PERJURY STATEMENT

Subject: Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, California
Closure Summary Report - dated 08 November 2010

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

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

Nov 12, 10
Date

Advanced
GeoEnvironmental, Inc.

08 November 2010
AGE-NC Project No. 08-1640

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

Subject: **Closure Summary Report**
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Dear Mr. Wickham:

At the request of Mr. Robert Strong, *Advanced* GeoEnvironmental, Inc. (AGE) has prepared the enclosed *Closure Summary Report - Soil Vapor Intrusion Investigation Report* for the site located at 224 Rickenbacker Circle, Livermore, California.

The enclosed report provides justification for no further action, based on site-specific data. Also included in this report are the results of the September 2010 soil vapor intrusion investigation.

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

Sincerely,

***Advanced* GeoEnvironmental, Inc.**

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

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

Advanced
GeoEnvironmental, Inc.

08 November 2010
AGE-NC Project No. 08-1640

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

Subject: **Closure Summary Report**
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Dear Mr. Strong:

At your request, *Advanced* GeoEnvironmental, Inc. (AGE) has prepared the enclosed *Closure Summary Report - Soil Vapor Intrusion Investigation Report* for the site located at 224 Rickenbacker Circle, Livermore, California.

The enclosed report provides justification for no further action, based on site-specific data. Also included in this report are the results of the September 2010 soil vapor intrusion investigation.

A copy of this report will be transmitted to Mr. Jerry Wickham of the Alameda County Environmental Health Services (ACEHS).

The opportunity to provide 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.**

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

cc: Mr. Jerry Wickham, ACEHS

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

Closure Summary Report

METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

08 November 2010
AGE-NC Project No. 08-1640

PREPARED FOR:

Mr. Robert Strong
METRO VALLEY CLEANERS

PREPARED BY:

***Advanced* GeoEnvironmental, Inc.**

Stockton • Santa Rosa • Monterey • Brea • Spokane • Reno
(800) 511-9300
www.advgeoenv.com

Closure Summary Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

08 November 2010
AGE-NC Project No. 08-1640

Advanced GeoEnvironmental, Inc.
Stockton • Santa Rosa • Monterey • Brea • Spokane • Reno
(800) 511-9300
www.advgeoenv.com

PREPARED BY:

Rebecca E. Natal
Staff Scientist

PROJECT MANAGER:

William R. Little
Senior Project Geologist

REVIEWED BY:

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

PROFESSIONAL GEOLOGIST
WILLIAM R. LITTLE
No. 7473
STATE OF CALIFORNIA

Closure Summary Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

TABLE OF CONTENTS

Closure Summary Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

TABLE OF CONTENTS

Closure Summary Report
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

1.0. INTRODUCTION

At the request of Mr. Robert Strong, *Advanced* GeoEnvironmental, Inc. (AGE) has prepared this *Closure Summary Report* (CSR) - *Soil Vapor Intrusion Investigation Report* summarizing all field activities conducted at 224 Rickenbacker Circle, Livermore, California (site).

Also included in this report are the results of the September 2010 soil vapor intrusion investigation. The location of the site is illustrated on Figure 1. A current map of the site is illustrated on Figure 2.

This CSR has been prepared in accordance with the California Regional Water Quality Control Board- Central Valley Region (CVRWQCB) guidelines *(Tri-Regional Board Staff Recommendations For Preliminary Investigations and Evaluation of Underground Tank Sites)* for No Further Action Requests (Appendix A).

2.0. BACKGROUND

The site is located in a mixed commercial and industrial area of Livermore, California. It is bordered on the north, south east and west by commercial properties. The Livermore Water Reclamation Plant is located approximately 750 feet to the west, and the Livermore Municipal Airport is located approximately ½ mile west of the site. Additionally, residential properties are located approximately 750 feet toward the south and 1,500 feet toward the east of the site. The location of the site is illustrated on Figure 1, and an aerial views of the site are shown in Appendix B. The site is further located in Township 3 south, Range 2 east, Mont Diablo Base and Meridian (Livermore Quadrangle, 7.5-minute USGS Topographic Series, 1961, photo revised 1980). The Alameda County Tax Assessor's office lists the site's boundaries as Parcel 32 on Map 1316 in Book 99 (APN 99-1316-32).

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

2.1. SITE INVESTIGATIONS

Soil and groundwater assessment activities, including the drilling and logging of soil borings and the installation of ground water monitoring wells, were performed between October

2005 and January 2009 by JMK Environmental Solutions (JMK), ENGEO, Inc. (ENGEO), and AGE.

The following is a brief summary of the site assessment investigations conducted at the site to date:

October 2005: JMK advanced three soil borings (S-1 through S-3) on site, to a total depth of approximately 35 feet below surface grade (bsg), for collection of soil samples. PCE was reported in soil samples collected from S-1 and S-2 at a maximum concentration of 0.23 milligrams per kilogram (mg/kg). Analytical results of soil samples are summarized in Table 2. Field procedures and sample results are outlined in the JMK-prepared *Subsurface Investigation For Phase II Site Assessment*, dated 28 October 2005.

January 2007: ENGEO advanced eleven soil borings (SG-1 through SG-9, P-1 and P-2) on site, to a total depth of approximately 5 feet bsg, for collection soil vapor samples (SG-1 through SG-9) and soil samples (P-1 and P-2). Soil vapor samples were collected in syringes and analyzed by a mobile laboratory in accordance with EPA method 8260M. PCE, and related PCE-daughter products trichloroethene (TCE), 1,1-Dichloroethene (1,1-DCE), trans 1,2-dichloroethene (trans 1,2-DCE) and vinyl chloride (VC) were reported in soil-gas samples a maximum concentrations of 860,000 micrograms per cubic meter ($\mu g/m^3$), 4,600,000 $\mu g/m^3$, 4,700 $\mu g/m^3$, 140,000 $\mu g/m^3$, 780,000 $\mu g/m^3$ and 1,800 $\mu g/m^3$, respectively.

Shallow soil samples were collected from borings P-1 and P-2 at depths of 1 foot and 5 feet bsg. PCE was reported in the soil sample collected from boring P-1 at 5 feet bsg, at a concentration of 0.0055 mg/kg. Analytical results of soil and soil vapor samples are summarized on Tables 2 and 3. Field procedures and sample results are outlined in the ENGEO-prepared *Interim Site Characterization Report*, dated 09 February 2007.

March 2007: ENGEO advanced five soil borings (S-1 through S-5) on site, to a total depth of 35 feet bsg, for collection of soil and ground water samples. Soil samples collected at various depths ranging from 2 feet to 30 feet bsg. PCE, TCE, trans 1,2-DCE and cis 1,2-dichloroethene (cis 1,2-DCE) were reported in the soil samples collected from S-3 at maximum concentrations of 0.079 mg/kg, 0.013 mg/kg, 0.014 mg/kg and 0.061 mg/kg, respectively. Analytical results of soil samples are

summarized on Table 2.

Grab ground water samples were collected from the first water bearing unit at depths ranging from approximately 21 feet to 26 feet bsg. PCE, TCE, cis 1,2-DCE and toluene were reported in grab water samples collected from borings S-2 through S-5 at maximum concentrations of 36 microgram per liter (µg/l), 2.2 µg/l, 1.6 µg/l and 1.8 µg/l, respectively. Additionally, total petroleum hydrocarbons quantified as diesel(TPH-d) were reported in the grab water sample collected from S-4 at a concentration of 70 µg/l. Analytical results of ground water samples are summarized on Table 4. Field procedures and sample results are outlined in the ENGEO-prepared *Soil and Groundwater Sampling Results*, dated 15 March 2007.

November 2007: ENGEO advanced one boring (1-B1) on site, to a total depth of approximately 100 feet bsg, for collection of soil and grab ground water samples. Soil samples were collected at ten-foot intervals from 10 feet to 90 feet bsg; grab ground water samples were collected at depths of approximately 35 feet, 70 feet and 95 feet bsg. PCE and TPH-d were reported at maximum concentrations of 0.079 mg/kg and 17 mg/kg, respectively. TPH-g, TPH-d and BTEX compounds were reported in grab ground water samples at maximum concentrations of 98 µg/l, 190 µg/l, 2.7 µg/l, 1.2 µg/l and 1.0 µg/l. Analytical results of soil and ground water samples are summarized in Tables 2 and 4. Field procedures and sample results are outlined in the ENGEO-prepared *Additional Site Characterization Results*, dated 28 April 2008, revised 23 July 2008.

December 2007: ENGEO advanced seven soil vapor borings (SG-10 through SG-16) on site, to a total depth of 5 feet bsg for collection of soil vapor samples. Soil vapor samples were collected into summa canisters and analyzed in accordance with EPA Method TO-15. PCE, TCE, Trans 1,2-DCE, Cis 1,2-DCE and BTEX compounds were reported in soil vapor samples at maximum concentrations of 64 µg/m^3, 22 µg/m^3, 8.2 µg/m^3, 7.9 µg/m^3, 6.6 µg/m^3, 31 µg/m^3, 8.2 µg/m^3 and 59 µg/m^3. Analytical results of soil vapor samples are summarized in Table 3. Field procedures and sample results are outlined in the ENGEO-prepared *Additional Site Characterization Results*, dated 28 April 2008, revised 23 July 2008.

December 2007: ENGEO installed three ground water monitoring wells (MW-1 through MW-3) on site, to a total depth of approximately 35 feet bsg. Soil samples were collected at five-foot intervals, beginning at 5 feet bsg. PCE and TPH-d were reported in soil samples at maximum concentrations of

0.081 mg/kg and 2.2 mg/kg, respectively. Well construction details are summarized in Table 2. Field procedures and sample results are outlined in the ENGEO-prepared *Additional Site Characterization Results*, dated 28 April 2008, revised 23 July 2008.

January 2009: AGE installed one soil vapor extraction (SVE) well (SV-1) and two SVE observation wells (OW-1 and OW-2) on site, to a total depth of approximately 20 feet bsg. Soil samples were collected at five-foot intervals, beginning at 5 feet bsg. PCE was reported in the soil samples at a maximum concentration of 0.058 mg/kg. Analytical Results of soil samples are summarized in Table 2. Field procedures and sample results are outlined in the AGE-prepared *Soil Vapor Extraction Pilot Test Report*, dated 09 March 2010.

January 2009: AGE performed a 24-hour variable flow rate SVE pilot test utilizing SVE well SV-1. Influent vapor samples were collected at the start-up of the pilot test, following the first and second increase in flow rates, and at the conclusion of the pilot test. PCE and TCE was reported in influent vapor samples at maximum concentrations of 110 µg/l and 33 µg/l, respectively. Field measurements and analytical results of influent soil vapor samples are summarized in Tables 5 and 6. Field procedures and sample results are outlined in the AGE-prepared *Soil Vapor Extraction Pilot Test Report*, dated 09 March 2010.

December 2009: AGE installed two SVE wells (SV-2 and SV-3) on site, to a depth of approximately 20 feet bsg. Soil samples were collected in five-foot intervals, beginning at 5 feet bsg. PCE was reported in soil samples at a maximum concentration of 0.010 mg/kg. Analytical results of soil samples are summarized in Table 2. Field measurements and sample results are outlined in the AGE-prepared *Soil Vapor Extraction Install, Start-up And Quarterly Monitoring Report - First Quarter 2010*, dated 19 April 2010.

January 2010: AGE installed the SVE remediation piping network at the site. Field procedures are outlined in the AGE-prepared *Soil Vapor Extraction Install, Start-up And Quarterly Monitoring Report - First Quarter 2010*, dated 19 April 2010.

February 2010: A SVE-unit was delivered and installed at the site. The SVE unit consisted of two 1,500-pond granular activated carbon (GAC) vessels for adsorption and a 250 standard cubic foot per minute (scfm) SVE extraction positive displacement (PD) lobe blower capable of drawing a maximum 250 scfm. Subsequently, SVE was initiated at the site. Field procedures and sample results are outlined in the AGE-prepared

Soil Vapor Extraction Install, Start-up And Quarterly Monitoring Report - First Quarter 2010, dated 19 April 2010.

September 2010: AGE performed a soil vapor intrusion investigation at the site. Three soil vapor borings (V-1 through V-3) were advanced to a depth of approximately 5 feet bsg for collection of soil vapor samples. Contaminants were not reported above laboratory detection limits in any of the soil vapor samples analyzed. Analytical results of soil vapor samples are summarized in Table 7. The soil vapor intrusion investigation is further discussed in Section 7.0.

2.3. GROUND WATER MONITORING EVENTS

Ground water monitoring was performed at the site on three occasions: 28 January 2008, 18 December 2008 and 17 December 2009. During this time, depths to ground water from wells MW-1, MW-2 and MW-3 were measured between 25.23 feet and 28.38 feet below the tops of the well casings. Ground water elevations at the site generally fluctuated between 381.57 feet and 384.75 feet above mean sea level. Ground water monitoring in the area of MW-1 through MW-3 indicated a ground water flow direction generally toward the northwest and west at gradients between 0.006 feet per feet (ft/ft) and 0.007 ft/ft. Ground water elevation data are summarized in Table 8; representative ground water elevations and ground water flow directions on 28 January 2008, 18 December 2008 and 17 December 2009 are presented in Appendix C.

During the three ground water monitoring events, PCE was reported in wells MW-1 and MW-2 at concentrations ranging between 0.8 µg/l and 7.1 µg/l. No other constituents of concern have been reported in any of the wells at or above laboratory detection limits. Volatile organic compound-impact to ground water is further discussed in Section 4.0. Analytical results of ground water samples are summarized in Table 9.

2.4. STRATIGRAPHY

Based on soil data collected from soil borings S-1 through S-5, 1-B1, MW-B1 through MW-B3 (MW-1 through MW-3), SVE-1 through SVE-3, OW-1 and OW-2 the subsurface soil beneath the site generally consists of silty clay between 1 foot and 75 feet bsg. Alternating layers of clay and silt were encountered between 5 feet and 20 feet bsg in borings SVE-1 through SVE-3, OW-1 and OW-2. Intermittent layers of silty gravel, clayey sand, silty sand, clayey silt and gravely sand were encountered at varying depths in borings S-1 through S-5, 1-B1 and MW-B1 through MW-B3. A thin layer of gravelly sand was noted

between 22 feet and 28 feet in boring S-2, and sandy clay was noted between 18 feet and 24 feet in boring 1-B1. Intermittent sand layers were encountered between 7 feet and 20 feet in borings S-5, and SVE-1 through SVE-3, and between 70 feet and 97 feet in boring 1-B1. Additionally, intermittent gravel layers were encountered between 10 feet and 20 feet in borings SVE-1 through SVE-3, and between 60 feet and 82 feet in boring 1-B1. Boring logs are included in Appendix D.

2.5. REGIONAL GEOLOGIC SETTING

The property is located within the Livermore-Amador Valley, an east-west trending, inland structural basin located in northeastern Alameda County. The valley lies about 40 miles east of San Francisco and 30 miles southwest of Stockton within a structural trough of the Diablo Range. The ground water basin extends from the Pleasonton Ridge east to the Altamont Hills and from the Livermore Upland north to the Orinda Upland.

The valley is partially filled with recent alluvial fan, stream and lake deposits of Pleistocene-Holocene Age. The alluvial fans range in thickness from a few feet along the margins to nearly 800 feet in the west-central portion of the valley. The Livermore Formation, found below the majority of the alluvium in the ground water basin, unconsolidated to semi-consolidated beds of gravel, sand, silt, and clay. Limey concretions are fairly common in its lower portion, and tuffaceous beds are present at its base. Erosion of Jurassic and Cretacious rocks to the south of the basin produced the coarse-grained Livermore Formation. These grains consist of black to red chert, micaceous sandstone, black shale, and quartizite.

