Advanced GeoEnvironmental, Inc.

09 March 2009
AGE-NC Project No. 08-1640

Mr. Bob Strong
500 Bollinger Canyon Way #A4 North California Street
San Ramon, 94582

Subject: **Soil Vapor Extraction Pilot Test Report**
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Dear Mr. Strong:

Advanced GeoEnvironmental, Inc. has prepared this report of environmental activities conducted at the site located at 224 Rickenbacker Circle, Livermore, California. The scope of work included a ground water monitoring event, the installation of one soil vapor extraction well and two soil vapor observation wells, and the performance of a variable speed 24-hour soil vapor extraction pilot test. Copies of this report will be forwarded to Mr. Jerry Wickham of the Alameda County Environmental Health Services (ACEHS).

The opportunity to provide you with this service is greatly appreciated. If you have any questions or require further information, please contact our office at (209) 467-1006.

Sincerely,

***Advanced* GeoEnvironmental, Inc.**

Daniel J. Villanueva
Staff Geologist

cc: Mr. Jerry Wickham, ACEHS

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

Advanced
GeoEnvironmental, Inc.

09 March 2009
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 Extraction Pilot Test Report**
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Dear Mr. Wickham:

Advanced GeoEnvironmental, Inc. has prepared this report of environmental activities conducted at the site located at 224 Rickenbacker Circle, Livermore, California. The scope of work included a ground water monitoring event, the installation of one soil vapor extraction well and two soil vapor observation wells, the performance of a variable speed 24-hour soil vapor extraction pilot test, and preparation of this report.

If you have any questions or require further information, please contact our office at (209) 467-1006.

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Soil Vapor Extraction Pilot Test Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

09 March 2009
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PREPARED FOR:

Mr. Bob Strong
METRO VALLEY CLEANERS

PREPARED BY:

Advanced GeoEnvironmental, Inc.

381 Thor Place, Brea, California 92821 ● Phone (714) 529-0200 ● Fax (714) 529-0203
837 Shaw Road, Stockton, California 95215 ● Phone (209) 467-1006 ● Fax (209) 467-1118
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

Soil Vapor Extraction Pilot Test Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

09 March 2009
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Advanced **GeoEnvironmental, Inc.**
837 Shaw Road, Stockton, California

PREPARED BY:

Daniel J. Villanueva
Staff Geologist

PROJECT MANAGER:

Arthur E. Deicke Jr.
Project Scientist

REVIEWED BY:

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

Soil Vapor Extraction Pilot Test Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

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METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

1.0. INTRODUCTION AND BACKGROUND

At the request of Mr. Strong, *Advanced* GeoEnvironmental, Inc. (AGE) has prepared this report of environmental activities conducted at 224 Rickenbacker Circle, Livermore, California (site) in December 2008 and January 2009. The report documents the results of a ground water monitoring event, the installation of one soil vapor extraction (SVE) well and two soil vapor observation wells and the performance of a variable speed 24-hour soil vapor extraction pilot test.

The site and the surrounding area are illustrated on Figure 1; a plan of the site, including soil boring and well locations, is illustrated on Figure 2. Well construction details are included in Table 1.

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 (Appendix A).

1.1. BACKGROUND

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 late 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. A metal fabrication facility is currently in operation at the site.

1.2. PREVIOUS INVESTIGATIONS

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 to 15 feet below surface grade (bsg) and in ten-foot intervals between 15 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 vapor samples were collected in syringes and analyzed by a mobile laboratory in accordance with EPA Method 8260M. PCE and related 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 to 30 feet bsg. In general, ground water samples were collected from the first water bearing unit at depths ranging from

approximately 21 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 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. advanced seven soil borings (SG-10 through SG-16) to five feet bsg and collected eight soil vapor samples utilizing Summa canisters and were analyzed by EPA Method TO-15. Results from the survey indicated that all locations were either non-detect or below environmental screening levels.

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 and 10 feet bsg; one soil sample was collected during the advancement of MW-2 and MW-3 at depths of 25.5 and 26 feet, respectively. PCE was reported in both samples collected from MW-1.

ENGEO, Inc. performed one ground water monitoring event on-site in January 2008 utilizing wells MW-1 through MW-3. PCE was reported in monitoring wells MW-1 and MW-2; PCE concentrations reported in MW-1 and MW-2 were 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.

2.0. PROCEDURES

On 18 December 2008, a ground water monitoring event was performed at the site utilizing wells MW-1 through MW-3. On 19 and 20 January 2009, a 24-hour variable speed pilot test was conducted using SVE well SVE-1, screened from 5 feet to 20 feet bsg.

2.1. GROUND WATER SAMPLE COLLECTION AND ANALYSIS

Monitoring was performed in accordance with AGE's standard monitoring and sampling procedures, provided in Appendix B. Field data and logs are provided in Appendix C. No exceptions to AGE's standard procedures were noted.

Ground water samples were analyzed by Cal Tech Environmental Laboratories (CTEL) a California Department of Public Health (CDPH)-certified laboratory for analysis located in Paramount, California for volatile organic compounds (VOCs) in accordance with EPA Method 8260B.

2.2. REMEDIATION WELL INSTALLATION

One SVE well (SVE-1) and two SVE observation wells (OW-1 and OW-2) were installed at the site on 08 January 2009.

2.2.1. Pilot Boring Advancement

Three pilot soil borings were advanced at the site to depths of approximately 20 feet bsg. The borings were advanced utilizing a CME-75 drill rig equipped with 8.25-inch diameter hollow-stem augers. 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.

2.2.2. Soil Sample Collection and Analysis

Soil samples will be collected from pilot borings at five-foot intervals. Relatively undisturbed soil samples were collected in each of the pilot borings using a California modified split-spoon sampler fitted with 2-inch diameter by 6-inch long stainless steel sleeves. Upon removal from the sampler, the sleeves were separated with a clean knife. The exposed ends of the second sleeve were covered with Teflon sheets, capped and sealed with tape. The remaining soil will was visually classified by an AGE representative in accordance with the Unified Soil Classification System (USCS). Soil samples were also field screened for the presence of volatile organic compounds using an organic vapor meter (OVM), equipped with a photo ionization detector (PID). Soil sample descriptions and OVM readings are detailed on boring logs included in Appendix D.

Following sample collection, each preserved sample sleeve was labeled with the boring location, depth, time, date and sampler's initials. Appropriately sealed and labeled samples will be placed in a chilled container with ice and transported under chain of custody procedures to CTEL, a CDPH-certified laboratory for analysis of VOCs in accordance with EPA Method 8260B.

Any non-disposable equipment used for sample collection was thoroughly rinsed with clean water after being washed with a solution of Alconox.

2.2.3. Well Installation

The three pilot borings were completed as single-casing SVE extraction and SVE observation wells utilizing 2-inch diameter schedule 40 polyvinylchloride (PVC) 0.030-inch slotted well screen and blank well casing. Based on geologic conditions, a 15-foot length of well screen, from 5 to 20 feet bsg was used for each well. After installing each well casing, a filter pack material consisting of #3 sand was added to approximately one foot above the screened interval (Figure 5).

A nominal one-foot bentonite seal (bentonite chips) was placed above the filter pack to minimize the potential for grout penetration into the screened section of the well. The bentonite seal was formed by pouring bentonite chips into the annulus and allowing them to settle on the filter pack. The bentonite chips were hydrated using a few gallons of tap water and allowed to hydrate for a minimum of one-half hour prior to grouting.

The remaining annular space was filled to about 1 foot beneath ground surface with a cement grout. The grout mixture consisted of Type I/II Portland neat cement and not more than 6 gallons of water per 94-pound sack of cement.

2.2.4. Waste Management

Soil cuttings generated during drilling activities were containerized in properly labeled Department of Transportation (DOT)-approved 55-gallon drums. Upon characterization and profiling, the cuttings will be disposed at an appropriate landfill facility.

2.3. SOIL VAPOR EXTRACTION PILOT TEST

One variable flow rate, 24-hour SVE pilot study was conducted at the site on 19 and 20 January 2009 to evaluate the use of the technology to effectively remove chlorinated solvents from the impacted soil.

The pilot study was conducted at the site utilizing a 2.5-horsepower, regenerative vacuum blower; the vacuum blower was rated at a maximum 150 standard cubic feet per minute (scfm). The inlet of the vacuum blower was directly routed through a Blue-White F-452 flow rotometer to the SVE well head and connected by 2-inch diameter PVC piping. The outlet of the vacuum blower was directly routed through four 400-pound, vapor-phase activated carbon adsorption canisters.

Air-tight, 2-inch diameter PVC well caps fitted with Dwyer Magnehelic® vacuum gauges were attached to SVE observation wells OW-1 and OW-2. The induced vacuum was measured (i.e. inches

of water) at those observation points.

The vapor stream from extraction well SVE-1 was monitored for the presence of organic vapor using an OVM equipped with a PID. From the vacuum blower, the extracted vapor was processed and adsorbed through the carbon canisters as part of the treatment process.

During the pilot study, the vapor flow rate extracted was monitored at the inlet of the vacuum blower using a Dwyer DS-200 differential pressure flow sensor (inches of water); the flow rate was converted to scfm using a manufacturer supplied conversion chart. Additionally, the flow rate was measured with flow rotometer; measurements were collected in scfm. The flow rate was increased in three steps in four-hour increments for the first 12 hours of the pilot test. In the beginning of the pilot test, the blower was initially set to 15 scfm and increased to 22 scfm, 31scfm and 33 scfm (maximum capacity) in four-hour increments (Table 5). During the pilot test, flow rates were measured and recorded at 30-minute intervals.

Influent vapor samples were collected at the start-up, following the first increase in flow rate from 15 to 22 scfm, following the second increase from 22 to 31scfm and at the conclusion of the pilot test. Influent vapor samples were collected in Tedlar® bags using a hand-operated air-vacuum pump. An effluent vapor sample was not collected during the pilot test as no carbon breakthrough was noted during periodic field measurements.

Following collection, the influent vapor samples were placed in a container and transported under chain of custody to a CDPH-certified analytical laboratory for analysis. Each influent vapor sample was analyzed within 72 hours for VOCs by EPA method 8260.

3.0. FINDINGS

Ground water elevation, flow direction and gradient were determined from field data collected on 18 December 2008. The contaminant impact to ground water was quantified from laboratory analytical data.

3.1. GROUND WATER ELEVATION

At the time of the December 2008 sampling event, depths to ground water ranged from 27.90 feet (MW-1) to 28.38 feet (MW-2) below the top of the casing (btoc). Ground water elevations ranged from 381.57 feet (MW-3) to 382.10 (MW-1).

Ground water flow was inferred to be flowing toward the west under an average hydraulic gradient of approximately 0.006 foot/foot (ft/ft). Figure 3 illustrates the contoured ground water elevations for the water table as measured on 18 December 2008.

3.2. ANALYTICAL RESULTS

Three ground water samples were collected for background data in support of the SVE pilot test. Soil samples were collected during advancement of the pilot borings for the installation of SVE wells SVE-1, OW-1 and OW-2.

3.2.1. Ground Water Samples

Tetrachloroethene (PCE) was reported in the ground water samples collected from monitoring well MW-2 at a concentration of 7.1 micrograms per liter (µg/l). No other analytes were reported in the ground water samples collected on 18 December 2008.

Analytical results of the ground water samples collected on 18 December 2008 are summarized in Table 3. A map illustrating PCE impact to ground water is included as Figure 4.

The laboratory report (CTEL Project No. CT214-0812178), Quality Assurance/Quality Control report, and chain-of-custody form are included in Appendix D. Laboratory electronic deliverable format (EDF) files and electronic deliverable data (EDD) depth-to-water measurements were uploaded to the State GeoTracker database (confirmation numbers 4288864612 and 943786778).

3.2.2. Soil Samples

Samples collected during the 08 January 2009 well installation were submitted for laboratory analysis for VOCs by EPA method 8260B.

