weighted at the surface. Isopropyl alcohol (IPA) as a liquid will be placed in a stainless steel bowl within the plastic structure and allowed to volatilize into the air enclosed within the plastic structure surrounding the borehole, tubing and manifold/canister assembly.

The purge volume will be determined by calculating the internal volume of the tubing, vapor point holder and PRT adapter and the volume of sampling void (created by retracting the boring rod).

Upon achieving a successful leak test and allowing for 20 minutes for equilibrium to be achieved, the purge canister valve will be opened for a calculated period of time to allow the three calculated volumes of air to be purged. The purge vacuum gauge will be monitored to ensure a proper decrease of vacuum purged.

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

The soil vapor samples will be analyzed for the constituents listed in Section 3.2.

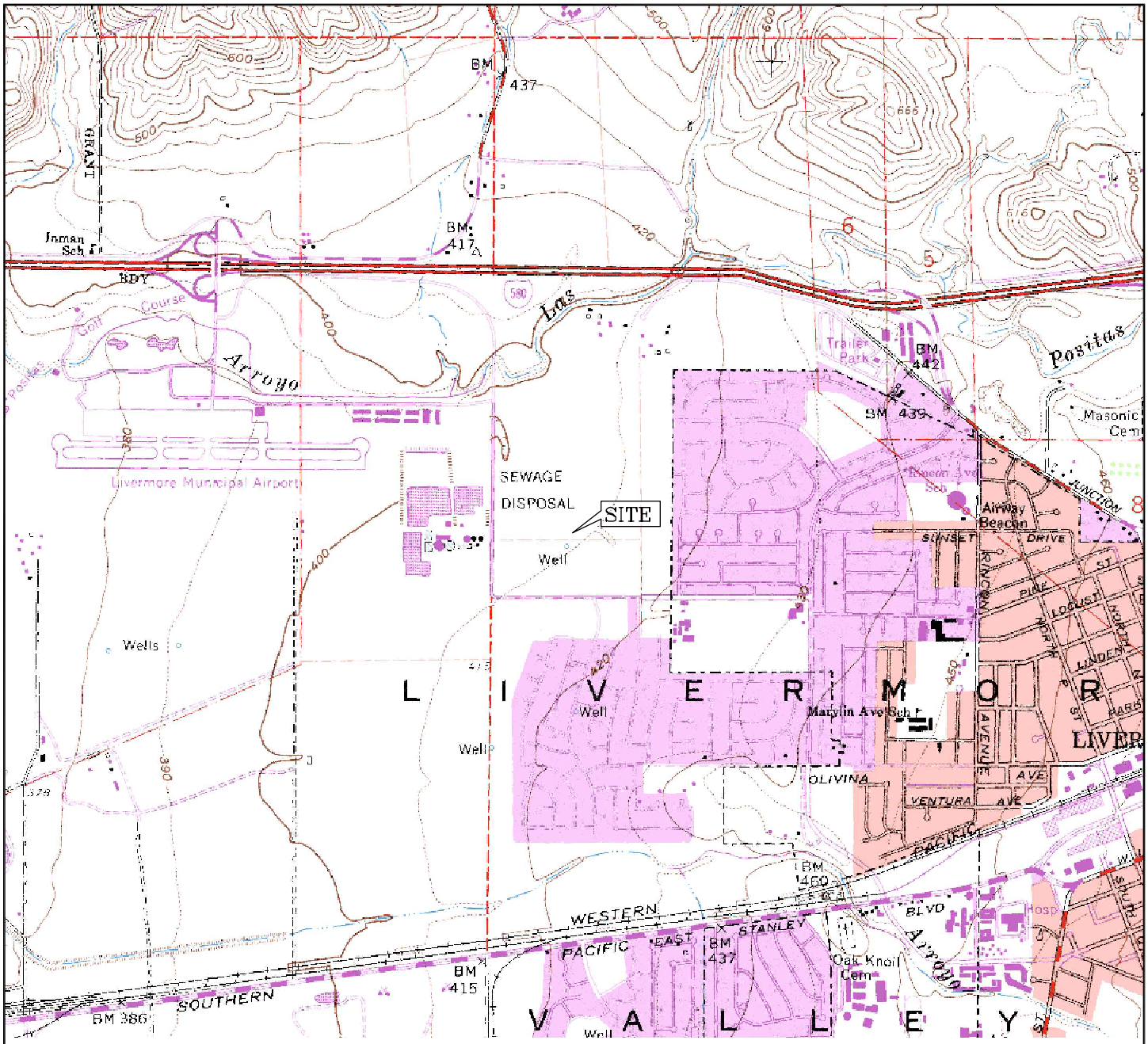
4.3. EQUIPMENT DECONTAMINATION

Prior to use, all sampling tools used for sample collection will be thoroughly rinsed with clean water after being washed with a solution of Alconox. All probing rods will be cleaned prior to advancement at each probe boring location.

4.4. BORING ABANDONMENT

All probe borings will be permanently sealed to prevent vertical migration of potential contaminants. Soil borings shall be abandoned by backfilling with portland cement from the total depth to surface grade.