3.0. ASSESSMENT OF CHLORINATED HYDROCARBON-IMPACTED SOIL

Between October 2005 and December 2009, a total of eight borings (S-1 through S-5, P-1, P-2 and 1-B1), three ground water monitoring wells (MW-1 through MW-3), three SVE wells (SVE-1 through SVE-3) and two SVE observation wells (OW-1 and OW-2) were advanced at the site as part of an on-going subsurface investigation and remediation. Based on results of soil samples collected in October 2005, PCE was established as the contaminant of concern.

To date, a total of forty seven soil samples have been collected at the site and submitted for laboratory analysis. In general, low concentrations of chlorinated or petroleum hydrocarbons were reported in soil samples:

- PCE was reported in twenty-eight samples at concentrations ranging between 0.0055 mg/kg (P-1@5) and 0.45 mg/kg (S-1-10).

- TCE was reported in two samples at concentrations of 0.013 mg/kg (S-3@4) and 0.0006 mg/kg (S-3@8)
- Trans 1,2-DCE and Cis 1,2-DCE were only reported in the sample collected from boring S-3 at 4 feet bsg (S-3@4), at concentrations of 0.014 mg/kg and 0.061 mg/kg, respectively.
- TPH-g were only reported in the sample collected from boring S-3 at 2 feet bsg (S-3@2), at a concentration of 0.33 mg/kg.
- TPH-d were reported in ten samples at concentrations ranging between 1.0 mg/kg (S-3@4 and S-5@30) and 190 mg/kg (P-1@5).
- TPH-mo were only reported in the sample collected from boring P-1 at 5 feet bsg (P-1@5) at a concentration of 1,000 mg/kg.

All reported concentrations were below the San Francisco Bay Regional Water Quality Control Board California Environmental Protection Agency Environmental Screening Levels (ESLs) for all constituents. Analytical results of soil samples are summarized in Table 2.

4.0. ASSESSMENT OF CHLORINATED HYDROCARBON-IMPACTED GROUND WATER

In March 2007 and November 2007, six soil borings were advanced on site for collection of grab ground water samples. Additionally, a total of three ground water monitoring wells were installed and three ground water monitoring/sampling events were performed to investigate the extent of chlorinated hydrocarbon-impacted ground water beneath the site.

A total of eight grab ground water samples were collected at the site between March and November 2007:

- PCE was reported in four of the grab ground water samples collected, at concentrations ranging between 1.8 µg/l (S-2) and 36 µg/l (S-5).
- TCE was reported in the grab ground water samples collected from borings S-3 and S-5 at concentrations of 2.2 µg/l and 2.0 µg/l, respectively.
- Cis 1,2-DCE was reported in the grab ground water samples collected from borings S-3 and S-5 at concentrations of 1.6 µg/l and 0.54 µg/l.
- TPH-g and TPH-d were reported in the grab ground water sample collected from boring DB-1 at 70 feet bsg (DB-1/GW@70) at concentrations of 98 µg/l and 190 µg/l, respectively.

- Toluene was reported in four of the grab ground water samples collected, at concentrations ranging between 0.86 µg/l (S-3) and 2.3 µg/l (DB-1/GW@90).
- Benzene, ethylbenzene and xylenes were reported in the grab ground water sample colleted from boring DB-1 at 70 feet bsg (DB-1/GW@70) at concentrations of 2.7 µg/l, 1.2 µg/l and 1.0 µg/l, respectively.

PCE concentrations in borings S-3, S-4 and S-5 exceeded the ESL of 5.0 µg/l. TPH-d and benzene in boring 1B-1 (DB-1/GW@70) exceeded the ESLs of 100 µg/l and 1.0 µg/l, respectively. Analytical results of grab ground water samples are summarized in Table 4.

Between January 2008 and December 2009, three ground water monitoring/sampling events were performed at the site. PCE was reported in the ground water samples collected from well MW-1 during two sampling events, and in well MW-2 during all three sampling events. With the exception of one sample collected from well MW-2 during the December 2008 ground water monitoring event, PCE concentrations were below the ESL of 5.0 µg/l. Analytical results of ground water samples are summarized in Table 10. The current approximate extent of dissolved PCE beneath the site is illustrated on Figure 3.

5.0 ASSESSMENT OF CHLORINATED HYDROCARBON-IMPACTED SOIL VAPOR

Between January 2007 and December 2007, sixteen soil borings (SG-1 through SG-16) were advanced at the site for collection of soil vapor samples. Elevated concentrations of PCE, and other chlorinated hydrocarbons were reported in each of the soil vapor samples collected at the site in January 2007. PCE and TCE were reported at maximum concentrations of 860,000 µg/m^3 and 4,600,000 µg/m^3, respectively in the sample collected from boring SG-5 advanced in the former location of the dry cleaning machine. PCE concentrations in borings SG-1 through SG-9 exceeded the soil vapor ESL and the California Human Health Screening Levels (CHHSL) of 1,400 µg/m^3 and 603 µg/m^3, respectively. TCE concentrations in borings SG-3 and SG-5 exceeded the ESL and the CHHSL of 4,100 µg/m^3 and 1,770 µg/m^3, respectively. TCE concentrations in borings SG-7 and SG-9 only exceeded the CHHSL. Elevated concentrations of 1,1-DCE, Trans 1,2-DCE, Cis 1,2-DCE and VC were reported at maximum concentrations of 4,700 µg/m^3, 140,000 µg/m^3, 780,000 µg/m^3, and 1,800 µg/m^3, respectively in the sample collected from boring SG-5. Trans 1,2-DCE, Cis 1,2-DCE and VC concentrations in the sample collected from SG-5 exceeded the ESLs and CHHSLs for each of the respective constituents. Slightly elevated concentrations of BTEX compounds were reported in several of the vapor samples collected at the site in January 2007. Toluene and xylenes were reported in several of the vapor samples at maximum concentrations of 550 µg/m^3 and 450 µg/m^3, respectively in the sample collected from boring SG-7, advanced near the sanitary sewer alignment. Ethylbenzene was reported in the sample collected from boring SG-7 at a

concentration of 120 µg/m^3. Reported concentrations of BTEX compounds were below the ESLs and CHHSLs.

Comparatively low concentrations of PCE, PCE-daughter products and BTEX compounds were reported in the soil vapor samples collected at the site in December 2007. PCE was reported in four of the soil vapor samples collected at a maximum concentration of 64 µg/m^3 in the sample collected from boring SG-11, advanced approximately 66 feet northeast of the former dry cleaning machine location. TCE, Trans 1,2-DCE and Cis 1,2-DCE were reported in the sample collected from SG-16, advanced approximately 54 feet southeast of the former dry cleaning machine location, at concentrations of 22 µg/m^3, 8.2 µg/m^3 and 7.9 µg/m^3, respectively. Benzene was reported in all but one of the soil vapor samples collected at the site in December 2007, at low concentrations ranging between 2.2 µg/m^3 (duplicate sample collected from SG-12) and 6.6 µg/m^3 (SG-16). Toluene and total xylenes were reported in each of the soil vapor samples collected at the site in December 2007, at maximum concentrations of 68 µg/m^3 (SG-15) and 59 µg/m^3 (SG-16). Additionally, low concentrations of ethylbenzene were reported in two on the samples collected at the site in December 2007 at concentrations of 1.7 µg/m^3 (SG-14) and 8.2 µg/m^3 (SG-16). Soil vapor concentrations reported from samples collected at the site in December 2007 were all below the ESLs and CHHSLs for all constituents. Analytical results of soil vapor samples collected at the site between January 2007 and December 2007 are summarized in Table 3.

6.0. CORRECTIVE ACTION (SOIL VAPOR EXTRACTION)

During the pilot test for the evaluation of soil vapor extraction, the initial eight-hour soil vapor extraction removed a mass of PCE calculated to be approximately 0.3 pounds. Therefore, soil vapor extraction was determined to be appropriate to remediate the impact to the site from former dry cleaning operations.

Between 22 February 2010 and 24 June 2010, an SVE remediation system intermittently operated at the site. The SVE unit consists of two 1,500-pound granular activated carbon (GAC) vessels for adsorption and a nominal 250 scfm SVE extraction positive displacement lobe blower capable of drawing a maximum 250 scfm. The SVE system utilized a network of two-inch diameter, Schedule 40 PVC piping installed above ground from SVE wells SV-1 through SV-3, and underground from SVE observation wells OW-1 and OW-2 to the inlet of the vacuum blower through an 85-gallon condensation (knockout) vessel.

The SVE unit operated for approximately 2,023 hours at an air flow rate ranging between 45 scfm and 170 scfm. Due to declining concentration in the influent vapor stream, the system was shut down on 13 May 2010 for the performance of a 30-day vapor rebound

test. The system was restarted on 14 June 2010 and then subsequently sampled one week following the restart on 21 June 2010. After confirming that influent vapor concentrations had not significantly increased, the SVE system was permanently decommissioned and removed from the site in July 2010.

During system operation influent extracted organic vapor concentrations measured with an organic vapor meter (OVM), equipped with a photo ionization meter (PID), ranged between 0 ppmv (multiple monitoring events) and 4.5 ppmv (02 March 2010). Each effluent extracted organic vapor concentration was measured at a concentration of 0 ppmv with the OVM. Field measurements are summarized in Table 10.

Influent SVE soil vapor and effluent vapor samples were collected between 02 February 2010 and 26 February 2010, 01 March 2010 and 03 March 2010, and 09 March 2010. PCE was reported in the influent vapor samples at concentrations ranging between 7.6 µg/l (26 February 2010) and 93 µg/l (22 February 2010). Additionally a confirmation sample was collected from the influent and effluent sampling ports on 21 June 2010; following the 30-day SVE rebound response testing period. PCE was reported in the sample collected from the influent vapor stream at a concentration of 3.0 µg/l. No other constituents of concern were reported in the influent vapor stream. Analytical results of SVE samples are summarized in Table 10.

The mass of PCE removed during the SVE 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 PCE removed was based on laboratory analysis of soil-vapor samples, flow rate and operational time. Mass of extracted PCE was calculated for the time period using average PCE concentrations of influent soil-vapor sample data, averaged air flow rates, and duration of operation. Operational results are summarized in Table 10.

During the operational period, the mass of PCE extracted by the SVE system was calculated to be 7.54 pounds, or equivalent to an approximate volume of 0.56 gallons of PCE. The volume/mass calculations for extracted PCE are included with Appendix E.

7.0. SOIL VAPOR INTRUSION INVESTIGATION

On 02 September 2010, three soil vapor borings (V-1 through V-3) were advanced at the for collection of soil vapor samples to assess the remaining chlorinated hydrocarbon mass at the site and to evaluate the potential of soil vapor migration into existing on-site and adjacent off-site buildings. The scope of work was previously outlined in the AGE-prepared *Soil Vapor Intrusion Work Plan - July 2010*, dated 23 July 2010 and approved by Alameda County Environmental Health (ACEH), by letter dated 12 August 2010 (Appendix F).

Boring V-1 was advanced just outside the on-site building, approximately 10 feet from boring S-2. Boring V-2 was advanced near the former location of the dry-cleaning machines approximately 10 feet from soil vapor sampling point SG-5. Boring V-3 was advanced northeast of the former dry-cleaning machines, approximately 5 feet east of soil vapor extraction well SVE-3 (Figure 2).

A total of three soil vapor samples were collected and submitted for laboratory analysis. Volatile organic compounds were not reported above laboratory reporting limits in any of the soil vapor samples analyzed. The reported method detection limits are all below the ESLs and the CHHSLs. The soil vapor data should satisfy requirements for evaluation of vapor intrusion. ESLs were evaluated against method detections limits to demonstrate compliance. Additionally, the tracer compound, isopropyl alcohol was not reported in any of the soil vapor samples analyzed, indicating that both soil vapor samples were collected with no ambient air breakthrough down the probe rod.

Analytical results of soil vapor samples are summarized in Table 7. Field procedures are summarized in Appendix G. The laboratory report (Cal Tech Environmental Laboratories Project No. CT214-1009032), quality assurance/quality control report, and chain-of-custody form are included in Appendix H. ESL reports are included in Appendix I. The electronic deliverable format (EDF) file was uploaded to the State GeoTracker database under confirmation number 9377152442.

8.0. SENSITIVE RECEPTOR SURVEY

In 2007, ENGEO conducted a sensitive receptor survey for the site. Two wells were identified approximately 360 feet southeast of the property, both wells were later determined to have been destroyed:

- Well 3S/2E-7C1 was an agricultural well, destroyed on 07 December 1983.
- Well 3S/2E-7D1 was likely destroyed due to construction activities.

No other domestic wells were identified within 2,000 feet of the site. One school, Rancho Las Positas Elementary School, was identified approximately 1,300 feet southeast of the site. The locations of wells within 2,000 feet of the site are depicted on the ENGEO-prepared *Well Location Map*, included in Appendix J.

As part of a utility corridor assessment, ENGEO reviewed available facility records including copies of utility maps, building "as-built" drawings, building construction specifications, and municipal utility corridor maps. Information available at the City of Livermore indicated that the storm drain, sanitary sewer and drinking water mains extended the length of Rickenbacker Circle, near the center of the street. Plans indicated:

- A 24-inch storm drain is located approximately 10 feet bsg; and
- An 8-inch water main is located approximately 4 feet bsg.

According to the available "as built" plants, all utilities enter the site from Rickenbacker Circle. Information was not available pertaining to the depth of the gas and electrical lines; however, as a general rule, no more than 24-inches of cover are recommended for gas and electrical lines. Results of the sensitive receptor survey and utility corridor assessment are summarized in the ENGEO-prepared *Additional Site Characterization Results*, dated 28 April 2008, revised 23 July 2008.

9.0. NON-HAZARDOUS WASTE DISPOSAL

On 22 July 2010, Slaby Environmental, of Stockton, California, picked up and removed ten 55-gallon drums, an estimated 4,950 pounds of soil cuttings, from the site. The drums were transported under manifest to a Western Environmental, of Mecca, California, a licenced disposal facility. A copy of the non-hazardous waste manifest is included in Appendix K.

10.0. SUMMARY AND CONCLUSIONS

Based upon a review of the site assessment activities to date, AGE concludes:

- Ground water flow direction at the site is generally northwest and west under hydraulic gradients between 0.006 ft/ft and 0.007 ft/ft (Appendix C).
- The subsurface soil generally consists of silty clay with alternating layers of clays and silts, intermittent layers of silty gravel, clayey sand, silty sand, clayey silt, gravely sand, sandy clay, sand and gravel.
- Low concentrations of chlorinated hydrocarbons and petroleum hydrocarbons were

reported in soil samples collected in the vicinity of the former dry-cleaning machine location. PCE, TCE, Trans 1,2-DCE, Cis 1,2-DCE, TPH-g, TPH-d and TPH-mo were reported at maximum concentrations of 0.45 mg/kg, 0.013 mg/kg, 0.014 mg/kg, 0.061 mg/kg, 0.33 mg/kg, 190 mg/kg and 1,000 mg/kg, respectively (Table 2). All reported adsorbed concentrations were below the ESLs for commercial land use where ground water is a current or potential drinking water resource. The low reported concentrations indicate that a source of gross adsorbed contamination does not appear to exist beneath the site.