PCE was reported in samples collected at 5, 10 and 15 feet bsg in pilot boring SVE-1 at concentrations of 0.058 milligrams per kilograms (mg/kg), 0.11 mg/kg, and 0.014 mg/kg, respectively. PCE was reported in the sample collected at 5 feet bsg in pilot boring OW-1 at 0.040 mg/kg. PCE was reported in samples collected at 5 and 10 feet bsg in pilot boring OW-2 at concentrations of 0.036 mg/kg and 0.026 mg/kg, respectively.

No other target chemicals were reported in samples collected from SVE wells installed on 08 January 2009. Soil analytical results are summarized in Table 4. The laboratory report (CTEL Project No. CT214-0901030), Quality Assurance/Quality Control report, and chain-of-custody form are included in Appendix E. The laboratory electronic deliverable format (EDF) file was uploaded to the State GeoTracker database under confirmation number 3561844348).

3.3. STRATIGRAPHY

During the advancement of pilot borings for SVE well SVE-1 and SVE observation wells OW-1 and OW-2 soil samples were collected at 5-foot intervals between 5 and 20 feet bsg. 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. Boring logs documenting the installation of the SVE and observation wells are included as Appendix F.

3.4. SOIL VAPOR EXTRACTION PILOT TEST

One variable rate, 24-hour SVE pilot study was conducted at the site on 19 and 20 January 2009 to evaluate the use of the technology to effectively remove chlorinated solvents from the subsurface impacted soil.

3.4.1. Analytical Results of Soil Vapor Samples

PCE was reported in each of the four soil vapor samples collected from SVE well SVE-1 ranging from 67 µg/l (SVE-1/End) to 110 µg/l (Influent St. and Influent 1400).

Trichloroethene (TCE) was reported in soil vapor sample Influent 1400 at concentrations of 3.3 µg/l.

No other analytes were reported in soil vapor samples collected during the pilot test. Analytical results of soil vapor samples are summarized in Table 6. The laboratory report (CTEL Project Nos. CT214-0901115 and -09011028), QA/QC report and chain of custody forms are included in Appendix G. The confirmation numbers for GeoTracker submittal of laboratory electronic deliverable format (EDF) are 1826067268 and 1932946324.

3.4.2. Soil Vapor Extraction Pilot Test Results

The flow rates were measured between 15 scfm and 38 scfm for the 24-hour test. Influent vapor readings on the OVM/PID ranged from 26 to 56 parts per million volume (ppmv). Induced vacuum measured at the SVE well SVE-1 ranged between 20 and 80 inches of water (iow). Vacuum at the well heads of the observation wells OW-1 and OW-2 were recorded throughout the pilot test. Vacuum measurements ranged from 0.10 to 0.25 inches in observation well OW-1 and 0.05 to 0.21 inches in observation well OW-2.

During the first several measurements (start-up to approximately 1330), the gauge used to measure the induced vacuum at the SVE observation was improperly set-up. The proper setting and readings were performed from 1330 until the completion of the pilot test.

The maximum vacuum measured at the SVE extraction wells and SVE observation points (OW-1 and OW-2) during the pilot test were plotted versus the distance from SVE well SVE-1 (Appendix G). The theoretical radius of influence (ROI) was determined by drawing a best-fit line though these data points to correlate distance to vacuum data. Based on the United States Environmental Protection Agency (EPA)-prepared document, *How to Evaluate Alternative Cleanup Technologies For UST Sites*, the ROI is considered to be the distance from the extraction well at which a vacuum of at least 0.1 iow is observed. Based upon a vacuum of 0.1 iow, the extrapolated ROI at the site was approximately 35 feet.

A summary of parameters collected during the pilot test is included in Table 5. The theoretical or extrapolated ROI is depicted on Figure 6.

3.4.3. Mass Removal

The hydrocarbon mass of (PCE) removed during the operating period was calculated using the following equation: $M = C \bullet Q \bullet t$

where:
M = cumulative mass recovered (kilogram - kg)
C = soil-vapor concentration (kilogram per cubic meter - kg/m^3)
Q = extraction flow rate (cubic meter per hour - m^3/hr)
t = operational period (hours)

Estimated mass of hydrocarbons removed was based on laboratory analysis of soil-vapor samples, flow rate and operational time. Mass of extracted hydrocarbons was calculated for the time period using average hydrocarbon concentrations of influent soil-vapor sample data, averaged air flow rates, and duration of operation. Operational results are summarized in Table 5.

A calculated 0.3 pounds of mass or an approximate volume of 0.05 gallons of PCE was extracted using the SVE system during the 24-hour pilot test. Volume and mass calculations are provided in Appendix I.

4.0. CONCLUSIONS

Based upon the environmental activities performed in December 2008 and January 2009, AGE concludes:

- PCE was reported in monitoring well MW-2 during the 18 December 2008 background ground water monitoring event at a concentration of 7.1 µg/l, which is slightly above MCL of 5.0 µg/l.
- PCE impact to ground water is currently undefined south and west of monitoring well MW-2 (Figure 4).
- Continuous influent vapor readings observed with the OVM/PID during the SVE pilot test indicate that volatile organic compounds were effectively extracted from soil vapor soil vapor (Table 5).
- Based the projected 35-foot ROI of soil vapor extraction in the vadose zone, soil vapor extraction would be an effective remediation option for treatment of chlorinated solvent-impacted soil at the site. (Figure 6; Appendix G).

5.0. RECOMMENDATIONS

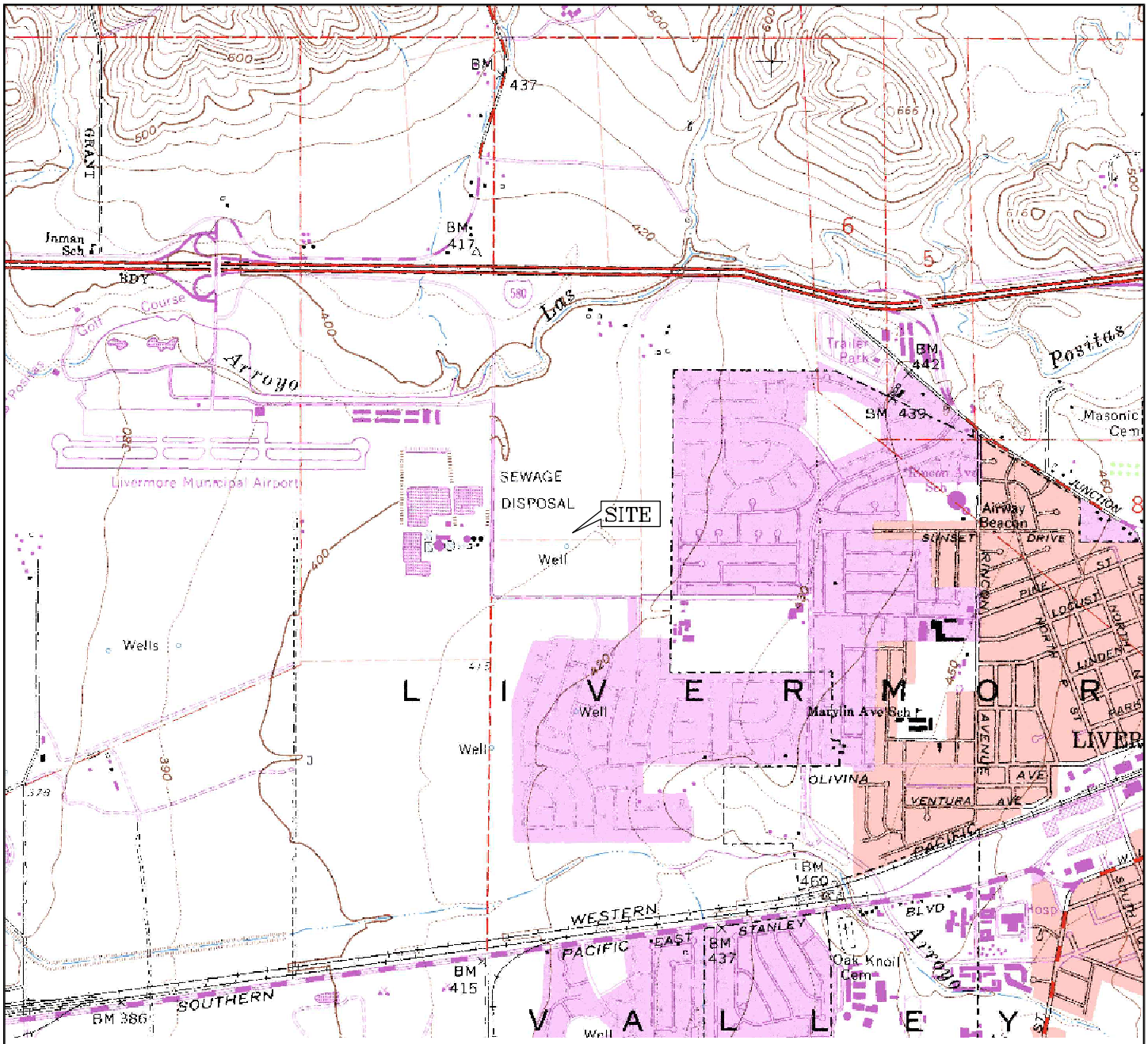
Based upon the environmental activities completed in December 2008 and January 2009, AGE recommends:

- Preparation of work plan for installation, start-up and operation of a SVE system at the site. The two observations wells OW-1 and OW-2 and SVE-1 would be used as SVE points. The work plan should include the installation of an additional SVE well north of theformer dry-cleaning machine location, based upon historical significant soil vapor concentrations (Table 7) and the projected ROI.
- Performance of annual monitoring, sampling and reporting of site monitoring wells MW-1 through MW-3. Annual monitoring of dissolved PCE is justified due to low PCE concentrations reported during the background monitoring event in monitoring well MW-2 and previous reported low PCE concentrations in samples collected from monitoring wells MW-1 and MW-2 in January 2008.

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. The 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 (i.e., soil samples, ground water samples and soil vapor samples) and subsurface conditions may vary away from these data points. No other warranty, expressed or implied, is made as to the professional interpretations, opinions and recommendations contained in this report.