FIGURES



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

LOCATION MAP

METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.
of Northern California

PROJECT NO. AGE-NC-08-1640	FILE: LOCATION	FIGURE:
DATE: 03 OCTOBER, 2008	DRAWN BY: MAC	1

RICKENBACKER PLACE

LANDSCAPE

LANDSCAPE AREA

PARKING LOT

S-1

SG-10

RESTROOM

S-2

RECEPTION AREA

SG-11

SG-13

OFFICE

MW-3

ELECTRICAL ROOM
(OPEN CEILING)

SG-12

SANITARY SEWER ALIGNMENT

S-3*

SG-8

SG-7

SG-6

SVE-3

DRIVEWAY

TRENCH DRAIN
WITH GRATING

WASHER/EXTRACTOR PAD

FORMER LOCATION
DRY CLEANING MACHINE

SVE-2

P-1

BOILER ROOM

ELECTRICAL BOX/LINES

S-3

S-1*

SG-4

SG-9

SG-5

VACANT LOT

OW-2

S-2*

ROLL-UP
BACK DOOR

P-2

ABOVEGROUND
REMEDIAL PIPING

SVE-1

SG-14

SG-1

1'

1'

P-1

S-4

SG-2

CHEMICAL
STORAGE
AREA

UNDERGROUND
REMEDIAL PIPING

MW-1

**Note: All locations approximated

OW-1

DUMPSTER AREA

1-B1

SG-3

S-5

MW-2

SG-16

SG-15

BUILIDING

LEGEND

SG-9 ▲	SOIL GAS SAMPLE (MOBILE LABORATORY, JANUARY, 2007)
S-1* ●	BORING LOCATION (BY JMK ENVIRONMENTAL. OCTOBER, 2005)
1-B1	DEEP BORING LOCATION (ENGEO, NOVEMBER, 2007)
S-5	SOIL AND GROUNDWATER SAMPLE (ENGEO, MARCH, 2007)
P-2	APPROXIMATE LOCATION OF SHALLOW SOIL SAMPLE (ENGEO, JANUARY, 2007)
MW-3	MONITORING WELL LOCATION
SG-15 ▲	SOIL GAS SAMPLE (SUMMA CANISTER, DECEMBER, 2007)
SVE-1	SOIL VAPOR EXTRACTION WELL LOCATION
OW-1 ●	SOIL VAPOR EXTRACTION OBSERVATION WELL LOCATION TO BE CONVERTED TO SOIL VAPOR EXTRACTION POINT
	PROPOSED SOIL VAPOR SAMPLING LOCATION

N

SCALE
0 20 40
FEET

RICKENBACKER CIRCLE

Advanced GeoEnvironmental, Inc.

PROJECT NO: AGE-NC-08-1640	FILE: METRO2
DATE: JULY 2010	DRAWN BY: MAC

FIGURE: 2

SITE PLAN
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

TABLES

TABLE 1

WELL CONSTRUCTION DETAILS
Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, CA

Well ID	Installation Date	Borehole Diameter (inches)	Total Depth (ft bsg)	Casing Diameter (inches)	Casing Material	Slot Size (inches)	Casing Elevation (ft MSL)[1]	Screen Interval (ft btoc)	Filterpack Interval (ft btoc)	Bentonite Interval (ft btoc)	Grout Interval (ft btoc)
Ground Water Monitoring Wells											
MW-1	12-18-2007	8	35	2	PVC	0.010	410.00	10 to 35	13 to 35	12 to 13	1 to 12
MW-2	12-18-2007	8	35	2	PVC	0.010	409.98	10 to 35	39 to 65	12 to 13	1 to 12
MW-3	25	8	35	2	PVC	0.010	409.48	10 to 35	43 to 65	12 to 13	1 to 12
Remediation Wells											
SVE-1	01-08-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
OW-1	01-08-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
OW-2	01-08-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
SVE-2	12-07-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
SVE-3	12-07-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3

Notes:

ft bsg: feet below surface grade
PVC: polyvinylchloride
ft MSL: feet mean sea level
ft btoc: below top of well casing
ns: not surveyed
note 1: Survey data not available