- Low concentrations of chlorinated hydrocarbons and petroleum hydrocarbons were reported in grab ground water and ground water samples collected generally in the area of the former dry-cleaning machine location, and south of the former dry-cleaning machine location. PCE, TCE, Cis-1,2-DCE, TPG-g, TPH-d, and BTEX compounds were reported in grab ground water samples collected at maximum concentrations of 36 µg/l, 2.2 µg/l, 1.6 µg/l, 98 µg/l, 190 µg/l, 2.7 µg/l, 1.2 µg/l, 1.2 µg/l, 2.3 µg/l, and 1.0 µg/l, respectively. Dissolved PCE concentrations exceeded ESLs in grab ground water samples collected from borings S-3 through S-5. TPH-d and benzene concentrations exceeded ESLs in a single grab ground water sample collected from 70 feet bsg in deep boring 1-B1 (Table 4). PCE was reported in ground water samples collected from wells MW-1 and MW-2 at maximum concentrations of 3.4 µg/l and 7.1 µg/l, respectively. With the exception of one sample collected from well MW-2 during the December 2008 ground water monitoring event, PCE concentrations in wells MW-1 and MW-2 were below the ESL (Table 9).
- On two separate occasions between January 2007 and December 2007 soil vapor samples were collected at the site to investigate the release of dry cleaning solutions. Initially, elevated concentrations of PCE and TCE were reported in samples collected near the former dry-cleaning machine location. PCE, TCE, 1,1-DCE, Trans 1,2-DCE, Cis 1,2-DCE, VC, toluene, ethylbenzene and xylenes were reported at maximum concentrations of 860,000 µg/m^3, 4,600,000 µg/m^3, 4,700 µg/m^3, 140,000 µg/m^3, 780,000 µg/m^3, 1,800 µg/m^3, 550 µg/m^3, 120 µg/m^3, 450 µg/m^3 and respectively (Table 3). The reported PCE and several TCE concentrations exceeded ESLs. Additionally, Trans 1,2-DCE, Cis 1-2, DCE and VC concentrations in the sample collected in the former dry-cleaning machine location exceeded ESLs. Comparatively low concentrations of PCE and TCE concentrations were reported in samples collected under the building, in the area northeast of the former dry-cleaning machine location, and southwest of the former dry-cleaning machine location. PCE, TCE, Trans 1,2-DCE, Cis 1,2-DCE and BTEX compounds were reported at maximum concentrations of 64 µg/m^3, 22 µg/m^3, 8.2 µg/m^3, 7.9 µg/m^3, 6.6 µg/m^3, 68 µg/m^3, 8.2 µg/m^3 and 59 µg/m^3, respectively (Table 3). Reported concentrations in soil vapor samples collected in December 2007 were all below the ESLs, indicating that chlorinated hydrocarbons and petroleum

hydrocarbons in soil vapor were confined to the area of the former dry-cleaning machine location.

- To address elevated PCE concentrations in shallow soil vapor beneath the site, an SVE remediation system was operated intermittently between 22 February 2010 and 24 June 2010. The system operated for approximately 2,023 hours at a flow rate ranging between 45 scfm and 170 scfm. During the operational period, the mass of PCE extracted by the SVE system was calculated to be 7.54 pounds, or equivalent to approximately 0.56 gallons of PCE (Appendix E).
- The potential of soil vapor migration into existing on-site and adjacent off-site buildings was evaluated in September 2010. Constituents of concern were not reported in any of the soil vapor samples analyzed, indicating that any remaining chlorinated hydrocarbons in soil vapor should not pose any significant, long-term threat to human health and the environment (Appendix I).
- A sensitive receptor survey identified on school within 2,000 feet of the site. No other sensitive receptors were identified (Appendix J).

11.0 RECOMMENDATIONS

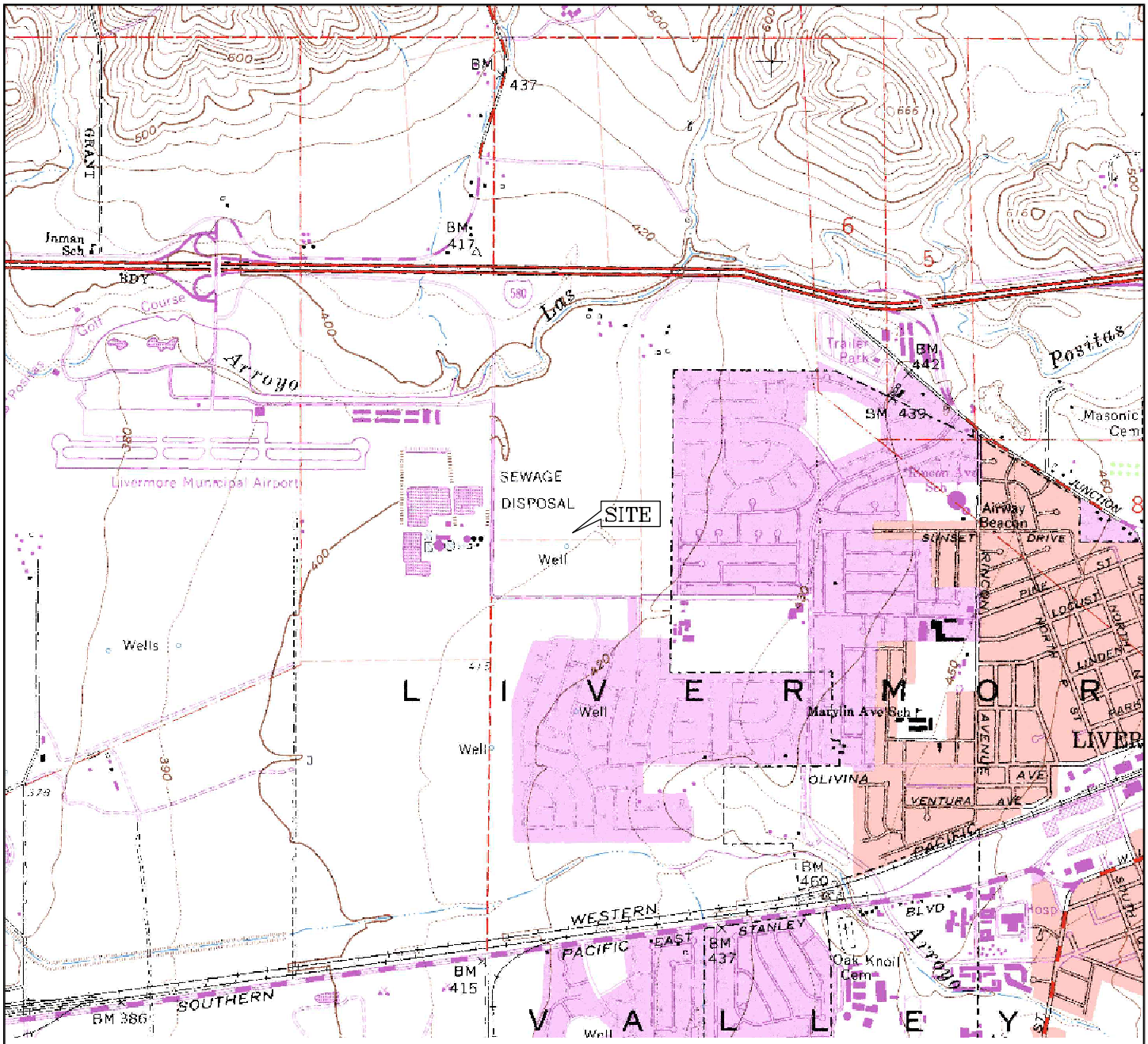
Based upon data collected from this site, AGE recommends the following:

- No further subsurface investigation at this time.
- Consideration of the facility for closure as a low risk ground water site.
- Destruction of monitoring wells in accordance with applicable regulations as part of the site closure preparations.

12.0. LIMITATIONS

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

FIGURES



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

LOCATION MAP

METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.
of Northern California

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

RICKENBACKER PLACE

LANDSCAPE

LANDSCAPE AREA

PARKING LOT

S-1

SG-10

RESTROOM

SG-11

S-2

RECEPTION AREA

SG-13

OFFICE

MW-3

SG-12

ELECTRICAL ROOM
(OPEN CEILING)

SANITARY SEWER ALIGNMENT

S-3*

SG-8

SG-7

SG-6

SVE-3

DRIVEWAY

V-3

WASHER/EXTRACTOR PAD

TRENCH DRAIN
WITH GRATING

FORMER LOCATION
DRY CLEANING MACHINE

SVE-2

P-1
BOILER ROOM

ELECTRICAL BOX/LINES

S-3

S-1*

SG-4

SG-9

V-2

SG-5

VACANT LOT

OW-2

S-2*

P-2

ABOVEGROUND
REMEDIAL PIPING

SVE-1

V-1

ROLL-UP
BACK DOOR

1'

1'

P-1

SG-14

SG-1

S-4

SG-2

CHEMICAL
STORAGE
AREA

UNDERGROUND
REMEDIAL PIPING

MW-1

OW-1

1-B1

SG-3

S-5

MW-2

SG-16

DUMPSTER AREA

SG-15

BUILIDING

LEGEND

SG-9	▲	SOIL GAS SAMPLE (MOBILE LABORATORY, JANUARY, 2007)
S-1*	●	BORING LOCATION (BY JMK ENVIRONMENTAL. OCTOBER, 2005)
1-B1	⊕	DEEP BORING LOCATION (ENGEO, NOVEMBER, 2007)
S-5	⊕	SOIL AND GROUNDWATER SAMPLE (ENGEO, MARCH, 2007)
P-2	⊕	APPROXIMATE LOCATION OF SHALLOW SOIL SAMPLE (ENGEO, JANUARY, 2007)
MW-3	⊕	MONITORING WELL LOCATION
SG-15	▲	SOIL GAS SAMPLE (SUMMA CANISTER, DECEMBER, 2007)
SVE-1	⊕	SOIL VAPOR EXTRACTION WELL LOCATION
OW-1	●	SOIL VAPOR EXTRACTION OBSERVATION WELL LOCATION TO BE CONVERTED TO SOIL VAPOR EXTRACTION POINT
V-1	⊕	SOIL VAPOR SAMPLING LOCATION - SEPTEMBER 2010

Notes:
All locations are approximated.
Remedial piping was removed from the site in July 2010.

N

SCALE
0 20 40
FEET

RICKENBACKER CIRCLE

Advanced GeoEnvironmental, Inc.

FIGURE: 2

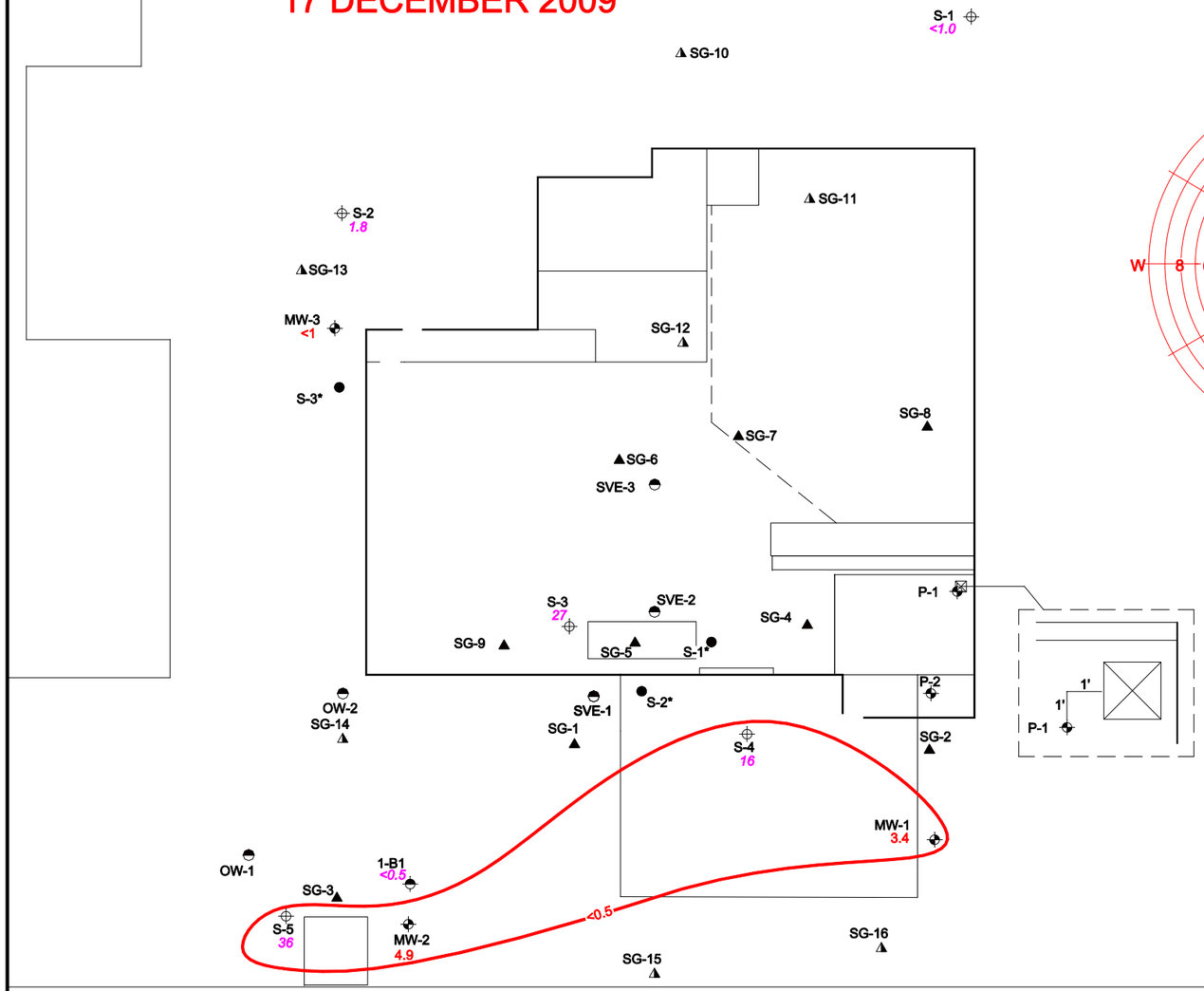
PROJECT NO. AGE-NC-08-1640 | FILE: METRO2

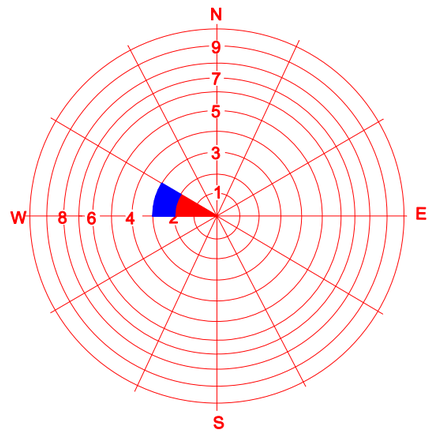
DATE: 08 NOVEMBER 2010 | DRAWN BY: MAC

SITE PLAN
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

RICKENBACKER PLACE

17 DECEMBER 2009





LEGEND

MW-3 <1.0	⌖	MONITORING WELL DESIGNATION CONTAMINANT RESULT (December 2009)
		GROUND WATER FLOW DIRECTION ROSE DIAGRAM
?		QUIERIED WHERE UNCERTAIN
SG-9	▲	SOIL GAS SAMPLE
S-1*	●	BORING LOCATION
1-B1 <0.5	⌖	DEEP BORING LOCATION CONTAMINANT RESULT (35 feet bsg, November 2007)
S-5 <1.0	⌖	SOIL AND GROUNDWATER CONTAMINANT RESULT (March 2007)
P-2	⌖	APPROXIMATE LOCATION OF SHALLOW SOIL SAMPLE
SG-15	▲	SOIL GAS SAMPLE
SVE-1	◓	SOIL VAPOR EXTRACTION WELL LOCATION
		INFERRED EXTENT OF DISSOLVED PCE (UG/L)

Advanced GeoEnvironmental, Inc.