FIGURES



N

SCALE
0 2000 4000
FEET

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

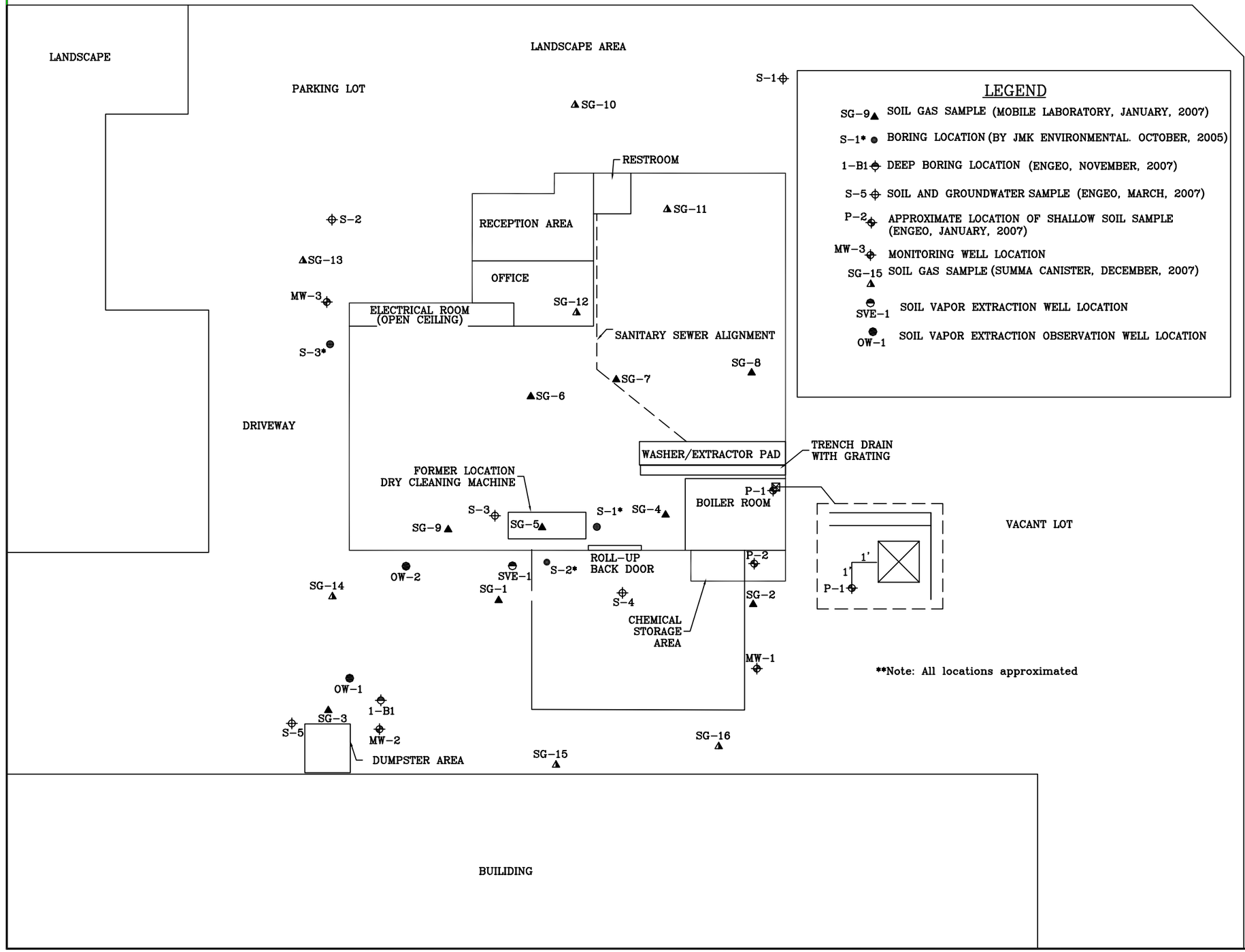
LOCATION MAP

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



RICKENBACKER CIRCLE

Advanced GeoEnvironmental, Inc.

PROJECT NO. AGE-NC-08-1640	FILE: METRO2
DATE: 17 FEBRUARY 2009	DRAWN BY: MAC

FIGURE: 2

SITE PLAN
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

RICKENBACKER PLACE

LANDSCAPE

LANDSCAPE AREA

PARKING LOT

18 DECEMBER 2008

S-1

SG-10

S-2

SG-11

SG-13

381.60

MW-3
381.57

SG-12

381.70

381.80

SG-8

SG-7

SG-6

DRIVEWAY

381.90

WASHER/EXTRACTOR PAD

DRY CLEANING MACHINE

P-1

S-3

SG-5

SG-4

382.00

BOILER ROOM

SG-9

VACANT LOT

OW-2

SVE-1

P-2

SG-14

SG-1

0.007 ft/ft

SG-2

382.10

MW-1
382.10

OW-1

DUMPSTER AREA

1-B1

SG-3

S-5

MW-2
381.60

SG-16

382.10

SG-15

381.80

381.90

382.00

381.60

381.70

BUILIDING

**Note: All locations approximated

LEGEND

- SG-9 ▲ SOIL GAS SAMPLE (MOBILE LABORATORY, JANUARY, 2007)
- ● 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-3 382.10 ⊕ MONITORING WELL LOCATION AND GROUND WATER ELEVATION
- SG-15 ▲ SOIL GAS SAMPLE (SUMMA CANISTER, DECEMBER, 2007)
- 0.006 ft/ft GROUNDWATER FLOW DIRECTION AND GRADIENT
- SVE-1 ◓ SOIL VAPOR EXTRACTION WELL LOCATION
- 382.10 LINES OF EQUAL GROUNDWATER ELEVATION

NOTES
GROUND WATER ELEVATION IN FEET MEAN SEA LEVEL
GRADIENT IN FOOT PER FOOT (ft/ft)

N

SCALE
0 20 40
FEET

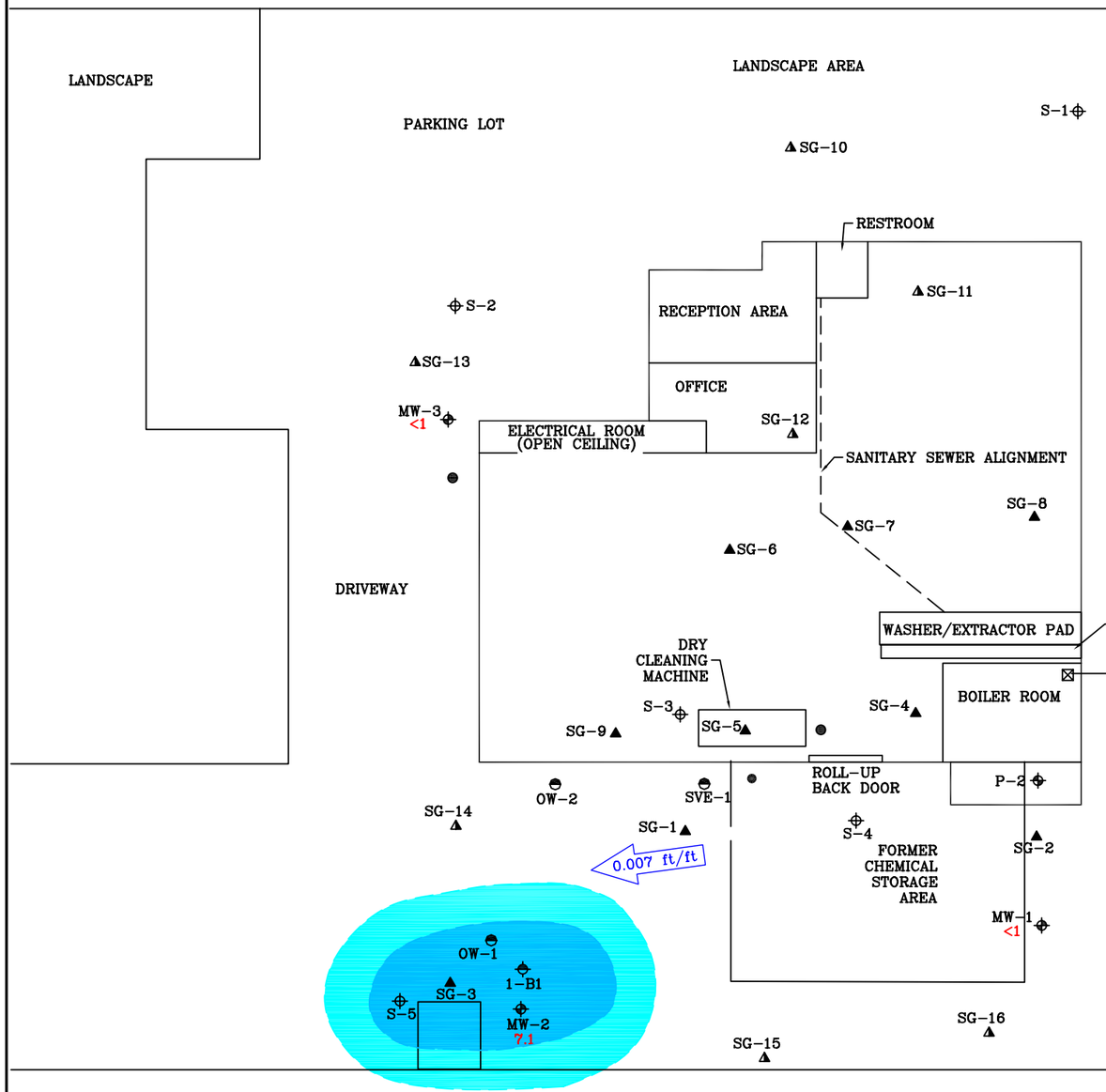
RICKENBACKER CIRCLE

GROUND WATER ELEVATION MAP
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.

PROJECT NO. AGE-NC-08-1640 | FILE: METRO2 | FIGURE: 3
DATE: 03 FEBRUARY, 2009 | DRAWN BY: MAC

RICKENBACKER PLACE



LEGEND

- SG-9 ▲ SOIL GAS SAMPLE (MOBILE LABORATORY, JANUARY, 2007)
- ● BORING LOCATION (BY JMK ENVIRONMENTAL. OCTOBER, 2005)
- 1-B1 ⊕ DEEP BORING 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 ⊕ <1 MONITORING WELL LOCATION AND PCE CONCENTRATION
- SG-15 ▲ SOIL GAS SAMPLE (SUMMA CANISTER, DECEMBER, 2007)
- 0.007 ft/ft GROUNDWATER FLOW DIRECTION IN FT/FT
- SVE-1 ◒ SOIL VAPOR EXTRACTION WELL LOCATION
- OW-1 ● SOIL VAPOR EXTRACTION OBSERVATION WELL LOCATION
- DISSOLVED PCE CONCENTRATION IN GROUND WATER > 5 UG/L
- DISSOLVED PCE CONCENTRATION IN GROUND WATER > 1 UG/L

**Note: All locations approximated

RICKENBACKER CIRCLE

NOTES
PCE: TETRACHLOROETHANE
UG/L: MICROGRAMS PER LITER
FT/FT: FOOT PER FOOT

N

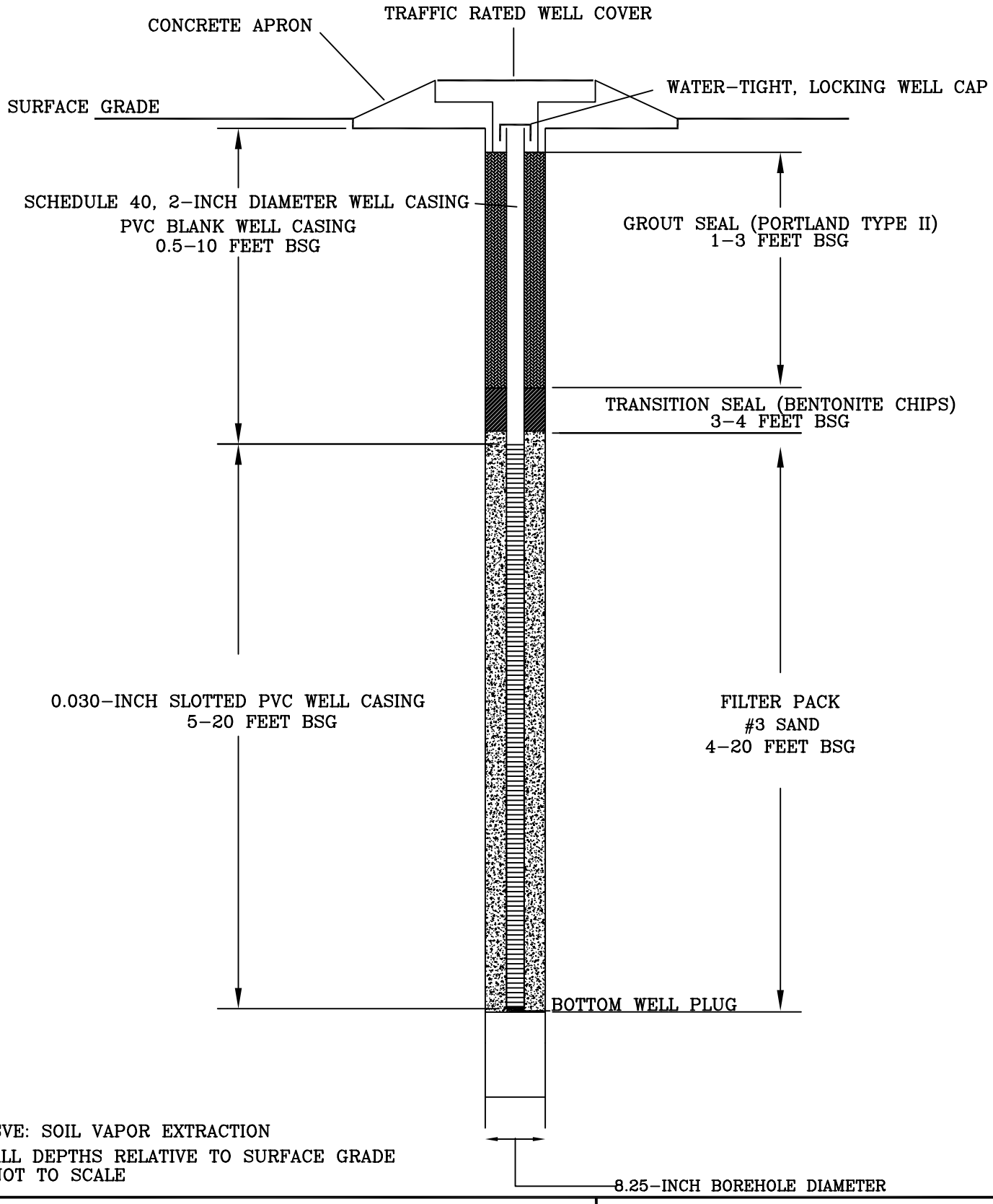
SCALE
0 20 40
FEET

18 DECEMBER 2008

DISSOLVED PCE CONCENTRATION MAP
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.