TABLE 2

SOIL ANALYTICAL DATA

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, California

(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA Method 8260B					
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC
S-1-5*	5	10-25-2005	**0.23**	<0.012	<0.012	<0.012	<0.012	<0.012
S-1-10*	10	10-25-2005	**0.032**	<0.005	<0.005	<0.005	<0.005	<0.005
S-1-15*	15	10-25-2005	**0.031**	<0.005	<0.005	<0.005	<0.005	<0.005
S-1-25*	25	10-25-2005	**0.057**	<0.005	<0.005	<0.005	<0.005	<0.005
S-1-35*	35	10-25-2005	**0.029**	<0.005	<0.005	<0.005	<0.005	<0.005
S-2-5*	5	10-25-2005	**0.45**	<0.005	<0.005	<0.005	<0.005	<0.005
S-2-10*	10	10-25-2005	**0.059**	<0.005	<0.005	<0.005	<0.005	<0.005
S-2-15*	15	10-25-2005	**0.036**	<0.005	<0.005	<0.005	<0.005	<0.005
S-2-25*	25	10-25-2005	**0.048**	<0.005	<0.005	<0.005	<0.005	<0.005
S-2-35*	35	10-25-2005	**0.023**	<0.005	<0.005	<0.005	<0.005	<0.005
S-3-25*	25	10-25-2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
S-3-35*	35	10-25-2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
P-1@1	1	01-22-2007	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
P-1@5	5	01-22-2007	**0.0055**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
P-2@1	1	01-22-2007	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
P-2@5	5	01-22-2007	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
S-1@24#	24	03-02-2007	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
S-2@26#	26	03-02-2007	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
S-3@2#	2	03-01-2007	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
S-3@4#	4	03-01-2007	**0.012**	**0.013**	<0.0049	**0.014**	**0.061**	<0.0049
S-3@8#	8	03-01-2007	**0.079**	**0.0066**	<0.0048	<0.0048	<0.0048	<0.0048
S-3@10#	10	03-01-2007	**0.023**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
S-3@27#	27	03-01-2007	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
S-4@25#	25	03-01-2007	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
S-5@30#	30	03-01-2007	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
1-B1/S-10	10	11-27-2007	**0.079**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
1-B1/S-20	20	11-27-2007	**0.017**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1-B1/S-30	30	11-27-2007	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
1-B1/S-40	40	11-27-2007	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1-B1/S-50	50	11-27-2007	**0.0014**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
1-B1/S-60	60	11-27-2007	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1-B1/S-70	70	11-27-2007	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
1-B1/S-80	80	11-27-2007	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
1-B1/S-90	90	11-27-2007	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
MWB1	5.5	12-18-2007	**0.081**	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
MWB1	10.5	12-18-2007	**0.068**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
MWB2	25.5	12-18-2007	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-3	26	12-19-2007	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
SVE-1-5	5	01-08-2009	**0.058**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SVE-1-10	10	01-08-2009	**0.011**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SVE-1-15	15	01-08-2009	**0.014**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
OW-1-5	5	01-08-2009	**0.040**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

TABLE 2

SOIL ANALYTICAL DATA

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, California

(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA Method 8260B					
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC
OW-2-5	5	01-08-2009	**0.036**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
OW-2-10	10	01-08-2009	**0.026**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SVE-2-20	20	12-07-2009	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
SVE-3-10	10	12-07-2009	**0.0094**	<0.005	<0.005	<0.005	<0.005	<0.005
SVE-3-20	20	12-07-2009	**0.0082**	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

mg/kg: milligrams per kilogram

bsg: below surface grade

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

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

*: borings advanced by JML Environmental Solutions in 2005

#: borings advanced by ENGEO in 2007

TABLE 3

HISTORICAL SOIL VAPOR ANALYTICAL DATA
Metro Valley Cleaners
224 Rickenbacker Circle
Livermore, California
(ug/m^3)

Sample ID	Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Tracer Compound
EPA METHOD 8260 / Mobile Laboratory / Syringe Sampling[2]								
SG-1	01-22-2007	**16,000**	**150**	<100	<100	<100	<100	<100
SG-2	01-22-2007	**15,000**	**480**	<100	<100	<100	<100	<100
SG-3	01-22-2007	**38,000**	**18,000**	<100	<100	**17,000**	<100	<100
SG-4	01-22-2007	**11,000**	**1,200**	<100	<100	**450**	<100	<100
SG-5	01-22-2007	**860,000**	**4,600,000**	**4,700**	**140,000**	**780,000**	**1,800**	<100
SG-6	01-22-2007	**25,000**	**1,300**	<100	<100	<100	<100	<100
SG-7	01-22-2007	**5,700**	**3,000**	<100	<100	**470**	<100	<100
SG-8	01-22-2007	**4,300**	**310**	<100	<100	<100	<100	<100
SG-9	01-22-2007	**4,100**	**3,100**	<100	**500**	**1,700**	<100	<100
EPA METHOD TO-15 / Summa Cannisters[3]								
SG-10	12-17-2007	<2.1	<0.86	<1.3	<0.90	<0.90	<0.40	<2.7
SG-11	12-17-2007	**64**	<0.83	<1.3	<0.88	<0.88	<0.39	<2.6
SG-12	12-17-2007	**10**	<0.82	<1.2	<0.86	<0.86	<0.39	<2.6
SG-12[1]	12-17-2007	**8.7**	<0.78	<1.2	<0.82	<0.82	<0.37	<2.6
SG-13	12-17-2007	<1.3	<0.55	<0.79	<0.55	<0.55	<0.25	<1.6
SG-14	12-17-2007	<2.0	<0.87	<1.2	<0.87	<0.87	<0.39	<2.6
SG-15	12-17-2007	<1.9	<0.77	<1.2	<0.81	<0.81	<0.37	<2.4
SG-16	12-17-2007	**15**	**22**	<1.2	**8.2**	**7.9**	<0.37	<2.5

Notes:

Note 1: duplicate sample

Note 2: Tracer compound: 1,1-diflouroethane

Note 3: Tracer compound: isopropanol

ug/m^3 micrograms per cubic meter

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

PCE: Tetrachloroethene

TCE: Trichloroethene

TABLE 4

SOIL VAPOR EXTRACTION OPERATION & ANALYTIC DATA
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Date	Operational Hours	SVE Wells in Operation	Inlet / Influent				Outlet / Effluent		
			Flow (cfm)	PID (ppmv)	PCE (µg/l)	TCE (µg/l)	PID (ppmv)	PCE (µg/l)	TCE (µg/l)
02/22/10 [0]	1	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	130	43	**93**	**4.5**	0	<1	<1
02/23/10	23	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	6	**48**	<1	0	<1	<1
02/24/10	49	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	140	1.3	**16**	<1	0	<1	<1
02/25/10	70	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	2	**9.0**	<1	0	<1	<1
02/26/10	97	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	0	**7.6**	<1	0	<1	<1
03/01/10	169	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	0	--	--	0	--	--
03/02/10	192	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	0	--	--	0	--	--
03/02/10 [1]	192	SVE-1, OW-1 & OW-2	--	4.5	--	--	0	--	--
03/03/10	216	SVE-1, OW-1 & OW-2	78	2.5	--	--	0	--	--
03/09/10	--	SVE-1, OW-1 & OW-2	--	--	<1	<1	--	<1	<1
03/16/09 [2]	-	SVE-1, OW-1 & OW-2	--	--	--	--	--	--	--
03/23/10	695	SVE-1, OW-1 & OW-2	110	0	--	--	0	--	--
03/23/10 [3]	695	SVE-2 & SVE-3	175	0	--	--	0	--	--
04/01/10	910	SVE-2 & SVE-3	135	0	--	--	0	--	--
04/08/10	1,077	SVE-2 & SVE-3	133	0	--	--	0	--	--
04/15/10	1,245	SVE-2 & SVE-3	130	0	--	--	0	--	--
04/23/10	1,431	SVE-1	58	2.6	--	--	0	--	--
04/29/10	1,578	OW-1	54	1.9	--	--	0	--	--
05/06/10	1,712	SVE-1, OW-1 & OW-2	57	0	--	--	0	--	--
05/13/10 [4]	1,878	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	54	0	--	--	0	--	--
06/14/10 [5]	1,878	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	85	1	--	--	0	--	--
06/21/10	1,950	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	104	0	**3.0**	<1	0	<1	<1
06/24/10	2,022	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	89	--	--	--	--	--	--
07/21/10 [6]	--	--	--	--	--	--	--	--	--

TABLE 4

SOIL VAPOR EXTRACTION OPERATION & ANALYTIC DATA
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Notes:

SVE: Soil Vapor Extraction
cfm: cubic feet per minute
PID: photoionization meter
ppmv: parts per million volume
PCE: tetrachloroethene, vapor sample also analyzed for full-scan EPA 8260B
TCE: trichloroethene, vapor sample also analyzed for full-scan EPA 8260B
µg/l: micrograms per liter

[0] SVE system start-up; system hours at time of start-up = 7,581; GAC-1 also sampled and analytical results were non-detect for full-scan EPA 8260B

[1] Wells in operation altered due to low PID readings. Wells SVE-2 and SVE-3 had individual PID readings of 0 ppmv; wells SVE-1 (2.3 ppmv), OW-1 (7.7 ppmv) and OW-2 (3.9 ppmv) remain in operation.

[2] Field sheets for this site visit are missing.

[3] Wells in operation altered due to low PID readings. All wells exhibit 0 ppmv individual PID readings; wells SVE-2 and SVE-3 turned on, and wells SVE-1, OW-1 and OW-2 turned off.

[4] SVE system shut down to begin rebound testing

[5] SVE system restarted to evaluate vapor rebound

[6] SVE system permanently decommissioned

APPENDIX A

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

May 10, 2010

Mr. Lawrence Hancock
Country Club Cleaners
500 Bollinger Canyon Way #A4
San Ramon, CA 94582
(*Sent via E-mail to: Larry@countryclubcleaners.com*)

Mr. Mark Ratto
Peter J. Ratto Trust
670 W. Fruit Cive Forest Road
Jacksonville, FL 32259

Mr. Robert Strong
Country Club Cleaners
500 Bollinger Canyon Way #A4
San Ramon, CA 94582
(*Sent via E-mail to: Bob@countryclubcleaners.com*)

Subject: SLIC Case RO0002913 and Geotracker Global ID T06019748481, Perciva/Metro Valley Cleaners, 224 Rickenbacker Circle, Livermore, CA 94550 – SVE and Monitoring Report Review

Dear Mr. Hancock, Mr. Strong, and Mr. Ratto:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted documents entitled, "*Soil Vapor Extraction Install, Start-Up and Quarterly Monitoring Report –First Quarter 2010*," dated April 19, 2010 (SVE Report) and "*Annual Groundwater Monitoring Report – December 2009*," dated April 19, 2010 (Monitoring Report). Both reports were prepared on your behalf by Advanced GeoEnvironmental, Inc. The SVE Report presents the results from operation of a soil vapor extraction (SVE) unit between February 22 and March 23, 2010. During this period of operation, low influent vapor concentrations were measured in individual extraction wells and the overall system influent. Based on the low recovery, the SVE Report recommends shutting down the system for one month. After the one month shut down, the system will be re-started and based upon influent concentrations, operations will be continued or the system again shut down.