FIGURE: 3

FILE: METRO2

DRAWN BY: MAC

PROJECT NO. AGE-NC-08-1640

DATE: 08 NOVEMBER 2010

DISSOLVED PCE
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

N

SCALE
0 20 40
FEET

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	12-18-2007	8	35	2	PVC	0.010	409.48	10 to 35	43 to 65	12 to 13	1 to 12
Remediation Wells											
SVE-1	01-08-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
OW-1	01-08-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
OW-2	01-08-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
SVE-2	12-07-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3
SVE-3	12-07-2009	8	20	2	PVC	0.030	ns	5 to 15	4 to 20	3 to 4	1 to 3

Notes:

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

TABLE 2

SOIL ANALYTICAL DATA - EPA METHODS 8260B / 8015B

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, CA

(mg/kg)

Sample ID	Depth (ft bsg)	Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	TPH-g	TPH-d	TPH-mo
S-1-5*	5	10/25/05	**0.23**	<0.012	<0.012	<0.012	<0.012	<0.012	-	-	-
S-1-10*	10	10/25/05	**0.032**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-1-15*	15	10/25/05	**0.031**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-1-25*	25	10/25/05	**0.057**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-1-35*	35	10/25/05	**0.029**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-2-5*	5	10/25/05	**0.45**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-2-10*	10	10/25/05	**0.059**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-2-15*	15	10/25/05	**0.036**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-2-25*	25	10/25/05	**0.048**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-2-35*	35	10/25/05	**0.023**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-3-25*	25	10/25/05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
S-3-35*	35	10/25/05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
P-1@1	1	01/22/07	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.24	**2.6**	<48
P-1@5	5	01/22/07	**0.0055**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.23	**190**	**1,000**
P-2@1	1	01/22/07	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.24	2.9	<49
P-2@5	5	01/22/07	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.25	<0.99	<50
S-1@24#	24	03/02/07	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.24	<0.96	<48
S-2@26#	26	03/02/07	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.22	**11**	<48
S-3@2#	2	03/01/07	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	**0.33**	**4.5**	<47
S-3@4#	4	03/01/07	**0.012**	**0.013**	<0.0049	**0.014**	**0.061**	<0.0049	<0.23	**1.0**	<46
S-3@8#	8	03/01/07	**0.079**	**0.0066**	<0.0048	<0.0048	<0.0048	<0.0048	<0.24	<0.96	<48
S-3@10#	10	03/01/07	**0.023**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.23	**13**	<47
S-3@27#	27	03/01/07	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.22	<0.99	<49
S-4@25#	25	03/01/07	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.23	<0.98	<49
S-5@30#	30	03/01/07	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.22	**1.0**	<46
1-B1/S-10	10	11/27/07	**0.079**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.23	<1.0	<50
1-B1/S-20	20	11/27/07	**0.017**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.24	**17**	<50
1-B1/S-30	30	11/27/07	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.24	<0.99	<50
1-B1/S-40	40	11/27/07	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.25	<0.99	<49
1-B1/S-50	50	11/27/07	**0.014**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.23	**1.1**	<49
1-B1/S-60	60	11/27/07	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.23	<0.99	<50
1-B1/S-70	70	11/27/07	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.24	<0.98	<49
1-B1/S-80	80	11/27/07	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.23	<1.0	<50
1-B1/S-90	90	11/27/07	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.24	<0.99	<50
MWB1	5.5	12/18/07	**0.081**	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.23	<1.0	<50
MWB1	10.5	12/18/07	**0.068**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.23	<1.0	<50
MWB2	25.5	12/18/07	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.24	<1.0	<50

TABLE 2

SOIL ANALYTICAL DATA - EPA METHODS 8260B / 8015B

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, CA

(mg/kg)

Sample ID	Depth (ft bsg)	Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	TPH-g	TPH-d	TPH-mo
MW-3	26	12/19/07	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.23	**2.2**	<49
SVE-1-5	5	01/08/09	**0.058**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	-	-
SVE-1-10	10	01/08/09	**0.011**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	-	-
SVE-1-15	15	01/08/09	**0.014**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	-	-
OW-1-5	5	01/08/09	**0.040**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	-	-
OW-2-5	5	01/08/09	**0.036**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	-	-
OW-2-10	10	01/08/09	**0.026**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	-	-
SVE-2-20	20	12/07/09	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
SVE-3-10	10	12/07/09	**0.0094**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
SVE-3-20	20	12/07/09	**0.0082**	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-
	ESLs (Shallow Soil):		*0.7*	*0.46*	*1.0*	*0.67*	*0.19*	*0.047*	*83*	*83*	*2,500*
	ESLs (Deep Soil):		*0.7*	*0.46*	*1.0*	*0.67*	*0.19*	*0.085*	*83*	*83*	*5,000*

Notes:

mg/kg: milligrams per kilogram

ft bsg: feet 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

-: not analyzed

ESL: San Francisco Bay Regional Water Quality Control Board California Environmental Protection Agency Environmental Screening Level (soil) for commercial/industrial land use.

Shallow soil: soil samples collected at maximum depths of 3 meters below surface grade

Deep Soil: soil samples collected at depths greater than 3 meters below surface grade

TABLE 3

HISTORICAL SOIL VAPOR ANALYTICAL DATA
Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, CA
($\mu g/m^3$)

Sample ID	Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Tracer Compound
EPA METHOD 8260 / Mobile Laboratory / Syringe Sampling[1]												
SG-1	01/22/07	**16,000**	**150**	<100	<100	<100	<100	<100	<100	<100	<100	<100
SG-2	01/22/07	**15,000**	**480**	<100	<100	<100	<100	<100	**320**	<100	**120**	<100
SG-3	01/22/07	**38,000**	**18,000**	<100	<100	**17,000**	<100	<100	**220**	<100	<100	<100
SG-4	01/22/07	**11,000**	**1,200**	<100	<100	**450**	<100	<100	**210**	<100	<100	<100
SG-5	01/22/07	**860,000**	**4,600,000**	**4,700**	**140,000**	**780,000**	**1,800**	<100	<100	<100	<100	<100
SG-6	01/22/07	**25,000**	**1,300**	<100	<100	<100	<100	<100	**250**	<100	<100	<100
SG-7	01/22/07	**5,700**	**3,000**	<100	<100	**470**	<100	<100	**550**	**120**	**450**	<100
SG-8	01/22/07	**4,300**	**310**	<100	<100	<100	<100	<100	**270**	<100	**100**	<100
SG-9	01/22/07	**4,100**	**3,100**	<100	**500**	**1,700**	<100	<100	**270**	<100	**130**	<100
EPA METHOD TO-15 / Summa Canisters[2]												
SG-10	12/17/07	<2.1	<0.86	<1.3	<0.90	<0.90	<0.40	**2.8**	**31**	<0.51	**48**	<2.7
SG-11	12/17/07	**64**	<0.83	<1.3	<0.88	<0.88	<0.39	**3.5**	**25**	<0.48	**49**	<2.6
SG-12	12/17/07	**10**	<0.82	<1.2	<0.86	<0.86	<0.39	**2.5**	**16**	<0.48	**31.4**	<2.6
SG-12[3]	12/17/07	**8.7**	<0.78	<1.2	<0.82	<0.82	<0.37	**2.2**	**14**	<0.46	**26.3**	<2.6
SG-13	12/17/07	<1.3	<0.55	<0.79	<0.55	<0.55	<0.25	**3.1**	**48**	<0.31	**43.2**	<1.6
SG-14	12/17/07	<2.0	<0.87	<1.2	<0.87	<0.87	<0.39	<1.4	**3.3**	**1.7**	**8.0**	<2.6
SG-15	12/17/07	<1.9	<0.77	<1.2	<0.81	<0.81	<0.37	**4.0**	**68**	<0.46	**50**	<2.4
SG-16	12/17/07	**15**	**22**	<1.2	**8.2**	**7.9**	<0.37	**6.6**	**30**	**8.2**	**59**	<2.5
	ESL:	*1,400*	*4,100*	*5,100*	*41,000*	*20,000*	*100*	*280*	*180,000*	*3,300*	*58,000*	-
	CHHSL:	*603*	*1,770*	--	*88,700*	*44,400*	*44.8*	*122*	*378,000*	--	*887,000*	--

TABLE 3

HISTORICAL SOIL VAPOR ANALYTICAL DATA
Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, CA
($\mu g/m^3$)

Notes:

$\mu g/m^3$	micrograms per cubic meter
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
<:	Indicates constituents were not detected at a concentration greater than the laboratory reporting limit shown.
Note 1:	Tracer compound: 1,1-diflouroethane
Note 2:	Tracer compound: isopropanol
Note 3:	duplicate sample
ESL:	San Francisco Bay Regional Water Quality Control Board California Environmental Protection Agency Environmental Screening Level (soil gas) for commercial/industrial land use.
-:	indicates there is no ESL for the listed constituent
CHHSL:	California Human Health Screening Levels (soil gas) for commercial/industrial land use.
--:	indicates there is no CHHSL for the listed constituent.

TABLE 4

GRAB GROUND WATER ANALYTICAL DATA - EPA METHODS 8260B / 8015B

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, CA

(µg/l)

Sample ID	Depth (ft bsg)	Date	PCE	TCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	TPH-g	TPH-d	TPH-mo	Benzene	Ethyl-benzene	Toluene	Xylenes
S-1	21.7	03/02/07	<1.0	<1.0	<1.0	<1.0	<1.0	<50	<50	<500	<1.0	<1.0	<1.0	<2.0
S-2	22	03/02/07	**1.8**	<1.0	<1.0	<1.0	<1.0	<50	<50	<500	<1.0	<1.0	<1.0	<2.0
S-3	24.5	03/01/07	**27**	**2.2**	<0.5	**1.6**	<0.5	<50	<50	<500	<0.5	<0.5	**0.86**	<1.0
S-4	26.1	03/01/07	**16**	<0.5	<0.5	<0.5	<0.5	<50	**70**	<500	<0.5	<0.5	**0.96**	<1.0
S-5	23.3	03/01/07	**36**	**2.0**	<0.5	**0.54**	<0.5	<50	<50	<500	<0.5	<0.5	**1.8**	<1.0
DB-1/GW@35	35	11/28/07	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<50	<500	<0.5	<0.5	<0.5	<1.0
DB-1/GW@70	70	11/28/07	<0.5	<0.5	<0.5	<0.5	<0.5	**98**	**190**	<500	**2.7**	**1.2**	**2.3**	**1.0**
DB-1/GW@90	90	11/28/07	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<50	<500	<0.5	<0.5	<0.5	<1.0
		ESLs:	*5.0*	*5.0*	*10*	*6.0*	*0.5*	*100*	*100*	*100*	*1.0*	*40*	*30*	*20*

Notes

µg/l	micrograms per liter
TPH-d:	total petorleum hydrocarbons quantified as diesel
TPH-mo:	total petroleum hydrocarbons quantified as motor oil
TPH-g:	total petroelum hydrocarbons quantified as gasoline
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
ESL:	San Francisco Bay Regional Water Quality Control Board California Environmental Protection Agency Environmental Screening Level (ground water) for commercial/industrial land use.

TABLE 5

SVE PILOT TEST - JANUARY 2009
FIELD PARAMETERS
Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, Califonria

Time	Date	Flow (iow/scfm)	Influent PID (ppm)	Effluent PID (ppm)	Vacuum Measurements		
					SVE-1 (scfm)	OW-1 (iow)	OW-2 (iow)
Baseline	01/19/09	-	-	-	0.00	0.00	0.25
0930	01/19/09	0.10 / 15	48.4	0	37.00	0.00	0.5
1000	01/19/09	0.10 / 15	51.2	0	26.00	0.00	3.1
1030	01/19/09	0.10 / 15	48.9	0	22.00	0.00	2.20
1100	01/19/09	0.10 / 15	55.2	0	27.00	0.80	1.2
1130	01/19/09	0.10 / 15	56.1	0	20.00	1.40	0
1200	01/19/09	0.10 / 15	54.3	0	26.00	1.40	0
1230	01/19/09	0.10 / 15	49.8	0	26.00	1.25	0.6
1300	01/19/09	0.10 / 20	44.4	0	20.00	1.35	0.6
1330	01/19/09	0.16 / 22	45.8	0	52.00	1.45	0.05
Adjustment made to vacuum gauge							
1400	01/19/09	0.16 / 22	50	0	51.00	0.10	0.05
1430	01/19/09	0.16 / 22	42	0	52.00	0.10	0.10
1500	01/19/09	0.16 / 22	43	0	52.00	0.11	0.06
1530	01/19/09	0.16 / 22	35	0	53.00	0.11	0.08
1600	01/19/09	0.16 / 22	39	0	53.00	0.11	0.08
1630	01/19/09	0.16 / 22	38	0	53.00	0.11	0.08
1700	01/19/09	0.16 / 22	38	0	53.00	0.11	0.08
1730	01/19/09	0.325 / 31	38	0	80.00	0.15	0.125
1800	01/19/09	0.325 / 31	37	0	79.00	0.175	0.125
1830	01/19/09	0.325 / 31	37	0	79.00	0.175	0.13
1900	01/19/09	0.35 / 32	37	0	78.00	0.19	0.15
1930	01/19/09	0.36 / 33	37	0	77.00	0.19	0.14
2000	01/19/09	0.375 / 33	35	0	76.00	0.20	0.15
2030	01/19/09	0.375 / 33	35	0	78.00	0.20	0.15
2100	01/19/09	0.375 / 33	35	0	78.00	0.20	0.15
2130	01/19/09	0.375 / 33	35	0	76.00	0.20	0.15
2200	01/19/09	0.40 / 35	34	0	74.00	0.20	0.15
2230	01/19/09	0.40 / 35	34	0	74.00	0.20	0.15
2300	01/19/09	0.43 / 36	34	0	72.00	0.20	0.16
2330	01/19/09	0.43 / 36	35	0	72.00	0.20	0.16
2400	01/19/09	0.43 / 36	35	0	72.00	0.21	0.16
0000	01/20/09	0.43 / 36	34	0	70.00	0.21	0.16
0030	01/20/09	0.42 / 36	34	0	70.00	0.21	0.16
0100	01/20/09	0.42 / 36	34	0	70.00	0.21	0.16
0130	01/20/09	0.43/ 36	34	0	70.00	0.21	0.16
0200	01/20/09	0.42 / 36	32	0	70.00	0.21	0.16

TABLE 5

SVE PILOT TEST - JANUARY 2009
FIELD PARAMETERS
Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, Califonria

Time	Date	Flow (iow/scfm)	Influent PID (ppm)	Effluent PID (ppm)	Vacuum Measurements		
					SVE-1 (scfm)	OW-1 (iow)	OW-2 (iow)
0230	01/20/09	0.43 / 36	34	0	70.00	0.21	0.16
0300	01/20/09	0.43 / 36	34	0	70.00	0.21	0.16
0330	01/20/09	0.43 / 36	33	0	69.00	0.21	0.16
0400	01/20/09	0.43 / 36	34	0	70.00	0.21	0.16
0430	01/20/09	0.43 / 36	34	0	70.00	0.21	0.16
0500	01/20/09	0.43 / 36	33	0	69.00	0.21	0.16
0530	01/20/09	0.43 / 36	34	0	69.00	0.21	0.16
0600	01/20/09	0.43 / 36	34	0	69.00	0.21	0.16
0630	01/20/09	0.43 / 36	33	0	69.00	0.21	0.16
0700	01/20/09	0.43 / 36	33	0	68.00	0.21	0.16
0730	01/20/09	0.45 / 38	34	0	68.00	0.25	0.21
0800	01/20/09	0.45 / 38	33	0	68.00	0.25	0.21
0830	01/20/09	0.45 / 38	29	0	68.00	0.25	0.21
0900	01/20/09	0.45 / 38	27	0	68.00	0.25	0.21
0930	01/20/09	0.45 / 38	26	0	68.00	0.25	0.21
post	01/20/09	-	-	-	0	0	0

Notes:

iow: Inches of Water
scfm: Standard Cubic Feet per Water
ppm: parts per million
PID: Photo Ionization Detector

TABLE 6

SVE PILOT TEST - JANUARY 2009
SOIL VAPOR ANALYTICAL DATA - EPA METHOD 8260B
Metro Valley Cleaners
224 Rickenbacker Circle, Livermore, Califonria
(µg/l)

Sample ID	Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC
Influent Statrup	01/19/09	**110**	<1	<1	<1	<1	<0.5
Influent 1400	01/19/09	**110**	**3.3**	<1	<1	<1	<0.5
SVE-1/1800	01/19/09	**91**	<1	<1	<1	<1	<0.5
SVE-1/End	01/20/09	**67**	<1	<1	<1	<1	<0.5

Notes:

µg/L	micrograms per liter
<:	Indicates constituents were not detected at a concentration greater than the laboratory 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

TABLE 7

SOIL VAPOR ANALYTICAL DATA - EPA METHOD TO-15

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, California

($\mu g/m^3$)

Sample I.D.	Sample Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Benzene	Toluene	Ethyl-benzene	Total Xylenes	IPA
V-1A	09/02/10	<2.5	<2.5	<2.5	<2.5	<2.5	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5
V-2A	09/02/10	<2.5	<2.5	<2.5	<2.5	<2.5	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5
V-3A	09/02/10	<2.5	<2.5	<2.5	<2.5	<2.5	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5
	ESL:	*1,400*	*4,100*	*5,100*	*41,000*	*20,000*	*100*	*280*	*180,000*	*3,300*	*58,000*	-
	CHHSL:	*603*	*1,770*	*--*	*88,700*	*44,400*	*44.8*	*122*	*378,000*	*--*	*887,000*	--

Notes:

$\mu g/m^3$: micrograms per cubic meter

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

Naph: Napth

IPA: isopropyl alcohol or 2-propanol (tracer compound)

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

ESL: San Francisco Bay Regional Water Quality Control Board California Environmental Protection Agency Environmental Screening Level (soil gas) for commercial/industrial land use.