PROJECT NO. AGE-NC-08-1640 | FILE: METRO2 | FIGURE: 4
DATE: 03 FEBRUARY, 2009 | DRAWN BY: MAC



SVE: SOIL VAPOR EXTRACTION

ALL DEPTHS RELATIVE TO SURFACE GRADE

NOT TO SCALE

SVE AND SVE OBSERVATION WELL CONSTRUCTION

METRO VALLEY CLEANERS

224 RICKENBACKER CIRCLE

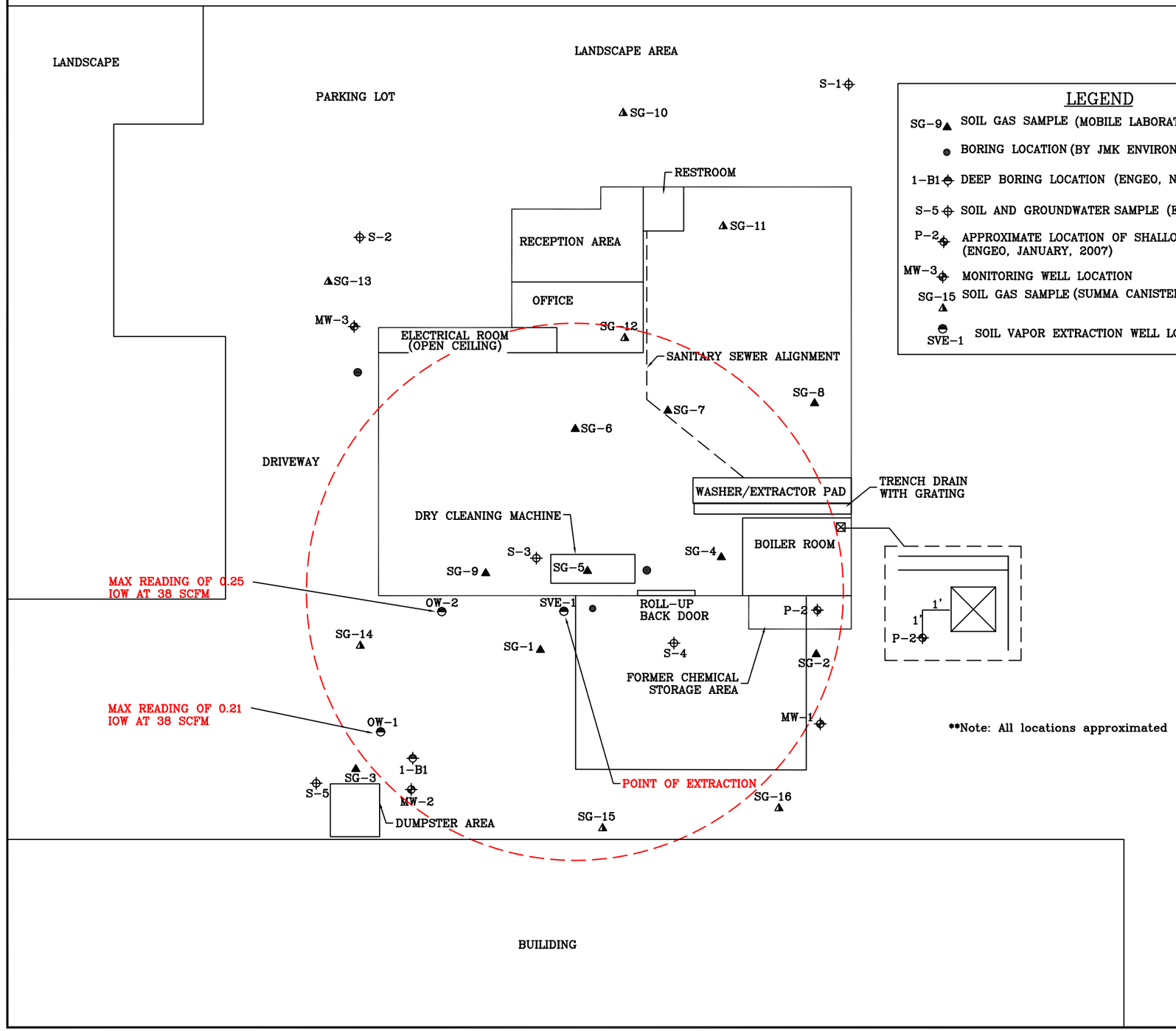
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.

of Northern California

PROJECT NO. AGE-NC-08-1640	FILE: METRO 5	FIGURE: 5
DATE: 17 FEBRUARY 2009	DRAWN BY: KMM	

RICKENBACKER PLACE



LEGEND

SG-9 ▲	SOIL GAS SAMPLE (MOBILE LABORATORY, JANUARY, 2007)
●	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

**Note: All locations approximated

N

SCALE
0 20 40
FEET

RICKENBACKER CIRCLE

THEORETICAL RADIUS OF INFLUENCE
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.

PROJECT NO. AGE-NC-08-1640	FILE: METRO2
DATE: 17 FEBRUARY 2009	DRAWN BY: MAC

FIGURE: 6

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	12-18-2008	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

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

GROUND WATER LEVEL MEASUREMENTS
Metro Valley Cleaners
224 Rickenbacker Circle
Livermore, CA

Well ID	Screened Interval (feet bsg)	Well Casing Elevation (ft MSL)[1]	Date	Depth to Ground Water (ft btoc)	Ground Water Elevation (ft MSL)	Ground Water Flow and Gradient	
						Quarter/Year	Direction/ Gradient
MW-1	13-35	410.00	01/28/08	25.25	384.75	1st/2008	NW / 0.00627 ft/ft
			12/18/08	27.90	382.10	4th/2008	W / 0.007 ft/ft
MW-2	13-35	409.98	01/28/08	25.23	384.75		
			12/18/08	28.38	381.60		
MW-3	13-35	409.48	01/28/08	25.25	384.23		
			12/18/08	27.91	381.57		

TABLE 3

GROUND WATER ANALYTICAL DATA
Metro Valley Cleaners
224 Rickenbacker Circle
Livermore, California
(ug/l)

Sample ID	Screen Interval (feet bsg)	Date	EPA Method 8260B					
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC
S-1	22 - 26	03-02-2007	<1	<1	<1	<1	<1	<1
S-2	22 - 26	03-02-2007	**1.8**	<1	<1	<1	<1	<0.5
S-3	24 - 28	03-02-2007	**27**	**2.2**	<0.05	<0.05	**1.6**	<0.05
S-4	26 - 30	03-02-2007	**16**	<0.05	<0.05	<0.05	<0.05	<0.05
S-5	23 - 27	03-02-2007	**36**	**2.0**	<0.05	<0.05	**0.054**	<0.05
1-B1/DB-1-35	35 - 39	11-28-2007	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-B1/DB-1-70	70 - 74	11-28-2007	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-B1/DB-1-95	95 - 99	11-28-2007	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MW-1	10 to 35	01-28-2008	**0.80**	<0.5	<0.5	<0.5	<0.5	<0.5
		12-18-2008	<1	<1	<1	<1	<1	<0.5
MW-2	10 to 35	01-28-2008	**0.95**	<0.5	<0.5	<0.5	<0.5	<0.5
		12-18-2008	**7.1**	<1	<1	<1	<1	<0.5
MW-3	10 to 35	01-28-2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		12-18-2008	<1	<1	<1	<1	<1	<0.5

Notes:

ug/l:	micrograms per liter
bsg:	below surface grade
<:	non-detect above laboratory reporting limit
DB:	deep boring
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

TABLE 4

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

TABLE 4

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
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
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

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 5

FIELD PARAMETERS-SVE PILOT TEST

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, CA

Time	Date	Flow (iow/scfm)	Influent PID (ppm)	Effluent PID (ppm)	Vacuum Measurements		
					SVE-1 (scfm)	OW-1 (iow)	OW-2 (iow)
Baseline	1/19/2009	-	-	-	0.00	0.00	0.25
0930	1/19/2009	0.10 / 15	48.4	0	37.00	0.00	0.5
1000	1/19/2009	0.10 / 15	51.2	0	26.00	0.00	3.1
1030	1/19/2009	0.10 / 15	48.9	0	22.00	0.00	2.20
1100	1/19/2009	0.10 / 15	55.2	0	27.00	0.80	1.2
1130	1/19/2009	0.10 / 15	56.1	0	20.00	1.40	0
1200	1/19/2009	0.10 / 15	54.3	0	26.00	1.40	0
1230	1/19/2009	0.10 / 15	49.8	0	26.00	1.25	0.6
1300	1/19/2009	0.10 / 20	44.4	0	20.00	1.35	0.6
1330	1/19/2009	0.16 / 22	45.8	0	52.00	1.45	0.05
Adjustment made to vacuum gauge							
1400	1/19/2009	0.16 / 22	50	0	51.00	0.10	0.05
1430	1/19/2009	0.16 / 22	42	0	52.00	0.10	0.10
1500	1/19/2009	0.16 / 22	43	0	52.00	0.11	0.06
1530	1/19/2009	0.16 / 22	35	0	53.00	0.11	0.08
1600	1/19/2009	0.16 / 22	39	0	53.00	0.11	0.08
1630	1/19/2009	0.16 / 22	38	0	53.00	0.11	0.08
1700	1/19/2009	0.16 / 22	38	0	53.00	0.11	0.08
1730	1/19/2009	0.325 / 31	38	0	80.00	0.15	0.125
1800	1/19/2009	0.325 / 31	37	0	79.00	0.175	0.125
1830	1/19/2009	0.325 / 31	37	0	79.00	0.175	0.13
1900	1/19/2009	0.35 / 32	37	0	78.00	0.19	0.15
1930	1/19/2009	0.36 / 33	37	0	77.00	0.19	0.14
2000	1/19/2009	0.375 / 33	35	0	76.00	0.20	0.15
2030	1/19/2009	0.375 / 33	35	0	78.00	0.20	0.15
2100	1/19/2009	0.375 / 33	35	0	78.00	0.20	0.15
2130	1/19/2009	0.375 / 33	35	0	76.00	0.20	0.15
2200	1/19/2009	0.40 / 35	34	0	74.00	0.20	0.15