We concur with the proposal to shut down the SVE system for one month prior to system re-start. If upon re-start, influent vapor concentrations remain at the low levels recently observed during SVE operation, we concur with shut down of the system. If the system is shut down, we request that you submit a report of findings with recommendations for soil vapor sampling to confirm that soil vapor concentrations below the building are below appropriate screening levels.

The proposal in the April 2010 Monitoring Report to continue groundwater monitoring on an annual basis is acceptable. We request that you perform the proposed work and send us the reports described below.

TECHNICAL REPORT REQUEST

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

- **September 10, 2010** – SVE System Re-Start Report with Recommendations for Future Actions

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

Sincerely,

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

Attachments: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566 (*Sent via E-mail to: dstefani@lpfire.org*)

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551 (*Sent via E-mail to: cdizon@zone7water.com*)

Arthur Deicke, Advanced GeoEnvironmental, Inc., 837 Shaw Road, Stockton, CA 95215 (*Sent via E-mail to: adeicke@advgeoenv.com*)

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH

Geotracker, File

Attachment 1
Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

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

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

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

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

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

Background Information
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

The site was formerly used as a dry cleaning facility utilizing a solvent-based dry cleaning machine. Reportedly, the tetrachloroethene (PCE)-based dry cleaning machine was upgraded in the early 1990s to an Exxon DF2000, which is a clean solvent machine, and then later to silicon-based dry cleaning technology. All dry cleaning equipment was reportedly removed from the site in 2005.

REGIONAL GEOLOGIC/HYDROGEOLOGIC CONDITIONS

In general, alternating layers of clay and silt were noted during the advancement of the pilot borings. Distinct layers of sand and gravel were also noted; sand layers encountered were poorly-graded containing some gravel pieces while gravel layers were noted as angular gravel containing some sands and silt.

PREVIOUS SITE ASSESSMENT

In October 2005, JMK Environmental Solutions advanced three soil borings for the collection of soil samples at the site. Soil samples were collected from borings S-1 and S-2 at five-foot intervals from 5 feet to 15 feet below surface grade (bsg) and in ten-foot intervals between 15 feet and 35 feet bsg.

In January 2007, ENGEO Inc. advanced nine soil borings (SG-1 to SG-9) to five feet bsg for the collection of soil-gas samples and two soil borings (P-1 and P-2) to one and five feet bsg for the collection of soil samples. Soil-gas samples were collected in syringes and analyzed by a mobile laboratory in accordance with EPA Method 8260M. PCE and related PCE-daughter products were reported in the soil-gas samples. PCE was also reported in soil sample P-1@5 at five feet bsg.

In March 2007, ENGEO, Inc. advanced five soil borings (S-1 through S-5) for the collection of soil and ground water. Soil samples were collected at various depths ranging from 2 feet to 30 feet bsg. In general, ground water samples were collected from the first water bearing unit at depths ranging from approximately 21 feet to 26 feet bsg. PCE was reported in soil samples collected from S-3, which is located near the former dry cleaning unit. PCE was reported in each grab water samples collected from boring S-2 through S-5.

In November 2007, ENGEO, Inc. advanced one boring (1-B1) near the current trash holding area to define the vertical extent of soil and ground water. Soil samples were collected at ten-foot intervals from 10 feet to 90 feet bsg; grab ground water samples were collected at depths of approximately 35, 70 and 95 feet bsg. PCE was reported in soil samples from collected from 10, 20 and 50 feet bsg. No target chemicals were reported in grab ground water samples.

In December 2007, ENGEO, Inc. performed a soil-gas survey and advanced seven soil borings (SG-10 through SG-16) to five feet bsg and collected eight soil-gas samples in Summa canisters and analyzed by EPA Method TO-15. Results from the survey indicated that all locations were either non-detect or below environmental screening levels for target chemicals.

In December 2007, ENGEO, Inc. installed three ground water monitoring wells (MW-1 through MW-3). Soil samples were collected from MW-1 at 5.5 feet and 10 feet bsg; one soil sample was collected during the advancement of MW-2 and MW-3 at depths of 25.5 feet and 26 feet, respectively. PCE was reported in both soil samples collected during the installation of well MW-1.

ENGEO, Inc. performed one ground water monitoring event at the site in January 2008 utilizing wells MW-1 through MW-3. PCE was reported in monitoring wells MW-1 and MW-2 at concentrations below Maximum Contaminate Level (MCL) of 5 ug/l. Historical analytical soil, ground water, soil-gas and other data is included in Tables 2 through 4 and 7.

On 08 January 2009 *Advanced* GeoEnvironmental, Inc. (AGE) advanced one SVE well (SVE-1) and two SVE observation wells (OW-1 and OW-2) at the site. Three pilot soil borings were advanced at the site to depths of approximately 20 feet bsg. SVE well SVE-1 was advanced south of the former dry-cleaning machine location and adjacent to soil vapor monitoring point SG-5. SVE observation well OW-1 was located approximately 39 feet to the southwest of well SVE-1 and north of the location of borings SG-3 and S-5. SVE observation well OW-2 was located approximately 21 feet west of well SVE-1. PCE was reported in samples collected at 5, 10 and 15 feet bsg in pilot boring SVE-1. PCE was reported in the sample collected at 5 feet bsg in pilot boring OW-1. PCE was reported in samples collected at 5 and 10 feet bsg in pilot boring.