-: indicates there is no ESL for the listed constituent

CHHSL: California Human Health Screening Levels (soil gas) for commercial/industrial land use.

--: indicates there is no CHHSL for the listed constituent.

TABLE 8

GROUND WATER ELEVATION DATA

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, California

Sample ID (screen interval)	Well Casing Elevatin (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 (10 to 35 ft bsg)	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
		12/17/09	27.03	382.97	4th/2009	W / 0.006 ft/ft
MW-2 (10 to 35 ft bsg)	409.98	01/28/08	25.23	384.75		
		12/18/08	28.38	381.60		
		12/17/09	27.54	382.44		
MW-3 (10 to 35 ft bsg)	409.48	01/28/08	25.25	384.23		
		12/18/08	27.91	381.57		
		12/17/09	27.13	382.35		

Notes:

ft bsg: feet below surface grade

ft MSL: feet mean sea level

ft btoc: feet below top of well casing

note 1: survey data not available

ft/ft: foot per foot

TABLE 9

GROUND WATER ANALYTICAL DATA - EPA METHOD 8260B

Metro Valley Cleaners

224 Rickenbacker Circle, Livermore, California

(µg/l)

Sample ID (screen interval)	Date	PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-1 (10 to 35 ft bsg)	01-28-2008	**0.80**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12-18-2008	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.6
	12-17-2009	**3.4**	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.6
MW-2 (10 to 35 ft bsg)	01-28-2008	**0.95**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12-18-2008	**7.1**	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.6
	12-17-2009	**4.9**	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.6
MW-3 (10 to 35 ft bsg)	01-28-2008	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12-18-2008	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.6
	12-17-2009	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.6
	ESLs:	*5.0*	*5.0*	*6.0*	*10*	*6.0*	*0.5*	*1.0*	*40*	*30*	*20*

Notes:

µg/l:	micrograms per liter
ft bsg:	feet below surface grade
<:	non-detect above laboratory reporting limit
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
ESL:	San Francisco Bay Regional Water Quality Control Board California Environmental Protection Agency Environmental Screening Level (ground water) for commercial/industrial land use.

TABLE 10

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

Date	Operational Hours	SVE Wells in Operation	Inlet / Influent				Outlet / Effluent		
			Flow (cfm)	PID (ppmv)	PCE (µg/l)	TCE (µg/l)	PID (ppmv)	PCE (µg/l)	TCE (µg/l)
02/22/10 [0]	1	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	130	43	**93**	**4.5**	0	<1	<1
02/23/10	23	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	6	**48**	<1	0	<1	<1
02/24/10	49	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	140	1.3	**16**	<1	0	<1	<1
02/25/10	70	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	2	**9.0**	<1	0	<1	<1
02/26/10	97	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	0	**7.6**	<1	0	<1	<1
03/01/10	169	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	0	--	--	0	--	--
03/02/10	192	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	142	0	--	--	0	--	--
03/02/10 [1]	192	SVE-1, OW-1 & OW-2	--	4.5	--	--	0	--	--
03/03/10	216	SVE-1, OW-1 & OW-2	78	2.5	--	--	0	--	--
03/09/10	356	SVE-1, OW-1 & OW-2	80	3	<1	<1	0	<1	<1
03/16/09	523	SVE-1, OW-1 & OW-2	77	2	--	--	0	--	--
03/23/10	695	SVE-1, OW-1 & OW-2	110	0	--	--	0	--	--
03/23/10 [2]	695	SVE-2 & SVE-3	175	0	--	--	0	--	--
04/01/10	910	SVE-2 & SVE-3	135	0	--	--	0	--	--
04/08/10	1,077	SVE-2 & SVE-3	133	0	--	--	0	--	--
04/15/10	1,245	SVE-2 & SVE-3	130	0	--	--	0	--	--
04/15/10	1,245	SVE-1, OW-1 & OW-2	45	1	--	--	0	--	--
04/23/10	1,432	SVE-1	58	2.6	--	--	0	--	--
04/23/10	1,432	SVE-2	130	0	--	--	0	--	--
04/23/10	1,432	SVE-3	170	0	--	--	0	--	--
04/23/10	1,432	OW-1	104	2.5	--	--	0	--	--
04/23/10	1,432	OW-2	50	1.2	--	--	0	--	--
04/29/10 [3]	1,578	SVE-1	54	1.9	--	--	0	--	--
04/29/10 [4]	1,578	OW-1	54	2	--	--	0	--	--
05/06/10 [5]	1,712	SVE-1, OW-1 & OW-2	57	0	--	--	0	--	--

TABLE 10

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

Date	Operational Hours	SVE Wells in Operation	Inlet / Influent				Outlet / Effluent		
			Flow (cfm)	PID (ppmv)	PCE (µg/l)	TCE (µg/l)	PID (ppmv)	PCE (µg/l)	TCE (µg/l)
05/13/10 [6]	1,878	SVE-1, OW-1 & OW-2	54	0	--	--	0	--	--
06/14/10 [7]	1,878	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	85	1	--	--	0	--	--
06/21/10 [8]	1,950	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	100	0	**3.0**	<1	0	<1	<1
06/24/10	2,023	SVE-1, SVE-2, SVE-3, OW-1 & OW-2	89	--	--	--	--	--	--

Notes:

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

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

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

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

[3]: Well in operation determined based on individual influent PID readings collected during the 23 April 2010 monitoring event. Wells SVE-1, OW-1 and OW-2 had individual PID readings above 0 ppmv. The well with the highest individual PID reading (SVE-1) was left on.

[4]: SVE-1 turned off and OW-1 turned on. Wells OW-1 and SVE-1 had indivudual PID readings above of 0 ppmv. The well with the highest PID reading (OW-1) was left on.

[5]: System was shut down. Overload to blower was tripped, due to water accumulated in the system. The air was let out of the system, and the system was restarted with wells SVE-1, OW-1 and OW-2 turned on.

[6]: SVE system shut down following monitoring procedures

[7]: SVE system restarted

[8]: SVE system was turned off, and had to be restarted prior to monitoring procedures

APPENDIX A

TABLE 1 - CHECKLIST OF REQUIRED DATA FOR NO FURTHER ACTION REQUESTS AT UNDERGROUND TANK SITES

Site Name and Location: METRO VALLEY CLEANERS / 224 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA

[X] *1. Distance to production wells for municipal, domestic, agriculture, industry and other uses within 2000 feet of the site;*

[X] *2. Site maps, to scale, of area impacted showing locations of any former and existing tank systems, excavation contours and sample locations, boring and monitoring well elevation contours, gradients, and nearby surface waters, buildings, streets, and subsurface utilities;*

[ ] *3. Figures depicting lithology (cross section), treatment system diagrams;*

[N/A] *4. Stockpiled soil remaining on-site or off-site disposal (quantity);*

[X] *5. Monitoring wells remaining on-site, fate;*
MONITORING WELLS WILL BE DESTROYED

[X] *6. Tabulated results of all groundwater elevations and depths to water;*

[X] *7. Tabulated results of all sampling and analyses:*
- [X] *Detection limits for confirmation sampling*
- [ ] *Lead analyses*

[X] *8. Concentration contours of contaminants found and those remaining in soil and groundwater, and both on-site and off-site:*
- [N/A] *Lateral and* [N/A] *Vertical extent of soil contamination*
- [X] *Lateral and* [N/A] *Vertical extent of groundwater contamination*

[N/A] *9. Zone of influence calculated and assumptions used for subsurface remediation system and the zone of capture attained for the soil and groundwater remediation system;*

[X] *10. Reports / information* [ ] *Unauthorized Release Form* [X] *QMRs (Dates)* [X] *Well and boring logs* [ ] *PAR* [ ] *FRP* [X] *Other (report name)*

[N/A] *11. Best Available Technology (BAT) used or an explanation for not using BAT;*

[N/A] *12. Reasons why background was/is unattainable using BAT;*

[X] *13. Mass balance calculation of substance treated versus that remaining;*

[ ] *14. Assumptions, parameters, calculations and model used in risk assessments, and fate and transport modeling;*

[X] *15. Rationale why conditions remaining at site will not adversely impact water quality, health, or other beneficial uses; and*

[N/A] *16. WET or TCLP results*

By:	*Comments:*
Date:	

APPENDIX B

Photo Provided by Google.

N

Photo Provided by Google.

N →

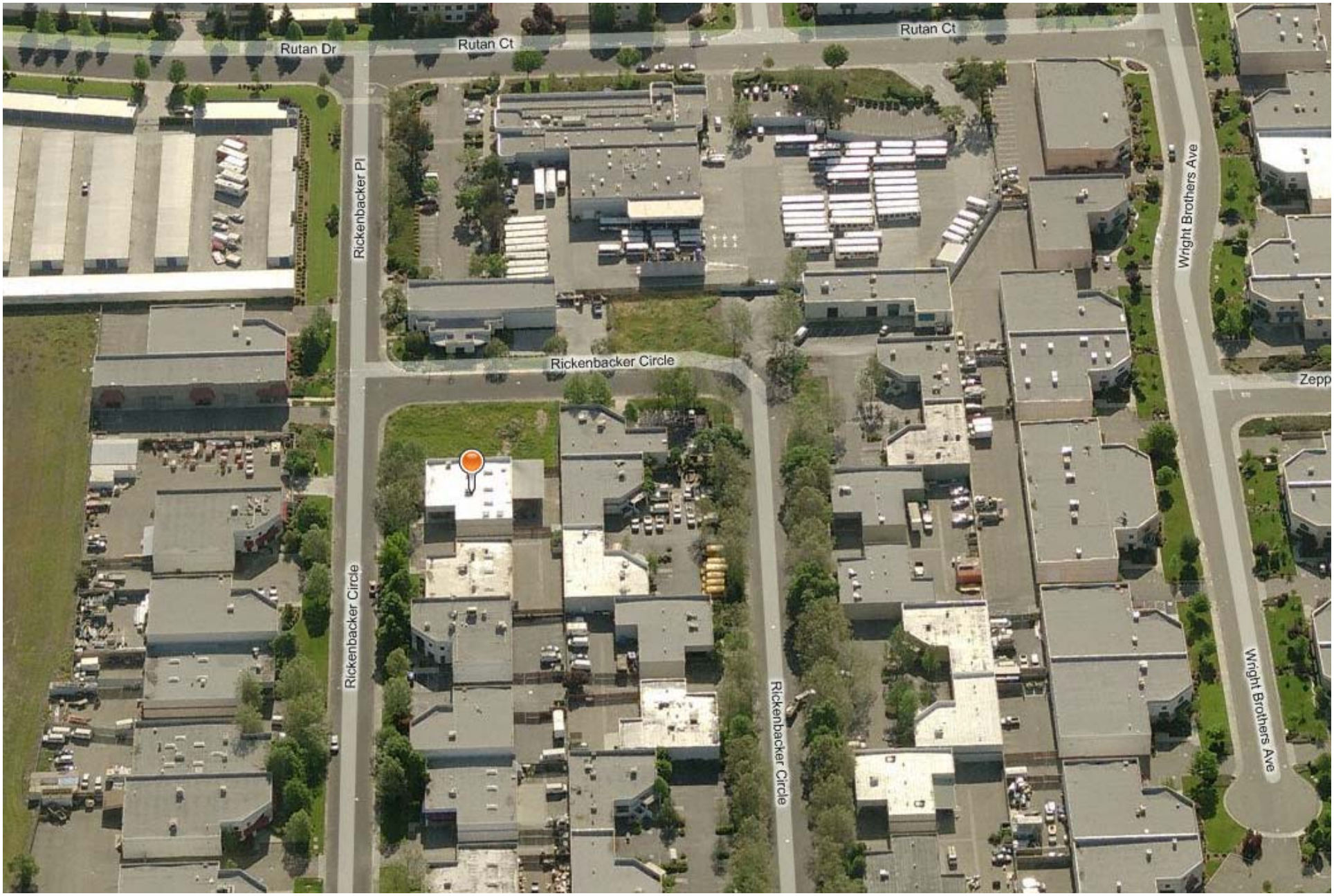
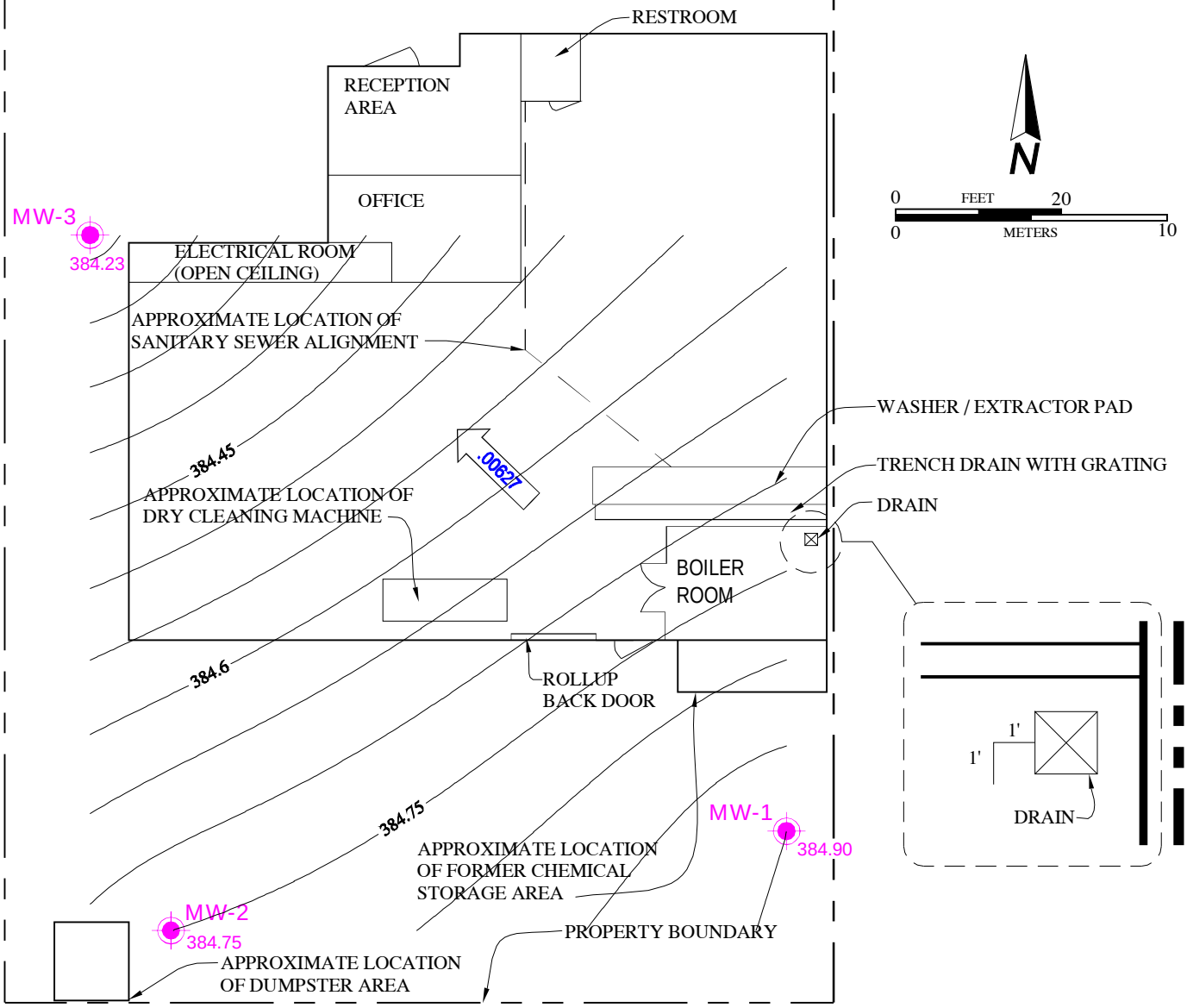


Photo provided by google.