TABLE 5

FIELD PARAMETERS-SVE PILOT TEST

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, CA

Time	Date	Flow (iow/scfm)	Influent PID (ppm)	Effluent PID (ppm)	Vacuum Measurements		
					SVE-1 (scfm)	OW-1 (iow)	OW-2 (iow)
2230	1/19/2009	0.40 / 35	34	0	74.00	0.20	0.15
2300	1/19/2009	0.43 / 36	34	0	72.00	0.20	0.16
2330	1/19/2009	0.43 / 36	35	0	72.00	0.20	0.16
2400	1/19/2009	0.43 / 36	35	0	72.00	0.21	0.16
0000	1/20/2009	0.43 / 36	34	0	70.00	0.21	0.16
0030	1/20/2009	0.42 / 36	34	0	70.00	0.21	0.16
0100	1/20/2009	0.42 / 36	34	0	70.00	0.21	0.16
0130	1/20/2009	0.43/ 36	34	0	70.00	0.21	0.16
0200	1/20/2009	0.42 / 36	32	0	70.00	0.21	0.16
0230	1/20/2009	0.43 / 36	34	0	70.00	0.21	0.16
0300	1/20/2009	0.43 / 36	34	0	70.00	0.21	0.16
0330	1/20/2009	0.43 / 36	33	0	69.00	0.21	0.16
0400	1/20/2009	0.43 / 36	34	0	70.00	0.21	0.16
0430	1/20/2009	0.43 / 36	34	0	70.00	0.21	0.16
0500	1/20/2009	0.43 / 36	33	0	69.00	0.21	0.16
0530	1/20/2009	0.43 / 36	34	0	69.00	0.21	0.16
0600	1/20/2009	0.43 / 36	34	0	69.00	0.21	0.16
0630	1/20/2009	0.43 / 36	33	0	69.00	0.21	0.16
0700	1/20/2009	0.43 / 36	33	0	68.00	0.21	0.16
0730	1/20/2009	0.45 / 38	34	0	68.00	0.25	0.21
0800	1/20/2009	0.45 / 38	33	0	68.00	0.25	0.21
0830	1/20/2009	0.45 / 38	29	0	68.00	0.25	0.21
0900	1/20/2009	0.45 / 38	27	0	68.00	0.25	0.21
0930	1/20/2009	0.45 / 38	26	0	68.00	0.25	0.21
post	1/20/2009	-	-	-	0	0	0

Notes:

iow: Inches of Water

scfm: Standard Cubic Feet per Water

ppm: parts per million

PID: Photo Ionization Detector

TABLE 6

SOIL VAPOR ANALYTICAL DATA - SVE PILOT TEST
Metro Valley Cleaners
224 Rickenbacker Circle
Livermore, California
(ug/l)

Sample ID	Date	EPA Method 8260B					
		PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC
Influent Statrup	01-19-2009	**110**	<1	<1	<1	<1	<0.5
Influent 1400	01-19-2009	**110**	**3.3**	<1	<1	<1	<0.5
SVE-1/1800	01-19-2009	**91**	<1	<1	<1	<1	<0.5
SVE-1/End	01-20-2009	**67**	<1	<1	<1	<1	<0.5

Notes:

ug/L micrograms per liter

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

PCE: Tetrachloroethene

TCE: Trichloroethene

TABLE 7

SOIL GAS 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

APPENDIX A

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

November 7, 2008

Mr. Lawrence Hancock
Country Club Cleaners
500 Bollinger Canyon Way #A4
San Ramon, CA 94582

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

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

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

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanups (SLIC) case file for the above referenced site including the recently submitted document entitled, "*Soil Vapor Extraction Pilot Study Work Plan*," dated October 2, 2008 and prepared on your behalf by Advanced GeoEnvironmental, Inc. The work plan proposes a scope of work to conduct a soil vapor extraction (SVE) pilot test.

The proposed scope of work for the SVE pilot test is generally acceptable and may be implemented provided that the technical comments below are addressed during implementation of the pilot study. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Observation Wells.** The proposed location of observation well OW-1 is in the area of the dumpster approximately 40 feet from the pilot test extraction well. Installation of observation wells at different radial distances is generally required to adequately define the area of influence for SVE pilot tests. We request that you install an additional observation well adjacent to the building and approximately 20 feet from the extraction well to provide data within closer proximity to the extraction well and building.

2. **Proposed Screen Interval.** The proposed scope of work to assess the fill soils and the historical UST and boiler locations is acceptable. Please present the results of the soil and groundwater sampling in the Site Investigation Report requested below.

3. **Flow Rate**. We request that the SVE pilot test be conducted with a minimum of three increases (steps) in applied vacuum/flow to evaluate air flow within the vadose zone. The duration of each test will depend upon the time required to achieve responses in the observation wells and reach equilibrium. Operational and monitoring parameters are to be measured and recorded at the beginning and end of each step and at a maximum of 30 minute intervals during the remainder of the each step. Measurements are to be collected more frequently during the initial period of each step.

4. **Groundwater Sampling**. We request that you gauge water levels and collect and analyze groundwater samples from each of the three existing monitoring wells prior to conducting the SVE pilot test. The groundwater samples are to be analyzed for volatile organic compounds using EPA Method 8260. Please present the results in the Pilot Test Report requested below.

TECHNICAL REPORT REQUEST

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

- **March 31, 2009** – Pilot Test Report

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/cleanup/electronic_reporting).

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.

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.

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

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

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street, Pleasanton, CA 94566

Paul Smith, Livermore-Pleasanton Fire Department, 3560 Nevada Street, Pleasanton, CA 94566

Daniel Villenueva, Advanced GeoEnvironmental, Inc., 837 Shaw Road, Stockton, CA 95215

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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

Effective **January 31, 2006**, 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 Alicia Lam-Finneke.
   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 at 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)

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 224 Richardson Circle
Livermore CA 94550

Coordinates Source _____ ft Accuracy _____ ft.
LAT: _____ ft. LONG: _____ ft.
APN _____

CLIENT
Name Robert Strong
Address 500 Billings Canyon Way Phone 1-925-252-2694
City San Ramon Zip 94582

APPLICANT ADVANCED GEOENVIRONMENTAL
Name David Villanueva
Email dvillanueva@advgeoenv.com Fax 1-209-467-1118
Address 837 Shaw Road Phone 1-209-323-6516
City Stockton Zip 95215

TYPE OF PROJECT:

Well Construction	9	Geotechnical Investigation	9
Well Destruction	9	Contamination Investigation	9
Cathodic Protection	9	Other _____	9

PROPOSED WELL USE:

Domestic	9	Irrigation	9
Municipal	9	Remediation	9
Industrial	9	Groundwater Monitoring	9
Dewatering	9	Other _____	9

DRILLING METHOD:

Mud Rotary	9	Air Rotary	9	Hollow Stem Auger	9
Cable Tool	9	Direct Push	9	Other _____	9

DRILLING COMPANY All Well Abandonment

DRILLER'S LICENSE NO. 848559

WELL SPECIFICATIONS:
Drill Hole Diameter 8.25 in. Maximum
Casing Diameter 2 in. Depth 20 ft.
Surface Seal Depth 1-3 ft. Number 3

SOIL BORINGS:
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE January 6, 2008
ESTIMATED COMPLETION DATE January 7, 2008

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE _____ Date 12/5/08
Daniel Villanueva

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 28177
WELL NUMBER _____
APN 099-1316-032-00

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

(A) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.**
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

(D.) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

(G.) SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results.**

Approved Wyman Hong Date 12/16/08
Wyman Hong

Revised: April 23, 2008

APPENDIX B

Monitoring and Sampling Procedures
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

STATIC WATER LEVEL MEASUREMENTS

Before sampling and during groundwater monitoring, static water levels are measured using an electric water level indicator. Water level data is recorded to the nearest 0.01-foot from a reference point marked on the top of the PVC well casing.

WELL EVACUATION

Subsequent to measurement of depth to water and prior to sampling, each well is purged to ensure samples are representative of the formation, rather than standing water in the well casing. Wells are purged using either a Waterra inertial pump and dedicated ⅝-inch plastic tubing or disposable polyethylene bailers.

Wells are purged until a minimum of three casing-water volumes are removed from the well and/or the field-measured ground water parameters (pH, temperature, and conductivity) are stabilized. However, if a well is purged dry prior to evacuating three casing volumes, a sample is collected following 80 percent recovery of ground water within the well, or after a minimum of one hour, but within eight hours, of well evacuation.

Field data and logs are provided in Appendix C.

SAMPLE WITHDRAWAL

Ground water samples were collected from wells MW-1 through MW-3. Water samples are collected from wells using either an inertia pump with dedicated plastic/Teflon tubing or a disposable polyethylene bailer. Bailers are disposed of after a single use (sample) and require no decontaminating; plastic tubing used with the inertia pump is either dedicated to each well point or changed at each sampling event, thereby minimizing cross contamination due to sampling devices. Samples are drawn and collected in such a manner that agitation and exposure of the ground water to the atmosphere is minimal.

SAMPLE HANDLING

Ground water samples are collected into laboratory-supplied 40-ml volatile organic analysis (VOA) vials without preservative and, if appropriate, one-liter amber glass containers without a preservative; samples are collected with no visible air bubbles present in the vials after filling and capping. Following collection, samples are appropriately labeled, placed on ice, and kept in a cooler

until delivered to Cal Tech Environmental Laboratories (CTEL), a State of California Department of Public Health-certified analytical laboratory, for analysis. Samples are analyzed for Volatile Organic Compounds by EPA method 8260.

EQUIPMENT DECONTAMINATION AND WASTE MANAGEMENT

Any non-disposable equipment used for sample collection is thoroughly rinsed with clean water after being washed with a solution of Alconox. Purge water generated during sampling activities was contained on-site in an appropriately labeled 55-gallon drum.

APPENDIX C

Advanced
GeoEnvironmental, Inc.
837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118

Ground Water Depth & Dissolved Oxygen Field Log

Project: Metro Valley cleaners

Date: 12/18/08

Field Personnel: KL

Page: 1 of 1

Well I.D.	Time	Casing Elevation	Depth To Water	Ground Water Elevation	Actual Depth	Screened Depth	Dissolved Oxygen		
							mg/l	%	°C
MW-1	1002	410.00	27.90	382.10	34.50				
MW-2	0953	409.98	28.38	381.60	34.38				
MW-3	0957	409.48	27.91	381.57	34.60				

Advanced
GeoEnvironmental, Inc.
837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118

Monitoring Well Field Log

Well Data

Project Name: METRO VALLEY CLEANERS		Project No.: *AGE-NC-*	Date: 12/18/08
Pre-Purge DTW: 27.90	Time: 1002	Well I.D.: MW- 1	
Post-Purge DTW: 27.92	Time: 1042		
Total Depth of Well: 34.50	Well Volume: 1.05	Casing Diameter: 0.5" / 2" / 4" / 6"	
		Gal./Ft.: 0.01074 / 0.16 / 0.65 / 1.47	
Sampler(s): KL		Sample Containers: 3 VOAS	
Sample I.D.: MW- 1 /121808		Analysis: VOC	

Stabilization Data

Time	Volume (gallons)	pH	Temp.	Cond µS/cm	Color/ Turbidity	Notes
1034	0	7.49	17.8	1104	clear	
1037	1.5	7.50	17.9	1113	tan/cloudy	
1039	2.5	7.51	18.0	1118	"	
1041	3.5	7.52	17.9	1117	"	

Purge Method:	Disposable bailer		
Sample Method:	SAME AS ABOVE	Well Integrity:	
Sample Time:	1043	Dissolved O_2:	C
Water analyzer: oakton		%	mg/L

Version 3.1/0202/CRM

Advanced
GeoEnvironmental, Inc.
837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118

Monitoring Well Field Log

Well Data

Project Name: METRO VALLEY CLEANERS		Project No.: *AGE-NC-*	Date: 12/18/08
Pre-Purge DTW: 28.38	Time: 0953	Well I.D.: MW-2	
Post-Purge DTW: 28.40	Time: 1017		
Total Depth of Well: 34.38	Well Volume: .96	Casing Diameter: 0.5" / 2" / 4" / 6"	
		Gal./Ft.: 0.01074 / 0.16 / 0.65 / 1.47	
Sampler(s): KL		Sample Containers: 3 VOAs	
Sample I.D.: MW-2 /121808		Analysis: VOL	

Stabilization Data

Time	Volume (gallons)	pH	Temp.	Cond µS/cm	Color/ Turbidity	Notes
1009	0	7.31	17.3	1074	clear	
1012	1	7.45	18.0	1101	tan/cloudy	
1014	2	7.50	18.0	1114	"	
1016	3	7.52	18.1	1112	"	

Purge Method:	Disposable bailer		
Sample Method:	SAME AS ABOVE	Well Integrity:	
Sample Time:	1018	Dissolved O_2:	C
Water analyzer: oakton		%	mg/L

Advanced
GeoEnvironmental, Inc.
837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118