On 19 and 20 January 2009 AGE performed vapor extraction tests at the site. Field work was performed as detailed in the AGE-prepared *Soil Vapor Extraction Pilot Test Work Plan* dated 02 October 2008 and as modified and approved by Alameda County Environmental Health Services (ACEHS) in their letter dated 07 November 2008 and consisted of a 24-hour variable speed pilot test utilizing SVE well SVE-1, screened from 5 feet to 20 feet bsg, to evaluate the use of the technology to effectively remove chlorinated solvents from the impacted soil. PCE was reported in each of the four soil vapor samples collected from SVE well SVE-1. Trichloroethene (TCE) was reported in soil vapor sample.

Based on the results of vapor extraction pilot tests performed at the site on, AGE had recommended installation of a soil vapor extraction (SVE) system utilizing existing shallow-screened vapor well SVE-1. AGE also recommended converting pilot test observation wells OW-1 and OW-2, which are constructed identical to SVE-1, to soil vapor extraction wells. Additionally AGE recommended the installation of two additional SVE wells near and north of the former drying cleaning system.

On 10 April 2009, Alameda County Environmental Health Services (ACEHS) concurred with

AGE's above stated recommendations and directed that an interim remediation work plan be submitted to the ACEHS by 15 June 2009 (Appendix A). Due to budget and scheduling constraints AGE requested two separate extensions for the submital of the interim soil remediation work plan, which were approved by ACEHS in email correspondence dated 09 June and 11 August 2009.

APPENDIX C

CAL TECH Environmental Laboratories
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

ANALYTICAL RESULTS*

CTEL Project No: CT214-1006195
Client Name: Advanced Geo Environmental, Inc.
837 Shaw Road
Stockton, CA 95215
Phone:(209) 467-1006
Fax: (209) 467-1118
Attention: Mr. Art Deicke / Bill Little

Project ID: Global ID: T06019748481
Project Name: Metro Valley Cleaners

Date Sampled: 06/21/10 @ 13:56 p.m.
Date Received: 06/22/10 @ 10:00 am
Date Analyzed 06/22/10
Matrix: Air

Laboratory ID:	1006-195-1	1006-195-2	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	Influent	Effluent			
Dilution	1	1			
Dichlorodifluoromethane	ND	ND	EPA 8260B	ug/L	1
Chloromethane	ND	ND	EPA 8260B	ug/L	1
Vinyl Chloride	ND	ND	EPA 8260B	ug/L	0.5
Bromomethane	ND	ND	EPA 8260B	ug/L	1
Chloroethane	ND	ND	EPA 8260B	ug/L	1
Trichlorofluoromethane	ND	ND	EPA 8260B	ug/L	1
Iodomethane	ND	ND	EPA 8260B	ug/L	1
Acetone	ND	ND	EPA 8260B	ug/L	10
1,1-Dichloroethene	ND	ND	EPA 8260B	ug/L	1
t-Butyl Alcohol (TBA)	ND	ND	EPA 8260B	ug/L	25
Methylene Chloride	ND	ND	EPA 8260B	ug/L	10
Freon 113	ND	ND	EPA 8260B	ug/L	5
Carbon disulfide	ND	ND	EPA 8260B	ug/L	1
trans,1,2-Dichloroethene	ND	ND	EPA 8260B	ug/L	1
Methyl-tert-butyl-ether(MtBE)	ND	ND	EPA 8260B	ug/L	5
1,1-Dichloroethane	ND	ND	EPA 8260B	ug/L	1
Vinyl acetate	ND	ND	EPA 8260B	ug/L	50
Diisopropyl Ether (DIPE)	ND	ND	EPA 8260B	ug/L	1
Methyl Ethyl Ketone	ND	ND	EPA 8260B	ug/L	10
cis,1,2-Dichloroethene	ND	ND	EPA 8260B	ug/L	1
Bromochloromethane	ND	ND	EPA 8260B	ug/L	1
Chloroform	ND	ND	EPA 8260B	ug/L	1
2,2-Dichloropropane	ND	ND	EPA 8260B	ug/L	1
Ethyl-t-butyl ether (ETBE)	ND	ND	EPA 8260B	ug/L	1
1,1,1-Trichloroethane	ND	ND	EPA 8260B	ug/L	1
1,2-Dichloroethane	ND	ND	EPA 8260B	ug/L	0.5
1,1-Dichloropropene	ND	ND	EPA 8260B	ug/L	1
Carbon Tetrachloride	ND	ND	EPA 8260B	ug/L	0.5
Benzene	ND	ND	EPA 8260B	ug/L	0.5
t-Amyl Methyl Ether (TAME)	ND	ND	EPA 8260B	ug/L	1
1,2-Dichloropropane	ND	ND	EPA 8260B	ug/L	1
Trichloroethene	ND	ND	EPA 8260B	ug/L	1
Dibromomethane	ND	ND	EPA 8260B	ug/L	1
Bromodichloromethane	ND	ND	EPA 8260B	ug/L	1
2-Chloroethylvinylether	ND	ND	EPA 8260B	ug/L	5
cis,1,3-Dichloropropene	ND	ND	EPA 8260B	ug/L	1
4-Methyl-2-pentanone(MI)	ND	ND	EPA 8260B	ug/L	10
trans,1,3-Dichloropropene	ND	ND	EPA 8260B	ug/L	1
Toluene	ND	ND	EPA 8260B	ug/L	0.5
1,1,2-Trichloroethane	ND	ND	EPA 8260B	ug/L	1