N

APPENDIX C



EXPLANATION

MW-3 384.9 — APPROXIMATE LOCATION OF MONITORING WELL W/GROUNDWATER ELEVATION

.00627 — GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)

BASE MAP SOURCE: CITY OF LIVERMORE BUILDING DEPARTMENT

ENGEO INCORPORATED
EXCELLENT SERVICE SINCE 1971

POTENTIOMETRIC SURFACE MAP

224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

PROJECT NO.: 7584.100.101	FIGURE NO. 3
DATE: JULY 2008	
DRAWN BY: RJS	CHECKED BY: SM

G:\Drafting\DRAFTING2_Dwg\7584\001\WorkPlan\7584100101-3-PotentiometricSurfaceMap-0708.dwg 7-23-08 07:16:39 AM

ORIGINAL FIGURE PRINTED IN COLOR

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

SG-8

SG-7

381.80

SG-6

DRIVEWAY

381.90

WASHER/EXTRACTOR PAD

DRY CLEANING MACHINE

P-1

382.00

SG-4

S-3

SG-5

SG-9

BOILER ROOM

VACANT LOT

OW-2

SVE-1

P-2

SG-14

SG-1

382.10

SG-2

0.007 ft/ft

MW-1
382.10

OW-1

DUMPSTER AREA

1-B1

SG-3

S-5

MW-2
381.60

SG-16

382.10

SG-15

381.90

382.00

381.80

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

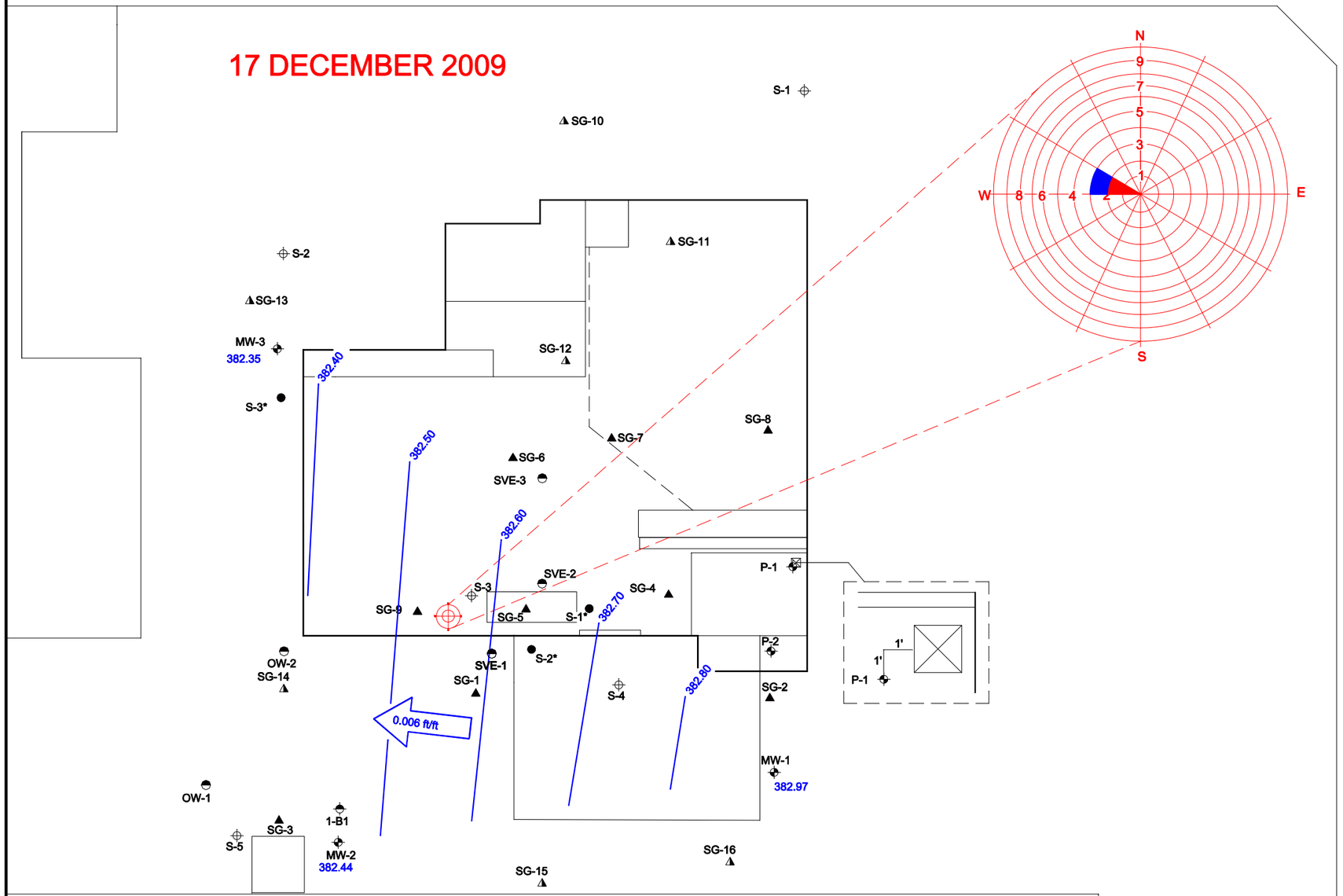
GROUND WATER ELEVATION MAP
METRO VALLEY CLEANERS
224 RICKENBACKER CIRCLE
LIVERMORE, CALIFORNIA

Advanced GeoEnvironmental, Inc.

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

RICKENBACKER PLACE

17 DECEMBER 2009



LEGEND

MW-3 16.76	⌖	MONITORING WELL LOCATION WITH REPORT GROUND WATER ELEVATION
		RECORDED GROUND WATER FLOW DIRECTIONS
(16.76)		NOT INCLUDED IN CONTOUR LINE
?		QUIERIED WHERE UNCERTAIN
NM		NOT MONITORED
0.003		INFERRED GROUND WATER FLOW DIRECTION AND GRADIENT
-17.00		ESTIMATED GROUND WATER ELEVATION CONTOUR LINE
SG-9	▲	SOIL GAS SAMPLE
S-1*	●	BORING LOCATION
1-B1	⌖	DEEP BORING LOCATION
S-5	⌖	SOIL AND GROUNDWATER
P-2	⌖	APPROXIMATE LOCATION OF SHALLOW SOIL SAMPLE
SG-15	▲	SOIL GAS SAMPLE
SVE-1	◓	SOIL VAPOR EXTRACTION WELL LOCATION

Advanced GeoEnvironmental, Inc.

FIGURE: 3

FILE: METRO2 | DRAWN BY: MAC

PROJECT NO. AGE-NC-08-1640 | DATE: 05 JANUARY 2009

RICKENBACKER CIRCLE

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

N

SCALE
0 20 40
FEET

APPENDIX D

KEY TO BORING LOGS

MAJOR TYPES			DESCRIPTION
COARSE-GRAINED SOILS MORE THAN HALF OF MAT'L LARGER THAN #200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW - Well graded gravels or gravel-sand mixtures GP - Poorly graded gravels or gravel-sand mixtures
		GRAVELS WITH OVER 12 % FINES	GM - Silty gravels, gravel-sand and silt mixtures GC - Clayey gravels, gravel-sand and clay mixtures
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW - Well graded sands, or gravelly sand mixtures SP - Poorly graded sands or gravelly sand mixtures
		SANDS WITH OVER 12 % FINES	SM - Silty sand, sand-silt mixtures SC - Clayey sand, sand-clay mixtures
FINE-GRAINED SOILS MORE THAN HALF OF MAT'L SMALLER THAN #200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50 % OR LESS		ML - Inorganic silt with low to medium plasticity CL - Inorganic clay with low to medium plasticity OL - Low plasticity organic silts and clays
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50 %		MH - Inorganic silt with high plasticity CH - Inorganic clay with high plasticity OH - Highly plastic organic silts and clays
	HIGHLY ORGANIC SOILS		PT - Peat and other highly organic soils

GRAIN SIZES

U.S. STANDARD SERIES SIEVE SIZE				CLEAR SQUARE SIEVE OPENINGS				
200	40	10	4	3/4 "	3"	12"		
SILTS AND CLAYS	SAND			GRAVEL			COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE			

RELATIVE DENSITY

SANDS AND GRAVELS	BLOWS/FOOT (S.P.T.)
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	OVER 50

CONSISTENCY

SILTS AND CLAYS	STRENGTH*	BLOWS/FOOT (S.P.T.)
VERY SOFT	0-1/4	0-2
SOFT	1/4-1/2	2-4
MEDIUM STIFF	1/2-1	4-8
STIFF	1-2	8-15
VERY STIFF	2-4	15-30
HARD	OVER 4	OVER 30

MOISTURE CONDITION

DRY	Absence of moisture, dusty, dry to touch
MOIST	Damp but no visible water
WET	Visible freewater
SATURATED	Below the water table

MINOR CONSTITUENT QUANTITIES (BY WEIGHT)

TRACE	Particles are present, but estimated to the less than 5%
SOME	5 to 15%
WITH	15 to 30%
.....Y	30 to 50%

SAMPLER SYMBOLS

- Modified California (3" O.D.) sampler
- California (2.5" O.D.) sampler
- S.P.T. - Split spoon sampler
- Shelby Tube
- Continuous Core
- Bag Samples
- Grab Samples
- NR No Recovery

LINE TYPES

- ———— Solid - Layer Break
- – – – – – Dashed - Gradational or approximate layer break

GROUND-WATER SYMBOLS

- Groundwater level during drilling
- Stabilized groundwater level

ENGEO INCORPORATED
EXCELLENT SERVICE SINCE 1971

(S.P.T.) Number of blows of 140 lb. hammer falling 30" to drive a 2-inch O.D. (1-3/8 inch I.D.) sampler

* Unconfined compressive strength in tons/sq. ft., asterisk on log means determined by pocket penetrometer

ENGEO
Expect Excellence

LOG OF BORING S-1

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/2/2007
HOLE DEPTH: Approx. 25 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
0	0		SILTY CLAY (CL), dark brown, moist, trace sand				0.2	
5	1						0.1	
	2							
10	3		SILTY CLAY (CL), brown mottled with dark brown, moist, trace carbonates				0.2	
12			SILTY GRAVEL (GM), light brown, moist				0.2	
~13.5	4		CLAYEY SAND (SC), grayish brown, moist, trace medium to coarse gravel					
15	5						0.1	
19			SILTY CLAY (CL), brown mottled with reddish brown, wet, some medium to coarse gravel		▽		0.1	
20	6						0.0	
	7						0.1	
25			Bottom of boring at approximately 25 feet. Groundwater encountered at 21.7 feet.					

LOG - ENVIRONMENTAL 7584.P.001.01 RICKENBACKER LOGS.GPJ ENGEO INC.GDT 4/3/07

ENGEO
Expect Excellence

LOG OF BORING S-2

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/2/2007
HOLE DEPTH: Approx. 28 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			ASPHALT					
			CLAYEY SAND (SC), brown, moist, some gravel				0.0	
	1						0.1	
5								
	2						0.1	
10	3		SILTY CLAY (CL), brown mottled with dark brown, moist, trace carbonates				0.1	
	4		SILTY SAND (SM), reddish brown, moist				0.0	
15			CLAYEY SILT (ML), light brown, moist, some sand				0.1	
	5							
			SAND WITH GRAVEL (SP), brown, moist, trace carbonates				0.0	
20	6				▽			
			GRAVELLY SAND (SW), reddish brown, saturated					
	7						0.1	
25								

ENGEO
Expect Excellence

LOG OF BORING S-2

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/2/2007
HOLE DEPTH: Approx. 28 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
	8		GRAVELLY SAND (SW), reddish brown, saturated					
			Bottom of boring at approximately 28 feet. Groundwater encountered at 22 feet.					

ENGEO
Expect Excellence

LOG OF BORING S-3

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/1/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			CONCRETE moist, some gravel					
			SILTY CLAY (CL), light brown, moist, with sand				26.3	
							97.4	
	1						56.7	
			SILTY CLAY (CL), dark brown, moist					
5							20.1	
	2							
							17.3	
			SILTY CLAY (CL), brown mottled with dark brown, moist, trace carbonates					
10	3						3.6	
	4						3.1	
15			GRAVELLY SAND (SW), reddish brown, moist				2.1	
	5							
							2.1	
20	6							
							10.3	
	7							
			SILTY CLAY (CL), dark brown, wet, some medium to coarse gravel		▽		6.2	
25								

LOG - ENVIRONMENTAL 7584.P.001.01 RICKENBACKER LOGS.GPJ ENGEO INC.GDT 4/3/07

ENGEO
Expect Excellence

LOG OF BORING S-3

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/1/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			SILTY CLAY (CL), dark brown, wet, some medium to coarse gravel					
	8		CLAYEY SAND (SC), grayish brown mottled with dark brown, saturated				2.4	
30	9						1.6	
	10						0.2	
35			Bottom of boring at approximately 35 feet. Groundwater encountered at 24.5 feet.					

LOG - ENVIRONMENTAL 7584.P.001.01 RICKENBACKER LOGS.GPJ ENGEO INC.GDT 4/3/07

ENGEO
Expect Excellence

LOG OF BORING S-4

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/1/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			ASPHALT					
			SILTY CLAY (CL), dark brown, moist, some medium to coarse gravel				1.7	
			Trace carbonates					
5	1						2.2	
	2		SILTY CLAY (CL), brown mottled with dark brown, moist, some carbonates				.9	
10	3						0.6	
							0.5	
	4		GRAVELLY SAND (SW), brown, moist, with fine to medium gravel					
15	5						0.2	
			CLAYEY SILT (CL), brown, moist, some fine to coarse gravel				0.4	
20	6						1.1	
							0.1	
	7		SILTY CLAY (CL), grayish brown, moist					
25								

LOG - ENVIRONMENTAL 7584.P.001.01 RICKENBACKER LOGS.GPJ ENGEO INC.GDT 4/3/07

ENGEO
Expect Excellence

LOG OF BORING S-4

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/1/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			SILTY CLAY (CL), grayish brown, moist		▽		0.3	
	8						0.3	
			CLAYEY SAND (SC), grayish brown mottled with dark brown, saturated, some medium to coarse gravel					
30	9						0.4	
	10							
							0.2	
35			Bottom of boring at approximately 35 feet. Groundwater encountered at 26.1 feet.					