Monitoring Well Field Log

Well Data

Project Name: METRO VALLEY CLEANERS		Project No.: *AGE-NC-*	Date: 12/18/08
Pre-Purge DTW: 27.91	Time: 0957	Well I.D.: MW- 3	
Post-Purge DTW: 27.93	Time: 1106		
Total Depth of Well: 34.60	Well Volume: 1.07	Casing Diameter: 0.5" / 2" / 4" / 6"	
		Gal./Ft.: 0.01074 / 0.16 / 0.65 / 1.47	
Sampler(s): KL		Sample Containers: 3 VOAs	
Sample I.D.: MW- 3 /121808		Analysis: VOC	

Stabilization Data

Time	Volume (gallons)	pH	Temp.	Cond µS/cm	Color/ Turbidity	Notes
1058	0	7.54	17.9	1094	clear	
1101	1.5	7.54	18.1	1090	tan/cloudy	
1103	2.5	7.54	18.1	1090	"	
1105	3.5	7.54	18.1	1089	"	

Purge Method:	Disposable bailer		
Sample Method:	SAME AS ABOVE	Well Integrity:	
Sample Time:	1107	Dissolved O_2:	C
Water analyzer: oakton		%	mg/L

APPENDIX D

CAL TECH Environmental Laboratories

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

ANALYTICAL RESULTS*

CTEL Project No: CT214-0812178
Client Name: Advanced Geo Environmental, Inc.
837 Shaw Road
Stockton, CA 95215
Phone:(209) 467-1006
Fax: (209) 467-1118
Attention: Mr. Art Deicke

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

Date Sampled: 12/18/08 @ 10:43 am
Date Received: 12/19/08 @ 08:30 am
Date Analyzed 12/19/08
Matrix: Water

Laboratory ID:	0812-178-1	0812-178-2	0812-178-3	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	MW1	MW2	MW3			
Dilution	1	1	1			
Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	ug/L	1
Chloromethane	ND	ND	ND	EPA 8260B	ug/L	1
Vinyl Chloride	ND	ND	ND	EPA 8260B	ug/L	0.5
Bromomethane	ND	ND	ND	EPA 8260B	ug/L	1
Chloroethane	ND	ND	ND	EPA 8260B	ug/L	1
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	ug/L	1
Iodomethane	ND	ND	ND	EPA 8260B	ug/L	1
Acetone	ND	ND	ND	EPA 8260B	ug/L	10
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	ug/L	1
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	ug/L	25
Methylene Chloride	ND	ND	ND	EPA 8260B	ug/L	10
Freon 113	ND	ND	ND	EPA 8260B	ug/L	5
Carbon disulfide	ND	ND	ND	EPA 8260B	ug/L	1
trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	ug/L	1
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	ug/L	5
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	ug/L	1
Vinyl acetate	ND	ND	ND	EPA 8260B	ug/L	50
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	ug/L	1
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	ug/L	10
cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	ug/L	1
Bromochloromethane	ND	ND	ND	EPA 8260B	ug/L	1
Chloroform	ND	ND	ND	EPA 8260B	ug/L	1
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	ug/L	1
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	ug/L	1
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	ug/L	1
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	ug/L	0.5
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	ug/L	1
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	ug/L	0.5
Benzene	ND	ND	ND	EPA 8260B	ug/L	0.5
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	ug/L	1
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	ug/L	1
Trichloroethene	ND	ND	ND	EPA 8260B	ug/L	1
Dibromomethane	ND	ND	ND	EPA 8260B	ug/L	1
Bromodichloromethane	ND	ND	ND	EPA 8260B	ug/L	1
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	ug/L	5
cis,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	ug/L	1
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	ug/L	10
trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	ug/L	1
Toluene	ND	ND	ND	EPA 8260B	ug/L	0.5
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	ug/L	1

(Continued)

CTEL Project No: CT214-0812178

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

Laboratory ID: / Client Sample ID:	0812-178-1 MW1	0812-178-2 MW2	0812-178-3 MW3	Method	Units	Detection Limit
1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	ug/L	0.5
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	ug/L	1
Dibromochloromethane	ND	ND	ND	EPA 8260B	ug/L	1
2-Hexanone	ND	ND	ND	EPA 8260B	ug/L	10
Tetrachloroethene	ND	7.1	ND	EPA 8260B	ug/L	1
Chlorobenzene	ND	ND	ND	EPA 8260B	ug/L	1
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	ug/L	1
Ethylbenzene	ND	ND	ND	EPA 8260B	ug/L	0.5
m.p-Xylene	ND	ND	ND	EPA 8260B	ug/L	0.6
Bromoform	ND	ND	ND	EPA 8260B	ug/L	1
Styrene	ND	ND	ND	EPA 8260B	ug/L	1
o-Xylene	ND	ND	ND	EPA 8260B	ug/L	0.6
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	ug/L	1
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	ug/L	1
Isopropylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
Bromobenzene	ND	ND	ND	EPA 8260B	ug/L	1
2-Chlorotoluene	ND	ND	ND	EPA 8260B	ug/L	1
n-Propylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
4-Chlorotoluene	ND	ND	ND	EPA 8260B	ug/L	1
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
tert-Butylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
sec-Butylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	ug/L	1
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	ug/L	1
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	ug/L	1
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	ug/L	1
n-Butylbenzene	ND	ND	ND	EPA 8260B	ug/L	1
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	ug/L	1
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	ug/L	1
Naphthalene	ND	ND	ND	EPA 8260B	ug/L	1
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	ug/L	1
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	ug/L	1

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	92	92	92	70-130
1,2 Dichloromethaned4	81	82	84	70-130
Toluene-d8	97	98	97	70-130
Bromofluorobenzene	101	102	102	70-130

R. Tejirian

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

Matrix: Water

Date Analyzed: 12/19/08

Date Extracted: 12/19/08

Perimeters	Conc. ug/L		Spike Added	Recovery %		Control Limits		RPD
	MS	MSD		MS	MSD	Rec.	RPD	
1,1-Dichloroethene	44	47	50	88	94	70-130	20	6
Benzene	53	49	50	106	98	70-130	20	8
Trichloroethene	50	48	50	100	96	70-130	20	4
Toluene	51	47	50	102	94	70-130	20	8
Chlorobenzene	48	48	50	96	96	70-130	20	0
m,p-Xylenes	105	101	100	105	101	70-130	20	4

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.

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

☐ _____

12-178

CHAIN OF CUSTODY RECORD

Date: 12/18/08 Page 1 of 1

Project Name	Metro Valley cleaners
Project Manager	Art Douche
Client	
Sampler (initials & signature)	LL
Invoice to:	☒ AGE ☐ Client
Lab Project No.:	

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes	Analysis Required: VOCs 8260
MW-1/121808	12/18/08	1043	W	3		X
MW-2/121808	12/18/08	1018	W	3		X
MW-3/121808	12/18/08	1107	W	3		X

Relinquished by:	Date: 12/18/08	Time: 1700	Laboratory: CTEL	
Courier: Ontrac			Received by: GREG T	Date: 12/19/08 Time: 8:30
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:

APPENDIX E

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

ANALYTICAL RESULTS*

CTEL Project No: CT214-0901030
Client Name: Advanced Geo Environmental, Inc.
837 Shaw Road
Stockton, CA 95215
Phone:(209) 467-1006
Fax: (209) 467-1118
Attention: Mr. Art Deicke

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

Date Sampled: 01/08/09 @ 08:40 am
Date Received: 01/09/09 @ 08:30 am
Date Analyzed 01/09/09
Matrix: Soil

Laboratory ID:	0901-030-1	0901-030-2	0901-030-3	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	SVE1-5	SVE1-10	SVE1-15			
Dilution	1	1	1			
Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	mg/Kg	0.020
Methylene Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	ND	EPA 8260B	mg/Kg	0.005
trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	mg/Kg	0.005
cis,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005

(Continued)

CTEL Project No: CT214-0901030

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

Laboratory ID: / Client Sample ID:	0901-030-1 SVE1-5	0901-030-2 SVE1-10	0901-030-3 SVE1-15	Method	Units	Detection Limit
1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	0.058	0.011	0.014	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
m.p-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
Bromoform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
tert-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
sec-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	mg/Kg	0.005

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	98	99	98	70-130
1,2 Dichloromethaned4	92	93	91	70-130
Toluene-d8	98	99	99	70-130
Bromofluorobenzene	107	105	104	70-130

CTEL Project No:	CT214-0901030
Client Name:	Advanced Geo Environmental, Inc.
	837 Shaw Road
	Stockton, CA 95215
Attention:	Mr. Art Deicke

Phone:(209) 467-1006
Fax: (209) 467-1118

Project ID:	Global ID:
Project Name:	Metro Valley Cleaners
Date Sampled:	01/08/09 @ 10:00 am
Date Received:	01/09/09 @ 08:30 am
Date Analyzed	01/09/09

Matrix: Soil

Laboratory ID:	0901-030-4	0901-030-5	0901-030-6	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	OW2-5	OW2-10	OW1-5			
Dilution	1	1	1			
Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	mg/Kg	0.020
Methylene Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	ND	EPA 8260B	mg/Kg	0.005
trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	mg/Kg	0.005
cis,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005

(Continued)

CTEL Project No: CT214-0901030

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

Laboratory ID: / Client Sample ID:	0901-030-4 OW2-5	0901-030-5 OW2-10	0901-030-6 OW1-5	Method	Units	Detection Limit
1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	0.036	0.026	0.040	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
m.p-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
Bromoform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
tert-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
sec-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	mg/Kg	0.005

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	94	97	97	70-130
1,2 Dichloromethaned4	88	93	91	70-130
Toluene-d8	97	99	98	70-130
Bromofluorobenzene	105	105	105	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

Matrix: Soil

Date Analyzed: 1/9/09

Date Extracted: 1/9/09

Perimeters	Conc. ug/Kg		Spike	Recovery %		Control Limits		RPD
	MS	MSD	Added	MS	MSD	Rec.	RPD	
1,1-Dichloroethene	43	42	50	86	84	70-130	20	2
Benzene	45	45	50	90	90	70-130	20	0
Trichloroethene	52	52	50	104	104	70-130	20	0
Toluene	49	51	50	98	102	70-130	20	4
Chlorobenzene	45	47	50	90	94	70-130	20	4
m,p-Xylenes	91	96	100	91	96	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/Kg	5
Benzene	ND	ug/Kg	5
Trichloroethene	ND	ug/Kg	5
Toluene	ND	ug/Kg	5
Chlorobenzene	ND	ug/Kg	5
m,p-Xylenes	ND	ug/Kg	5
MTBE	ND	ug/Kg	5
TBA	ND	ug/Kg	100
DIPE	ND	ug/Kg	10
ETBE	ND	ug/Kg	10
TAME	ND	ug/Kg	10
1,2-Dichloroethane	ND	ug/Kg	5
EDB	ND	ug/Kg	5
Ethylbenzene	ND	ug/Kg	5
o-Xylene	ND	ug/Kg	5

Advanced GeoEnvironmental, Inc.

www.advgeoenv.com

CHAIN OF CUSTODY RECORD

☒ 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
☐ _____

01-030

Date: 1-8-09 Page 1 of 1

Project Name	Metro Valley Cleaners
Client	Bob Strong
Invoice to:	☒ AGE ☐ Client
Project Manager	Art Deicke
Sampler (initials & signature)	DDV
Lab Project No.:	

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes	Analysis Required: VOCs (8260)
SVE1-5	1-8-08	0840	S	1		X
SVE1-10	1-8-08	0845	S	1		X
SVE1-15	1-8-08	0950	S	1		X
OW2-5	1-8-08	1000	S	1		X
OW2-10	1-8-08	1010	S	1		X
OW1-5	1-8-08	1130	S	1		X

Relinquished by:	Date: 1-8-08	Time: 1430	Laboratory: CTEL		
Courier:			Received by: GREG T	Date: 1/9/09	Time: 8:30
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:

APPENDIX F

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

BORING LOG

BOREHOLE NO. **OW-1**

TOTAL DEPTH: **20'**

Project:	METRO VALLEY CLEANERS	Drilling Co.:	ALL WELL ABANDONMENT
Site Location:	224 RICKENBACKER CIRCLE LIVERMORE CALIFORNIA	Rig/Auger Type:	CME 75 HOLLOW STEM AUGER
		Logged By:	D. VILLANUEVA
		Reviewed By:	W. LITTLE
Project No.:	AGE-NC-08-1640	Date(s) Drilled:	01/08/2009

Notes: Total depth of boring equal to 20 feet bsg; boring completed as 2-inch diameter soil vapor extraction well

▽ Water Level Before Drilling
▼ Water Level After Drilling

Depth	Sample ID	Blows (per 6")	PID (ppm)	Soil Symbol	USCS Class and Soil Description	Well Completion	Well Description
0							Well cover; water-tight, locking cap.
							Cement grout seal from 1' to 2' bsg.
							Bentonite seal from 2' to 3' bsg.
-5	OW-1-5	7,8,14	0		CL: brown, moist, stiff, CLAY, some gravel (5%), slightly plastic, friable, no odor		
							#3 Monterey 4' to 20' bsg.