(Continued)

CTEL Project No: CT214-1006195

Project ID: Global ID: T06019748481
Project Name: Metro Valley Cleaners

Laboratory ID: / **Client Sample ID:**	1006-195-1 Influent	1006-195-2 Effluent	**Method**	**Units**	**Detection Limit**
1,2-Dibromoethane(EDB)	ND	ND	EPA 8260B	ug/L	0.5
1,3-Dichloropropane	ND	ND	EPA 8260B	ug/L	1
Dibromochloromethane	ND	ND	EPA 8260B	ug/L	1
2-Hexanone	ND	ND	EPA 8260B	ug/L	10
Tetrachloroethene	3.0	ND	EPA 8260B	ug/L	1
Chlorobenzene	ND	ND	EPA 8260B	ug/L	1
1,1,1,2-Tetrachloroethane	ND	ND	EPA 8260B	ug/L	1
Ethylbenzene	ND	ND	EPA 8260B	ug/L	0.5
m.p-Xylene	ND	ND	EPA 8260B	ug/L	0.6
Bromoform	ND	ND	EPA 8260B	ug/L	1
Styrene	ND	ND	EPA 8260B	ug/L	1
o-Xylene	ND	ND	EPA 8260B	ug/L	0.6
1,1,2,2-Tetrachloroethane	ND	ND	EPA 8260B	ug/L	1
1,2,3-Trichloropropane	ND	ND	EPA 8260B	ug/L	1
Isopropylbenzene	ND	ND	EPA 8260B	ug/L	1
Bromobenzene	ND	ND	EPA 8260B	ug/L	1
2-Chlorotoluene	ND	ND	EPA 8260B	ug/L	1
n-Propylbenzene	ND	ND	EPA 8260B	ug/L	1
4-Chlorotoluene	ND	ND	EPA 8260B	ug/L	1
1,3,5-Trimethylbenzene	ND	ND	EPA 8260B	ug/L	1
tert-Butylbenzene	ND	ND	EPA 8260B	ug/L	1
1,2,4-Trimethylbenzene	ND	ND	EPA 8260B	ug/L	1
sec-Butylbenzene	ND	ND	EPA 8260B	ug/L	1
1,3-Dichlorobenzene	ND	ND	EPA 8260B	ug/L	1
1,4-Dichlorobenzene	ND	ND	EPA 8260B	ug/L	1
p-Isopropyltoluene	ND	ND	EPA 8260B	ug/L	1
1,2-Dichlorobenzene	ND	ND	EPA 8260B	ug/L	1
n-Butylbenzene	ND	ND	EPA 8260B	ug/L	1
1,2 Dibromo-3-Chloropropane	ND	ND	EPA 8260B	ug/L	1
1,2,4-Trichlorobenzene	ND	ND	EPA 8260B	ug/L	1
Naphthalene	ND	ND	EPA 8260B	ug/L	1
1,2,3-Trichlorobenzene	ND	ND	EPA 8260B	ug/L	1
Hexachlorobutadiene	ND	ND	EPA 8260B	ug/L	1

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY		Control Limit
Dibromofluoromethane	97	86	70-130
1,2 Dichloromethaned4	108	98	70-130
Toluene-d8	119	114	70-130
Bromofluorobenzene	113	117	70-130

Greg Tejirian
Laboratory Director

*The results are base upon the sample received.

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

CAL TECH Environmental Laboratories
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

QA/QC Report

Method: 8260B / TO15

Matrix: Water / Air

Date Analyzed: 6/22/2010

Date Extracted: 6/22/2010

Perimeters	Conc. ug/L		Spike Added	Recovery %		Control Limits		RPD
	MS	MSD		MS	MSD	Rec.	RPD	
1,1-Dichloroethene	46	48	50	92	96	70-130	20	4
Benzene	47	49	50	94	98	70-130	20	4
Trichloroethene	50	51	50	100	102	70-130	20	2
Toluene	53	55	50	106	110	70-130	20	4
Chlorobenzene	46	48	50	92	96	70-130	20	4
m,p-Xylenes	96	101	100	96	101	70-130	20	5

MS: Matrix Spike
MSD: Matrix Spike Duplicate

RPD: Relative Percent Difference of MS and MSD

Perimeters	Method Blank	Units	Det. Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
TCE	ND	ug/L	1
PCE	ND	ug/L	1

Advanced GeoEnvironmental, Inc.