ENGEO
Expect Excellence

LOG OF BORING S-5

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/1/2007
HOLE DEPTH: Approx. 33 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			ASPHALT					
			SILTY CLAY (CL), dark brown, moist, trace sand				11.7	
5	1						4.7	
	2		SAND (SP), light brown, moist, some gravel				3.1	
10	3		SILTY CLAY (CL), light brown mottled with dark brown, moist, some carbonates				2.9	
	4						1.5	
15	5						0.4	
			GRAVELLY SAND (SW), brown, moist, with fine to medium gravel				1.1	
20	6						1.0	
			SILTY CLAY (CL), dark brown, saturated		▽		1.3	
25	7							

LOG - ENVIRONMENTAL 7584.P.001.01 RICKENBACKER LOGS.GPJ ENGEO INC.GDT 4/3/07

ENGEO
Expect Excellence

LOG OF BORING S-5

Environmental Assessment
224 Rickenbacker Circle
Livermore, California
7584.P.001.01

DATE DRILLED: 3/1/2007
HOLE DEPTH: Approx. 33 ft.
HOLE DIAMETER: 2.0 in.
SURF ELEV (FT-410): Approx. 410 ft.

LOGGED / REVIEWED BY: K. Krohn / SM
DRILLING CONTRACTOR: Vironex
DRILLING METHOD: Direct Push
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			SILTY CLAY (CL), dark brown, saturated				0.4	
	8						1.1	
	9		CLAYEY SAND (SC), grayish brown, saturated, some medium to coarse gravel					
30							0.9	
	10		Bottom of boring at approximately 33 feet. Groundwater encountered at 23.3 feet.					

ENGEO
Expect Excellence

LOG OF BORING 1-B1

Environmental Assessment
Rickenbacker Assement
Livermore, California
07584.100.101

DATE DRILLED: 11/27/2007
HOLE DEPTH: Approx. 97½ ft.
HOLE DIAMETER: 4.0 in.
SURF ELEV (FT-MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / JJT
DRILLING CONTRACTOR: RSI
DRILLING METHOD: Rotosonic
HAMMER TYPE: N/A

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			4 inches of Asphalt Concrete.				1.9	
			SILTY CLAY (CL), dark brown, moist				0.4	
	1						1.4	
							0	
5							0.7	
	2						2.3	
							1.8	
							1.7	
			Grades medium brown, trace to some fine-grained sand.				1.2	
10	3		Grades orange with black spots.				0.7	
			Grades with gray orange mottling.				0.8	
							0.3	
	4							
15								
	5						0.4	
			SANDY CLAY (SC), brown, moist, with subrounded fine gravel					
	6							
20								

LOG - ENVIRONMENTAL 07584100101 - RNB ADDITIONAL STUDIES.GPJ ENGEO INC.GDT 12/7/07

ENGEO
Expect Excellence

LOG OF BORING 1-B1

Environmental Assessment
Rickenbacker Assement
Livermore, California
07584.100.101

DATE DRILLED: 11/27/2007
HOLE DEPTH: Approx. 97½ ft.
HOLE DIAMETER: 4.0 in.
SURF ELEV (FT-MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / JJT
DRILLING CONTRACTOR: RSI
DRILLING METHOD: Rotosonic
HAMMER TYPE: N/A

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			4 inches of Asphalt Concrete.				1.9	
			SILTY CLAY (CL), dark brown, moist				0.4	
	1						1.4	
							0	
5							0.7	
	2						2.3	
							1.8	
							1.7	
			Grades medium brown, trace to some fine-grained sand.				1.2	
10	3		Grades orange with black spots.				0.7	
			Grades with gray orange mottling.				0.8	
							0.3	
	4							
15								
	5						0.4	
			SANDY CLAY (SC), brown, moist, with subrounded fine gravel					
	6							
20								

ENGEO
Expect Excellence

LOG OF BORING 1-B1

Environmental Assessment
Rickenbacker Assement
Livermore, California
07584.100.101

DATE DRILLED: 11/27/2007
HOLE DEPTH: Approx. 97½ ft.
HOLE DIAMETER: 4.0 in.
SURF ELEV (FT-MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / JJT
DRILLING CONTRACTOR: RSI
DRILLING METHOD: Rotosonic
HAMMER TYPE: N/A

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			Sandy Clay (continued)					
	7							
			SILTY CLAY (CL), gray, moist, some fine-grained sand				0.3	
25								
	8							
			SILTY SAND (SC), brownish yellow, moist, trace clay, some subrounded fine gravel				0	
	9							
30								
			Grades with subrounded fine to coarse gravel.					
	10							
35								
	11						0	
	12						0.2	
40								

LOG - ENVIRONMENTAL 07584100101 - RNB ADDITIONAL STUDIES.GPJ ENGEO INC.GDT 12/7/07

ENGEO
Expect Excellence

LOG OF BORING 1-B1

Environmental Assessment
Rickenbacker Assement
Livermore, California
07584.100.101

DATE DRILLED: 11/27/2007
HOLE DEPTH: Approx. 97½ ft.
HOLE DIAMETER: 4.0 in.
SURF ELEV (FT-MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / JJT
DRILLING CONTRACTOR: RSI
DRILLING METHOD: Rotosonic
HAMMER TYPE: N/A

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			Silty Sand (continued)					
	13		SILTY CLAY (CL), gray, moist, some subrounded fine to coarse gravel				0.3	
45							0.5	
	14							
	15		SILTY CLAY (CL), gray, moist, with fine-grained sand, some subrounded fine gravel					
50							0.5	
	16		SILTY CLAY (CL), light brown mottled with black, moist, trace fine-grained sand					
55								
	17							
	18		Grades with subrounded fine to coarse gravel.					
60								

LOG - ENVIRONMENTAL 07584100101 - RNB ADDITIONAL STUDIES.GPJ ENGEO INC.GDT 12/7/07

ENGEO
Expect Excellence

LOG OF BORING 1-B1

Environmental Assessment
Rickenbacker Assement
Livermore, California
07584.100.101

DATE DRILLED: 11/27/2007
HOLE DEPTH: Approx. 97½ ft.
HOLE DIAMETER: 4.0 in.
SURF ELEV (FT-MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / JJT
DRILLING CONTRACTOR: RSI
DRILLING METHOD: Rotosonic
HAMMER TYPE: N/A

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
	19		GRAVEL (GM), grayish black, wet, with medium- to coarse-grained sand, trace silt, with subrounded coarse gravel				0.1	
65	20						0.1	
	21		Grades trace to some clay.					
70	22		SAND (SP), brown, wet, medium-grained sand, clay, trace subrounded to rounded fine gravel.				0.3	
			SILTY CLAY (CL), brown, moist, with fine- to coarse-grained sand, some subrounded fine gravel Grades to trace gravel and some sand.					
75	23		GRAVEL (GM), grayish brown, wet, subrounded fine gravel, with fine- to coarse-grained sand, with silt					
	24		SAND (SM), brown, wet, medium-grained sand, with subrounded fine gravel, some silt				0	
80								

ENGEO
Expect Excellence

LOG OF BORING 1-B1

Environmental Assessment
Rickenbacker Assement
Livermore, California
07584.100.101

DATE DRILLED: 11/27/2007
HOLE DEPTH: Approx. 97½ ft.
HOLE DIAMETER: 4.0 in.
SURF ELEV (FT-MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / JJT
DRILLING CONTRACTOR: RSI
DRILLING METHOD: Rotosonic
HAMMER TYPE: N/A

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx
			GRAVEL (GM), brown, wet, subrounded coarse gravel, some silt, some clay					
	25		SAND (SP), brown, saturated, medium-grained sand, trace silt				0	
			Grades to dark olive.					
85	26							
	27							
90								
	28						0.2	
			Grades fine to coarse subrounded gravel.					
95	29							
							1.3	
			Bottom of boring at approximately 97 1/2 feet. Ground water measured at approximately 42 feet.					

LOG - ENVIRONMENTAL 07584100101 - RNB ADDITIONAL STUDIES.GPJ ENGEO INC.GDT 12/7/07

LOG OF BORING MW-B1

Well Installation
Rickenbacker Assesment
Livermore, California
7584.100.101

DATE DRILLED: 12/18/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: J. Preece / SM
DRILLING CONTRACTOR: Gregg Drilling & Testing
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx	Well Construction
			Asphalt				17		
			WELL GRADED SAND WITH GRAVEL (SW), gray, very dense, moist, well graded						
			SILTY CLAY (CL), dark brown, stiff, moist, slightly porous				10*		
	1		SILTY CLAY (CH), dark gray, stiff, moist						
			Grades to dark olive brown.						
5							0.4		
	2								
			SILTY GRAVEL (GM), light olive brown to light olive gray, loose, moist to dry, fine- to coarse-grained sand, and fine gravel						
10	3						0.7		
	4								
15							0.4		
	5								
	6								
20									

0.01-inch slot width. No. 2/16 sand filter pack.

LOG - ENVIRONMENTAL + WELL MONITOR WELLS.GPJ ENGEO INC.GDT 2/15/08

LOG OF BORING MW-B1

Well Installation
Rickenbacker Assesment
Livermore, California
7584.100.101

DATE DRILLED: 12/18/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: J. Preece / SM
DRILLING CONTRACTOR: Gregg Drilling & Testing
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx	Well Construction
			SILTY CLAY (ML), light orange mottled with light gray, stiff, moist to wet, trace fine-grained sand						
	7								
			SILTY SAND (SM), light orange mottled with light gray, stiff, moist to wet, trace fine-grained sand		▼				
25									
	8								
			SILTY CLAY (ML), light orange mottled with light gray, stiff, saturated						
	9								
30									
			SILTY SAND (SM), light orange mottled with light gray, stiff, saturated, trace fine-grained sand						
	10								
35			Bottom of boring at approximately 35 feet.						

LOG - ENVIRONMENTAL + WELL MONITOR WELLS.GPJ ENGEO INC.GDT 2/15/08

LOG OF BORING MW-B2

ENGEO — Expect Excellence

Well Installation
Rickenbacker Assesment
Livermore, California
7584.100.101

DATE DRILLED: 12/18/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / SM
DRILLING CONTRACTOR: Gregg Drilling & Testing
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx	Well Construction
			Asphalt						
			WELL GRADED SAND WITH GRAVEL (SW), gray, very dense, moist, well graded						
			SILTY CLAY (CL), dark orangeish brown mottled with grayish brown, stiff, moist, trace fine-grained sand						
	1								
5			Grades to dark brown, some fine-grained sand, some fine subrounded gravel.				0.1		
	2								
			Grades to light brown with orange and black mottling.						
10	3						0.0		
	4								0.01-inch slot width. No. 2/16 sand filter pack.
15							0.0		
	5								
			SILTY GRAVEL (GM), light olive brown and brownish gray, loose to medium dense, moist, with fine- to medium-grained sand, and subrounded fine gravel						
20	6								

LOG - ENVIRONMENTAL + WELL MONITOR WELLS.GPJ ENGEO INC.GDT 2/15/08

LOG OF BORING MW-B2

Well Installation
Rickenbacker Assesment
Livermore, California
7584.100.101

DATE DRILLED: 12/18/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / SM
DRILLING CONTRACTOR: Gregg Drilling & Testing
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx	Well Construction
							0.1		
			SILTY CLAY (CL), brown mottled with orangeish gray, stiff, moist to saturated, trace fine-grained sand						
	7								
			Grades to some fine grained sand and fine grained, subrounded gravel.						
25							0.0		
	8								
			SILTY GRAVEL (GM), grayish brown, loose to medium dense, saturated, with fine- to medium-grained sand, and subrounded fine gravel						
	9								
30							0.0		
	10								
							0.0		
35			Bottom of boring at approximately 35 feet.						

LOG - ENVIRONMENTAL + WELL MONITOR WELLS.GPJ ENGEO INC.GDT 2/15/08

LOG OF BORING MW-B3

Well Installation
Rickenbacker Assesment
Livermore, California
7584.100.101

DATE DRILLED: 12/19/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / SM
DRILLING CONTRACTOR: Gregg Drilling & Testing
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx	Well Construction
			Asphalt						
			WELL GRADED SAND WITH GRAVEL (SW), gray, very dense, moist, well graded				0.0		
			SILTY CLAY (CL), dark brown, stiff, moist, trace fine-grained sand						
	1								
5							0.0		
	2								
			SILTY SAND (SM), grayish brown to olive brown, medium dense, moist, some clay						
10	3						0.0		
	4								
			SILTY GRAVEL (GP), olive brown to grayish brown, medium dense, moist to saturated, fine- to coarse-grained sand, and fine gravel						0.01-inch slot width. No. 2/16 sand filter pack.
15							0.0		
	5								
	6								
20									

LOG - ENVIRONMENTAL + WELL MONITOR WELLS.GPJ ENGEO INC.GDT 2/15/08

LOG OF BORING MW-B3

Well Installation
Rickenbacker Assesment
Livermore, California
7584.100.101

DATE DRILLED: 12/19/2007
HOLE DEPTH: Approx. 35 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 410 ft.

LOGGED / REVIEWED BY: R. Gandolfo / SM
DRILLING CONTRACTOR: Gregg Drilling & Testing
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	PID (ppm)	Unconfined Strength (tsf) *field approx	Well Construction
			SILTY GRAVEL (GP), olive brown to grayish brown, medium dense, moist to saturated, fine- to coarse-grained sand, and fine gravel				0.0		
	7								
25							0.0		
	8								
			SILTY CLAY (CL), dark olive brown mottled with orangeish brown, stiff, saturated, some fine-grained sand, and fine gravel						
	9								
30							0.0		
	10								
			SILTY GRAVEL (GW), olive brown to grayish brown, medium dense, saturated, fine- to coarse-grained sand, and fine gravel				0.0		
35									
			Bottom of boring at approximately 35 feet.						

LOG - ENVIRONMENTAL + WELL MONITOR WELLS.GPJ ENGEO INC.GDT 2/15/08

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

BORING LOG

BOREHOLE NO. **SVE-1**

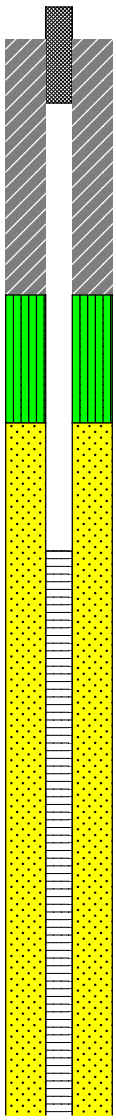
TOTAL DEPTH: **20'**

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.