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

BORING LOG

BOREHOLE NO.: **OW-1**

TOTAL DEPTH: **20'**

Project: METRO VALLEY CLEANERS

Date(s) Drilled: 01/08/2009

Project No.: AGE-NC-08-1640

Depth	Sample ID	Blows (per 6")	PID (ppm)	Soil Symbol	USCS Class and Soil Description	Well Completion	Well Description
-10		6,10,14	0		ML: brown, to tan, loose to firm, dry, SILT, no sand or gravel, some oxidation, no odor		
							Screened interval from 5' to 20' bsg. 0.030 Screen
-15		7,10,16	0		CL: tan to brown, dry, firm, CLAY with silt and gravel, 10% gravel, 10% silt, angular gravel pieces, no odor		
					SP: brown to red, dry, loose, SAND with gravel and silt, 25% gravel, 10 % silt, angular gravel, some oxidation, no odor		
-20							Well plug at 20'

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

BORING LOG

BOREHOLE NO. **OW-2**

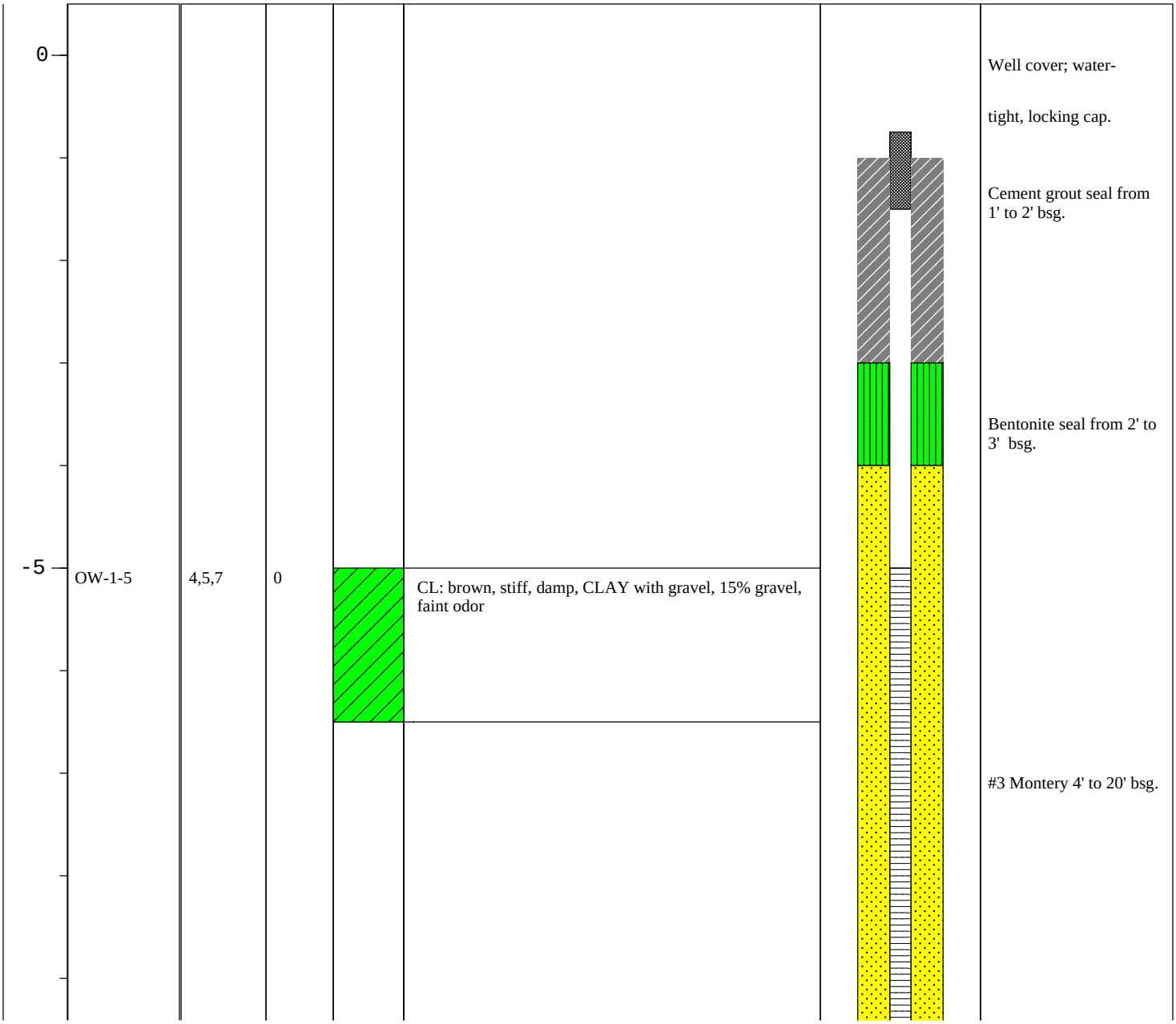
TOTAL DEPTH: **20'**

Project:	METRO VALLEY CLEANERS	Drilling Co.:	ALL WELL ABANDONMENT
Site Location:	224 RICKENBACKER CIRCLE LIVERMORE CALIFORNIA	Rig/Auger Type:	CME 75 HOLLOW STEM AUGER
		Logged By:	D. VILLANUEVA
		Reviewed By:	W. LITTLE
Project No.:	AGE-NC-08-1640	Date(s) Drilled:	01/08/2009

Notes: Total depth of boring equal to 20 feet bsg; boring completed as 2-inch diameter soil vapor extraction well

▽ Water Level Before Drilling
▼ Water Level After Drilling

Depth	Sample ID	Blows (per 6")	PID (ppm)	Soil Symbol	USCS Class and Soil Description	Well Completion	Well Description
-5	OW-1-5	4,5,7	0		CL: brown, stiff, damp, CLAY with gravel, 15% gravel, faint odor		



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BORING LOG

BOREHOLE NO.: **OW-2**

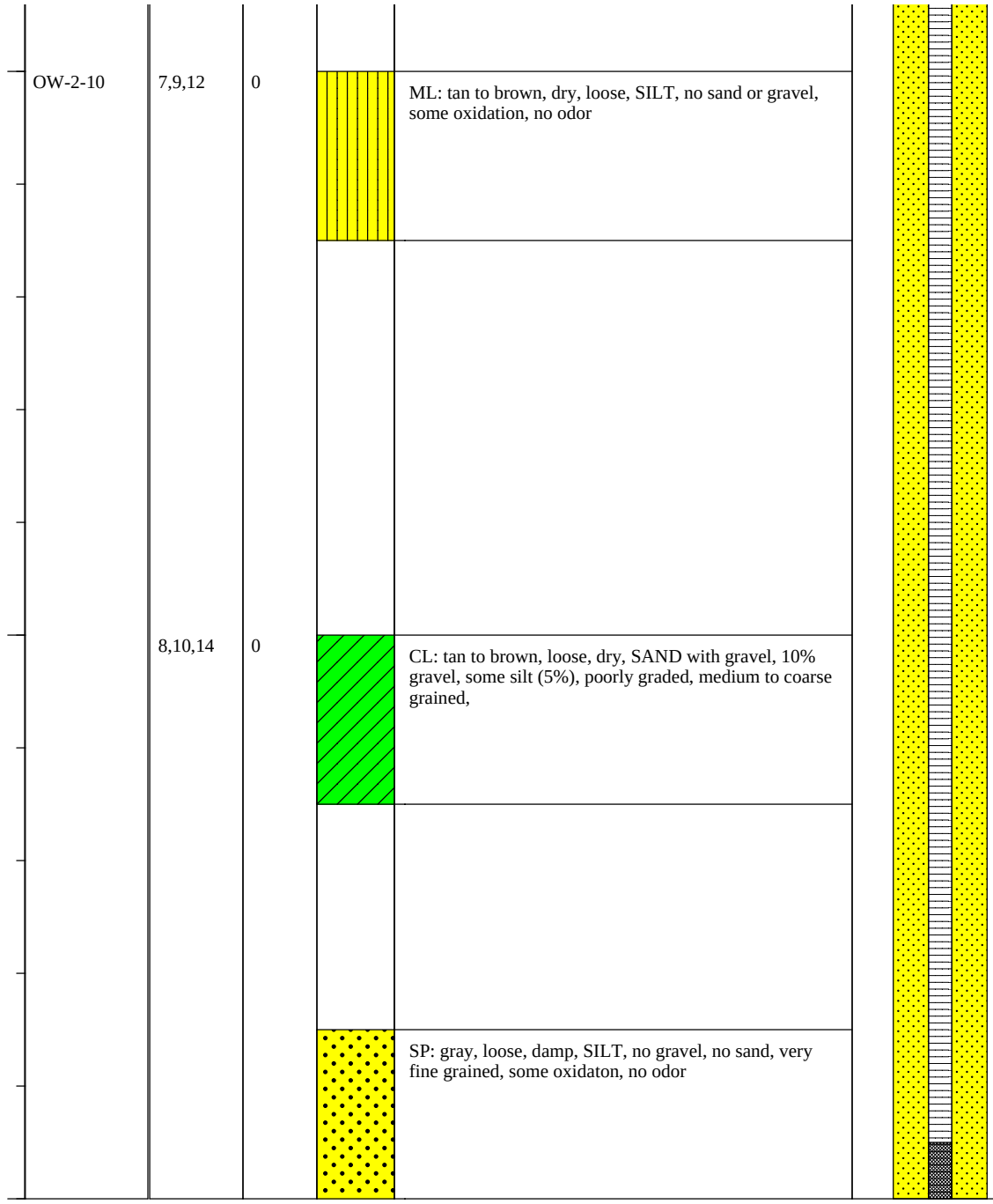
TOTAL DEPTH: **20'**

Project: METRO VALLEY CLEANERS

Date(s) Drilled: 01/08/2009

Project No.: AGE-NC-08-1640

Depth	Sample ID	Blows (per 6")	PID (ppm)	Soil Symbol	USCS Class and Soil Description	Well Completion	Well Description
-10	OW-2-10	7,9,12	0		ML: tan to brown, dry, loose, SILT, no sand or gravel, some oxidation, no odor		
-15		8,10,14	0		CL: tan to brown, loose, dry, SAND with gravel, 10% gravel, some silt (5%), poorly graded, medium to coarse grained,		Screened interval from 5' to 20' bsg. 0.030 Screen
-20					SP: gray, loose, damp, SILT, no gravel, no sand, very fine grained, some oxidaton, no odor		Well plug at 20'



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837 Shaw Road, Stockton, CA 95215
(209) 467-1006 FAX: (209) 467-1118

BORING LOG

BOREHOLE NO. **SVE-1**

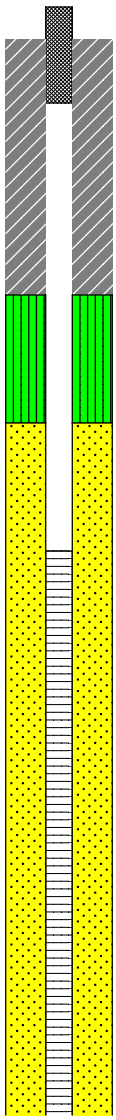
TOTAL DEPTH: **20'**

Project:	METRO VALLEY CLEANERS	Drilling Co.:	ALL WELL ABANDONMENT
Site Location:	224 RICKENBACKER CIRCLE LIVERMORE CALIFORNIA	Rig/Auger Type:	CME 75 HOLLOW STEM AUGER
		Logged By:	D. VILLANUEVA
		Reviewed By:	W. LITTLE
Project No.:	AGE-NC-08-1640	Date(s) Drilled:	01/08/2009

Notes: Total depth of boring equal to 20 feet bsg; boring completed as 2-inch diameter soil vapor extraction well

▽ Water Level Before Drilling
▼ Water Level After Drilling

Depth	Sample ID	Blows (per 6")	PID (ppm)	Soil Symbol	USCS Class and Soil Description	Well Completion	Well Description
0							Well cover; water-tight, locking cap.
							Cement grout seal from 1' to 2' bsg.
							Bentonite seal from 2' to 3' bsg.
-5	SVE-1-5	6,14,19	0		CL: brown, dry, stiff, CLAY, some sand (<5%), no odor		
							#3 Monterey 4' to 20' bsg.