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☐ 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
☐ _____

06-195

CHAIN OF CUSTODY RECORD

Date: 6/21/10 Page 1 of 1

Project Name Metro Valley Cleaners	**Project Manager** Bill Little
Client Strong	**Sampler (initials & signature)** RM
Invoice to: ☑ AGE ☐ Client	**Lab Project No.:**

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes	Analysis Required: Bull 8260
influent/vapor	6/21/10	1356	A	1		X
effluent/vapor	6/21/10	1353	A	1		X

Relinquished by: Rick Mart	Date: 6/21/10	Time: 1600	Laboratory: Cal Tech		
Courier: Ontrac			Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: R. Taylor	Date: 6-22-10	Time: 10:00

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:

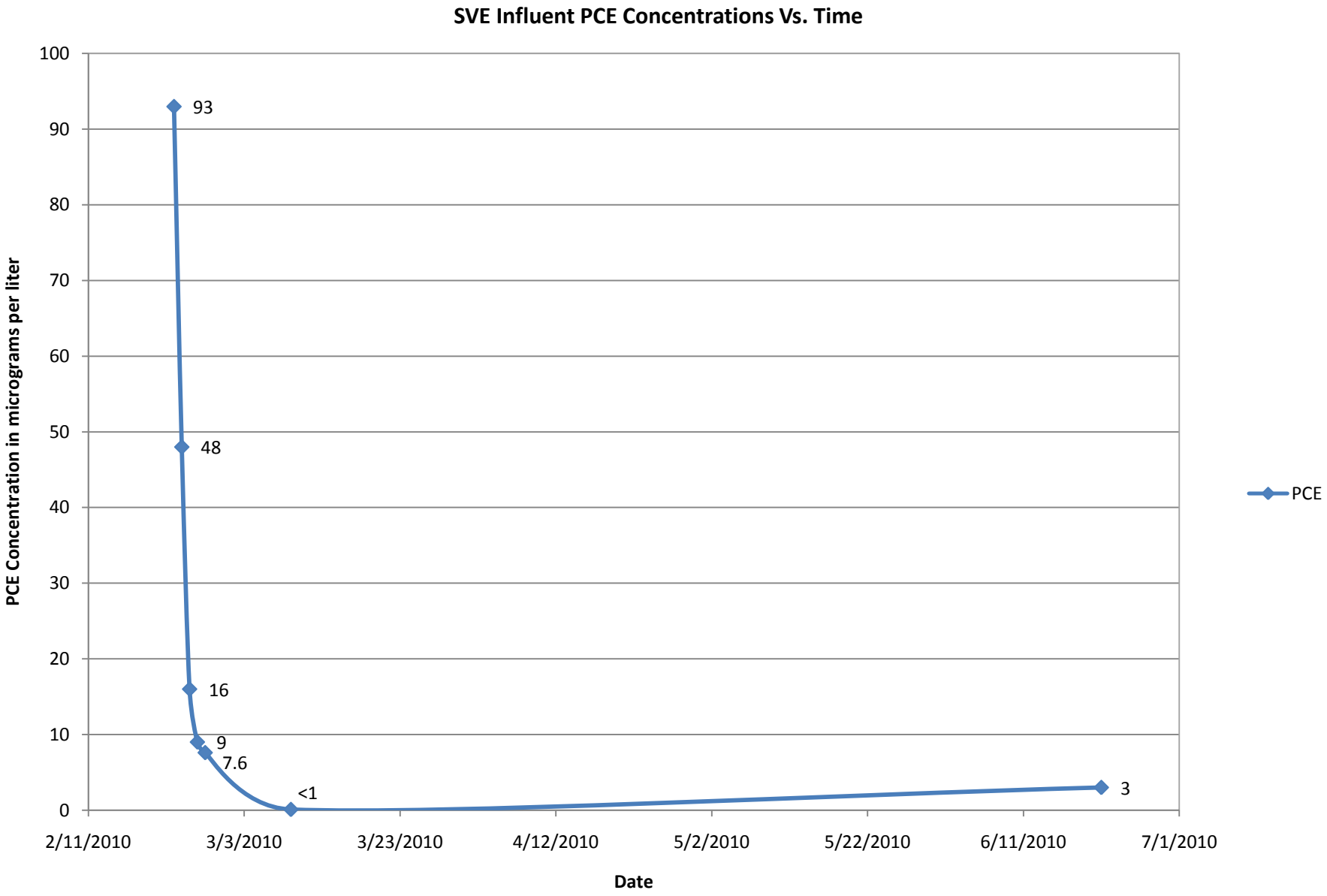
I hereby authorize the performance of the above indicated work.

Rick Mart

Geotracker EDF to: ☐ geotracker@advgeoenv.com ☐ _____

Global ID:

APPENDIX D


SVE Influent PCE Concentrations Vs. Time
PCE Concentration in micrograms per liter
100
90
80
70
60
50
40
30
20
10
0
93
48
16
9
7.6
<1
3
2/11/2010
3/3/2010
3/23/2010
4/12/2010
5/2/2010
5/22/2010
6/11/2010
7/1/2010
Date
PCE