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GeoEnvironmental, Inc.
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(209) 467-1006 FAX: (209) 467-1118

BORING LOG

BOREHOLE NO.: **SVE-1**

TOTAL DEPTH: **20'**

Project: METRO VALLEY CLEANERS

Date(s) Drilled: 01/08/2009

Project No.: AGE-NC-08-1640

Depth	Sample ID	Blows (per 6")	PID (ppm)	Soil Symbol	USCS Class and Soil Description	Well Completion	Well Description
-10	SVE-1-10	10,12,16	0		ML: tan, dry, loose, SILT, no sand, no gravel, fine grained, some oxidation, no odor		
-15	SVE-1-15	5,8,10	0		ML: tan to grey to red, dry, loose, SILT with gravel, angular, oxidation, no odor		
					GP: grey, GRAVEL, some sand (5%), some silt (5%), angular, no odor		
					ML: brown to red, loose, dry, SILT with gravel, 20% gravel, some sand (5%), some oxidation, no odor		
-20							Screened interval from 5' to 20' bsg. 0.030 Screen Well plug at 20'

APPENDIX G

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

ANALYTICAL RESULTS*

CTEL Project No: CT214-0901115
Client Name: Advanced Geo Environmental, Inc.
837 Shaw Road
Stockton, CA 95215
Phone:(209) 467-1006
Fax: (209) 467-1118
Attention: Mr. Art Deicke

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

Date Sampled: 01/19/09 @ 09:35 am
Date Received: 01/20/09 @ 09:00 am
Date Analyzed 01/20/09
Matrix: Air

Laboratory ID:	0901-115-1	0901-115-2	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	Influent St.	Influent 1400			
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	3.3	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: CT214-0901115

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

Laboratory ID: / Client Sample ID:	0901-115-1 Influent St.	0901-115-2 Influent 1400	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	110	110	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	95	92	70-130
1,2 Dichloromethaned4	80	80	70-130
Toluene-d8	93	98	70-130
Bromofluorobenzene	93	90	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

Matrix: Water

Date Analyzed: 1/20/09

Date Extracted: 1/20/09

Perimeters	Conc. ug/L		Spike Added	Recovery %		Control Limits		RPD
	MS	MSD		MS	MSD	Rec.	RPD	
1,1-Dichloroethane	48	47	50	96	94	70-130	20	2
Benzene	48	47	50	96	94	70-130	20	2
Trichloroethene	52	49	50	104	98	70-130	20	6
Toluene	51	49	50	102	98	70-130	20	4
Chlorobenzene	46	45	50	92	90	70-130	20	2
m,p-Xylenes	92	88	100	92	88	70-130	20	4

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.

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

☐ _____

01-115

CHAIN OF CUSTODY RECORD

Date: 1/19/09 Page 1 of 1

Project Name Metro Valley cleaners	**Project Manager** Art Deicke
Client	**Sampler (initials & signature)**
Invoice to: ☒ AGE ☐ Client	**Lab Project No.:**

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes	Analysis Required: VOCs (8260)
Influent/Start	1-19-09	0935	A	1		X
Influent/1400	1-19-09	1400	A	1		X

Relinquished by:	Date: 1/19/09	Time: 1730	Laboratory: CTEL		
Courier: Dutrac			Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: R. Tayhonbi	Date: 1.20.09	Time: 9:00

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.

Geotracker EDF to: ☒ geotracker@advgeoenv.com ☐ _____ Global ID:

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

ANALYTICAL RESULTS*

CTEL Project No: CT214-0901128
Client Name: Advanced Geo Environmental, Inc.
837 Shaw Road
Stockton, CA 95215
Phone:(209) 467-1006
Fax: (209) 467-1118
Attention: Mr. Art Deicke

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

Date Sampled: 01/19/09 @ 18:00 p.m.
Date Received: 01/21/09 @ 09:00 am
Date Analyzed 01/21/09
Matrix: Air

Laboratory ID:	0901-128-1	0901-128-2	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	SVE-1/1800	SVE-1/End			
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: CT214-0901128

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

Laboratory ID: / **Client Sample ID:**	0901-128-1 SVE-1/1800	0901-128-2 SVE-1/End	**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	91	67	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	99	95	70-130
1,2 Dichloromethaned4	97	85	70-130
Toluene-d8	105	101	70-130
Bromofluorobenzene	111	107	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

Matrix: Water

Date Analyzed: 1/21/09

Date Extracted: 1/21/09

Perimeters	Conc. ug/L		Spike Added	Recovery %		Control Limits		RPD
	MS	MSD		MS	MSD	Rec.	RPD	
1,1-Dichloroethene	48	49	50	96	98	70-130	20	2
Benzene	46	45	50	92	90	70-130	20	2
Trichloroethene	49	48	50	98	96	70-130	20	2
Toluene	53	51	50	106	102	70-130	20	4
Chlorobenzene	46	46	50	92	92	70-130	20	0
m,p-Xylenes	98	96	100	98	96	70-130	20	2

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.

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: 1/20/09 Page 1 of 1

01-12

Project Name	Metro Valley cleaners
Client	
Invoice to:	☒ AGE ☐ Client
Project Manager	Art Deiche
Sampler (initials & signature)	
Lab Project No.:	

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes	Analysis Required: VOCs (8260)
SVE-1/1800	1/19/09	1800	A	1		X
SVE-1/END	1/20/09	0930	A	1		X

Relinquished by:		Date: 1/20/09	Time: 1700	Laboratory: CTEL	
Courier: Ontrac				Received by:	Date: / Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: R. Taylor	Date: 1-21-09	Time: 9:00

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:

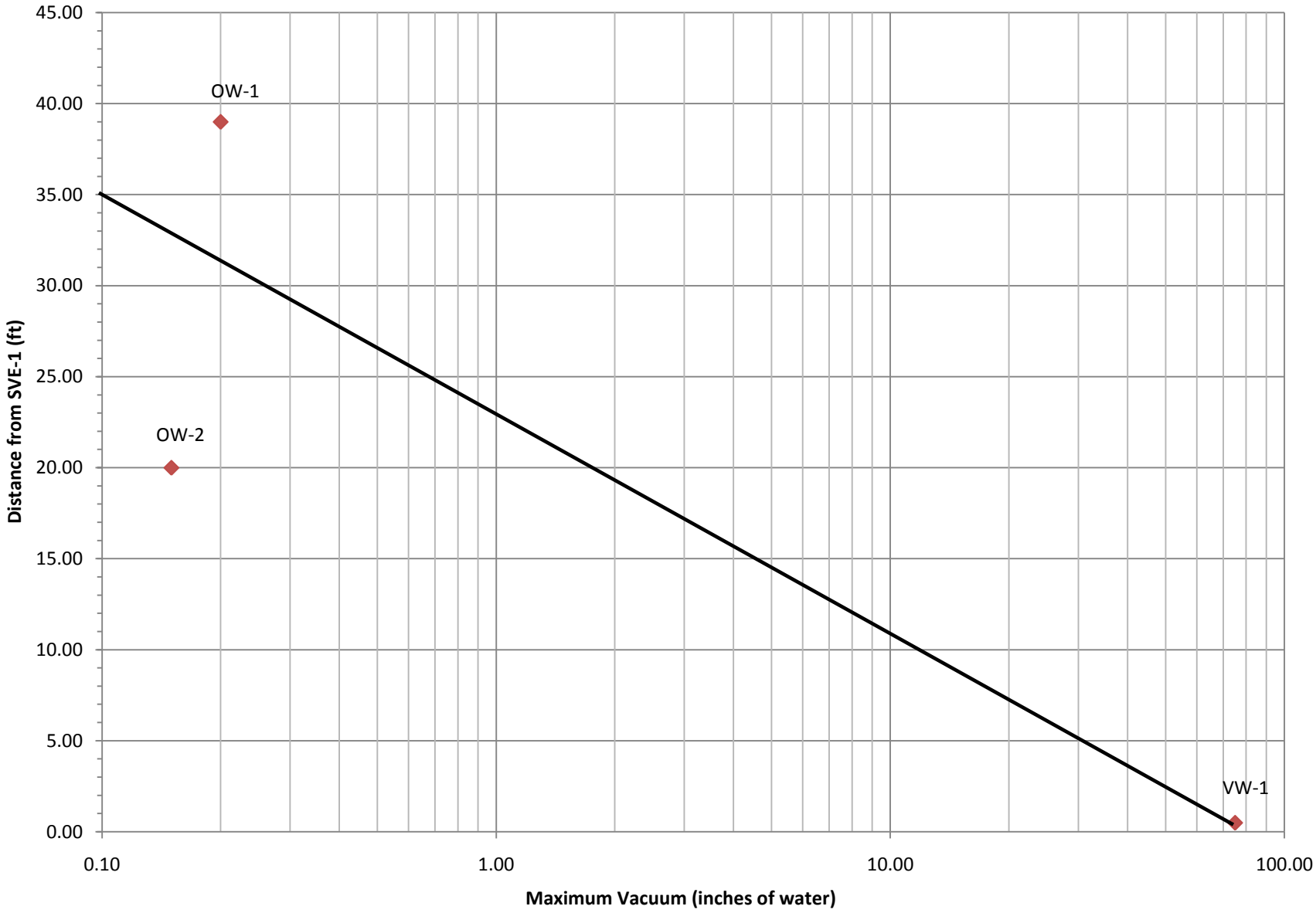
I hereby authorize the performance of the above indicated work.

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

Global ID:

APPENDIX H

Metro Valley Cleaners SVE Pilot Study 19 and 20 January 2009



APPENDIX I

APPENDIX I

SOIL VAPOR EXTRACTED VOLUME-MASS CALCULATIONS
METRO VALLEY CLEANERS
224 Rickenbacker Circle
Livermore, California

$M = C \times Q \times t$

C = vapor concentration (kg/m^3)
Q = extraction flow rate (m^3/hr)
t = operational period (hrs)

To convert, multiply by: 0.000001
To convert, multiply by: 60 min/hr
and: 0.028317 m^3/ft^3

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

Converting kg of M to lbs of M, multiply by: 2.2046 lbs/kg
Converting lbs of M to gal of M, multiply by: 0.16 gal/lb

Time Interval	Hours	Avgerage Flow		PCE Concentration		PCE Extracted		
		scfm	m^3/hr	µg/l	kg/m^3	kg	lbs	gallons
0930 to 0935	0.08	15	25	110	0.00011	**0.0002**	**0.0005**	**0.0001**
0935 to 1400	4.5	16.9	29	110	0.00011	**0.0142**	**0.0313**	**0.0050**
1400 to 1800	7.5	24	41	91	0.000091	**0.0278**	**0.0614**	**0.0098**
1800 to 0930	24	35	59	67	0.000067	**0.0956**	**0.2108**	**0.0337**
PCE Removed during Pilot Test:						**0.14**	**0.30**	**0.05**