Advanced
GeoEnvironmental, Inc.
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

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'

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

BORING LOG

BOREHOLE NO.: **SVE-2**

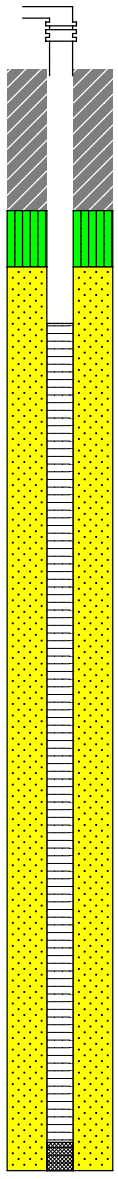
TOTAL DEPTH: **20'**

Project:	METRO VALLEY CLEANERS	Drilling Co.:	Gregg Drilling
Site Location:	224 RICKENBACKER CIRCLE LIVERMORE CALIFORNIA	Rig/Auger Type:	RHINO - M5T / 8.25" HSA
		Logged By:	A. DEICKE
		Reviewed By:	W. LITTLE
Project No.:	AGE-NC-08-1640	Date(s) Drilled:	07 December 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							Manifolded to SVE 3" piping network - 1/19/10
							Cement grout seal from 1' to 3' bsg.
							Bentonite seal from 3' to 4' bsg.
-5	SVE-2-5	--	0		ML: green-brown SILT, dry, no odor.		
							#3 Monterey 4' to 20' bsg.
-10	Insufficient Recovery	--	0		ML: dark brown SILT, dry, no odor.		
							Screened interval from 5' to 20' bsg. 0.030" Screen
-15	SVE-2-15	--	0		GP: rock, sand, GRAVEL, little cohesion, dry, no odor.		
					GP: rock, sand, GRAVEL, little cohesion, dry, no odor.		
-20	SVE-2-20	--	0				Well plug at 20'



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

BORING LOG

BOREHOLE NO.: **SVE-3**

TOTAL DEPTH: **20'**

Project:	METRO VALLEY CLEANERS	Drilling Co.:	Gregg Drilling
Site Location:	224 RICKENBACKER CIRCLE LIVERMORE CALIFORNIA	Rig/Auger Type:	RHINO - M5T / 8.25" HSA
		Logged By:	A. DEICKE
		Reviewed By:	W. LITTLE
Project No.:	AGE-NC-08-1640	Date(s) Drilled:	07 December 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							Manifolded to SVE 3" piping network - 1/19/10
							Cement grout seal from 1' to 3' bsg.
							Bentonite seal from 3' to 4' bsg.
-5	SVE-3-5	--	0		ML: green-brown SILT, dry, no odor.		
					ML: green-brown SILT, dry, no odor.		#3 Monterey 4' to 20' bsg.
-10	SVE-3-10	--	0		GP: rock, sand, GRAVEL, no cohesion, dry, no odor.		
							Screened interval from 5' to 20' bsg. 0.030" Screen
-15	SVE-3-15	--	0		GP: rock, sand, GRAVEL, no cohesion, dry, no odor.		
					GP: rock, sand, GRAVEL, no cohesion, dry, no odor.		
-20	SVE-3-20	--	0				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-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**

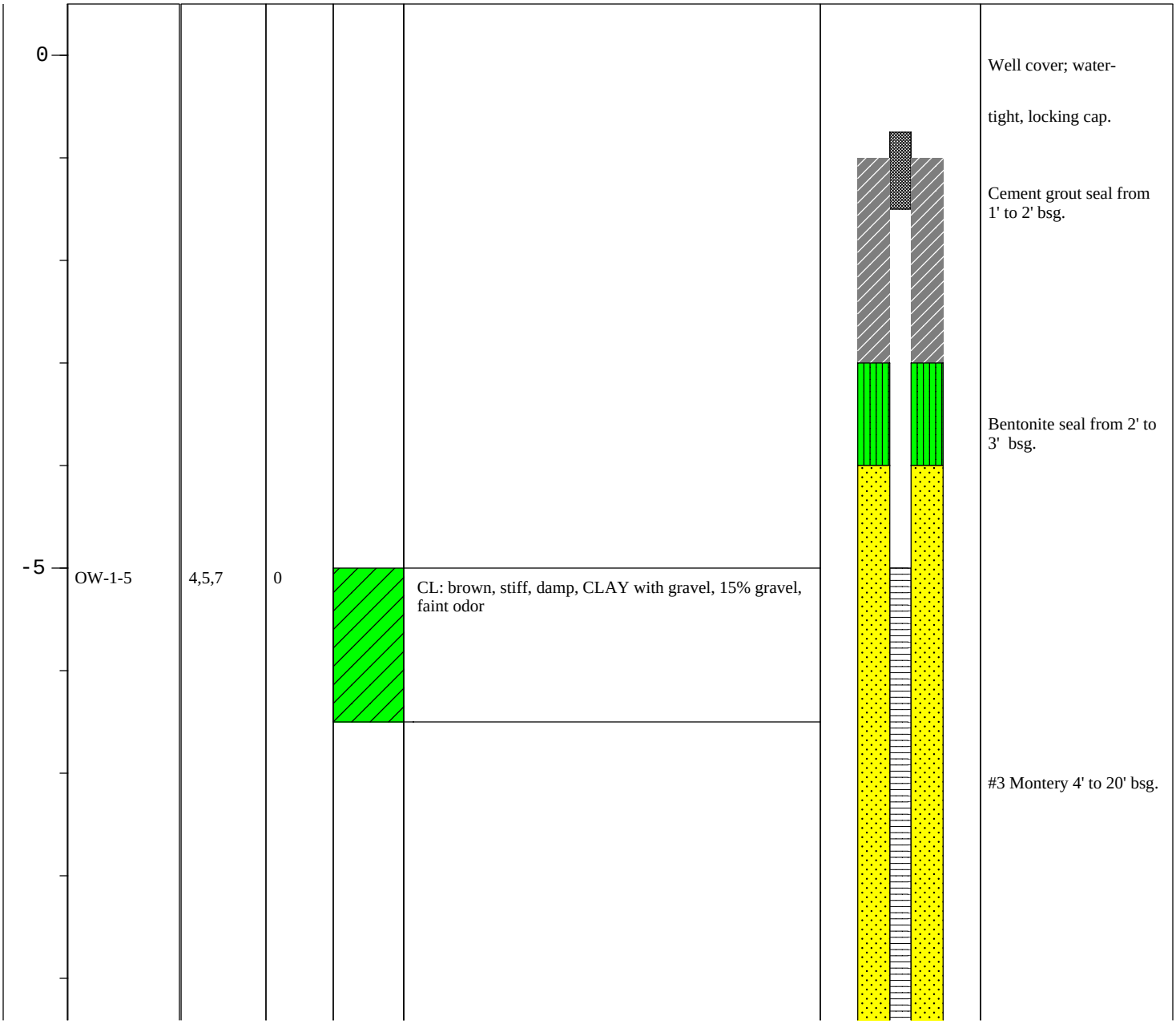
TOTAL DEPTH: **20'**

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		



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

BORING LOG

BOREHOLE NO.: **OW-2**

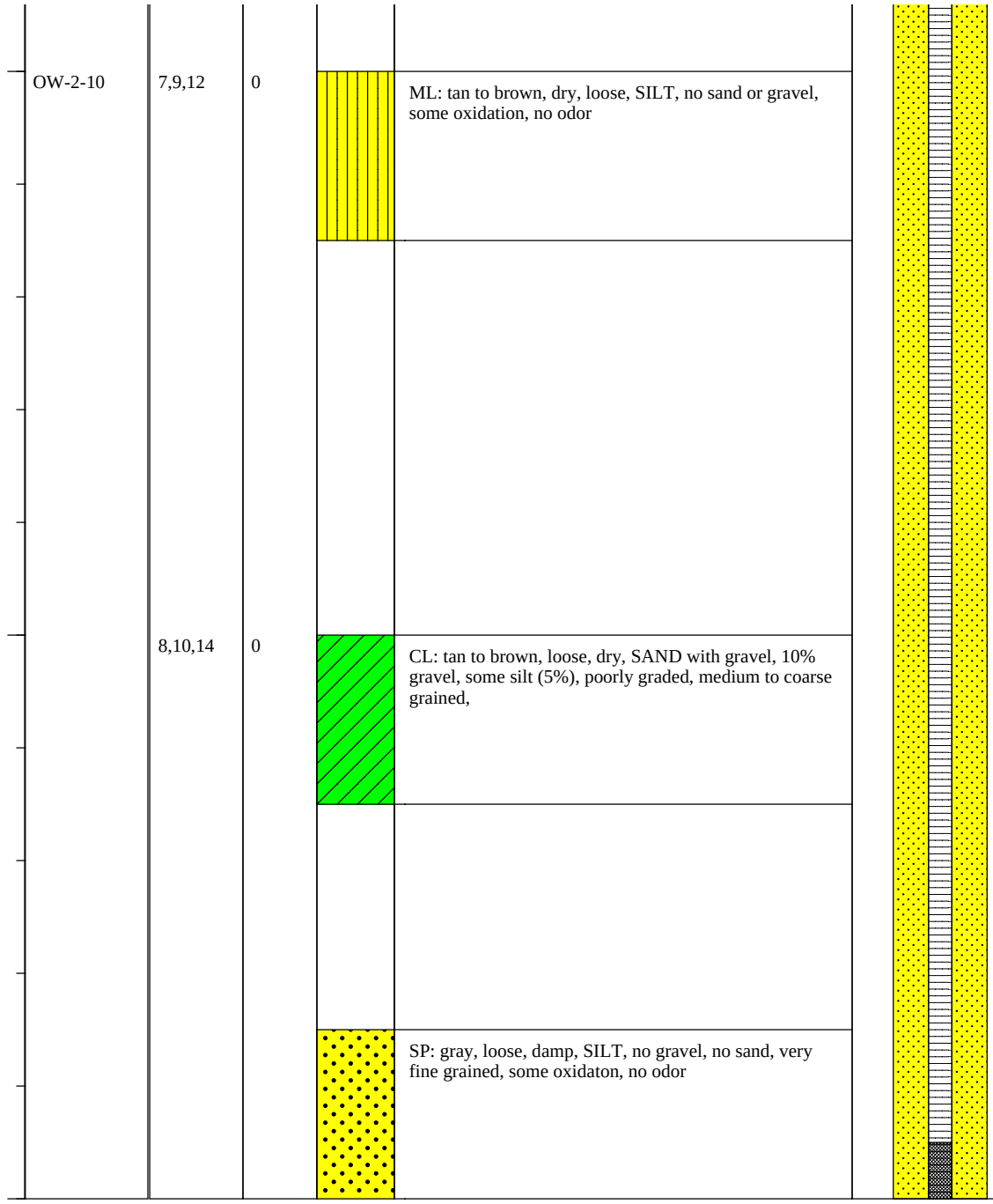
TOTAL DEPTH: **20'**

Project: METRO VALLEY CLEANERS

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'



APPENDIX E

APPENDIX E

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

Assumptions:

1) Utilizing field measurements and analytical data collected from air samples between 22 February 2010 and 21 June 2010, the volume and mass of extracted gasoline hydrocarbons at the site can be approximated
2) one gallon of tetrachloroethene (PCE) weighs approximately 13.6 pounds (lbs)

The PCE volume-mass removed during the operating period can be calculated using the following equation:

M = C x Q x t

M = cumulative mass recovered (kg)
C = average vapor concentration (kg/m^3)
Q = extraction flow rate (m^3/hr)
t = operational perid (hrs)

Constants and Conversions:	
1µg/l =	0.000001 kg/m^3
1 f^3 =	0.0283168 m^3
1 hr =	60 min
1 kg =	2.2046 lbs.
1 lb. of PCE =	0.074 gallons of PCE

M(kg) = (C x 0.000001 kg/m^3) x (Q f^3/min x 60 min/hr x 0.0283168 m^3/ft^3) x t(hrs)

Operational Period		Avgerage Flow		PCE Concentration		PCE Extracted		
Time Interval	Hours	scfm	m^3/hr	µg/l	kg/m^3	kg	lbs	gallons
22 February 2010 - 09 March 2010	356	126	214.075008	34.72	0.00003472	**2.6460**	**5.8335**	**0.4317**
09 March 2010 - 21 June 2010	1,594	95	161.40576	3.00	0.000003	**0.7718**	**1.7016**	**0.1259**
					PCE Removed:	**3.42**	**7.54**	**0.56**

APPENDIX F

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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

August 12, 2010

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

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

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

Subject: Work Plan Approval for 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 case file for the above referenced site including the recently submitted document entitled, "*Soil Vapor Intrusion Work Plan – July 2010,*" dated July 23, 2010 (Work Plan). The Work Plan, which was prepared on your behalf by Advanced GeoEnvironmental, Inc., presents plans to collect soil vapor samples at three locations to evaluate the residual chlorinated hydrocarbon mass and to assess potential risks from vapor intrusion.

The proposed scope of work is acceptable and may be implemented as proposed. We request that you address the following technical comments, perform the proposed work and send us the reports described below.

TECHNICAL REPORT REQUEST

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

- **December 9, 2010** – Soil Vapor Sampling Report

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

Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o, ou, email=jerry.wickham@acgov.org, c=US
Date: 2010.08.12 17:01:52 -07'00'

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

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 Rickenbacker Circle
Livermore, California, 94551

Coordinates Source _____ ft. Accuracy∀ _____ ft.
LAT: _____ ft. LONG: _____ ft.
APN 099-1316-032-00

CLIENT
Name Robert Strong
Address 500 Bollinger Canyon Way #A4 Phone 925-250-2894
City San Ramon Zip 94582

APPLICANT
Name Advanced GeoEnvironmental Inc.
Email dvillanueva@advgeoenv.com Fax 209-467-1118
Address 837 Shaw Road Phone 209-467-1006
City Stockton Zip 95215

TYPE OF PROJECT:

Well Construction	__	Geotechnical Investigation	__
Well Destruction	__	Contamination Investigation	x
Cathodic Protection	__	Other	__

PROPOSED WELL USE:

Domestic	__	Irrigation	__
Municipal	__	Remediation	__
Industrial	__	Groundwater Monitoring	
Dewatering	__	Other Temporary Vapor Borings	

DRILLING METHOD:

Mud Rotary	__	Air Rotary	__	Hollow Stem Auger	__
Cable Tool	__	Direct Push	x	Other	__

DRILLING COMPANY Advanced GeoEnvironmental Inc.

DRILLER'S LICENSE NO. C57-680227

WELL SPECIFICATIONS:
Drill Hole Diameter _____ in. Maximum
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

SOIL BORINGS:
Number of Borings 3 Maximum
Hole Diameter 1.25" in. Depth 5 ft.

ESTIMATED STARTING DATE September 2010
ESTIMATED COMPLETION DATE September 2010

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

APPLICANT'S SIGNATURE _____ Date 08/25/2010

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 2010075
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.
4. **Notify Zone 7 at least 24 hours before the start of work.**

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 8/27/10
Wyman Hong

Revised: January 4, 2010

APPENDIX G

Soil Vapor Intrusion Investigation Procedures
METRO VALLEY CLEANERS
224 Rickenbacker Circle, Livermore, California

Soil probe boring advancement and sampling procedures were previously outlined in the AGE-prepared *Soil Vapor Intrusion Work Plan - July 2010*, dated 23 July 2010. The scope of work was approved by Alameda County Environmental Health (ACEH), by letter dated 12 August 2010 (Appendix F).

SOIL VAPOR BORING ADVANCEMENT

On 02 September 2010, three soil vapor borings (V-1 through V-3) were advanced at the site utilizing a van-mounted Geoprobe 5400 direct push probing unit. Boring V-1 was advanced just outside the on-site building, approximately 10 feet from boring S-2. Boring V-2 was advanced near th former location of the dry-cleaning machines approximately 10 feet from soil vapor sampling point SG-5. Boring V-3 was advanced northeast of the former dry-cleaning machines, approximately 5 feet east of soil vapor extraction well SVE-3 (Figure 2). The vapor borings were advanced using a hydraulic hammer to drive 1.25-inch probing rods to a depth of approximately 5 feet below surface grade (bsg). A Copy of the ACEH/Zone 7 Water Agency drill permit is included in Appendix F.

SOIL VAPOR SAMPLE COLLECTION AND ANALYSIS

Soil vapor samples were collected from borings V-1 through V-3 between 4 and 5 feet bsg using a Geoprobe soil-vapor assembly. An expendable vapor point was placed into a point holder at the bottom of an assembly of 1.25-inch diameter hollow rods. The assembly was then advanced to the specified depth and retracted approximately twelve inches in order to disengage the expendable point and expose a column of strata from which soil-vapor could be extracted. Single use, ¼-inch diameter disposable polyethylene tubing was then attached to a tubing adapter equipped with an O-ring to ensure a vacuum-tight seal. The adapter assembly was lowered through the center of the hollow drive rods to the specified depth and secured by threading into the expendable vapor point holder. Sampling procedures followed a 20 minute wait time to allow for subsurface conditions to equilibrate.

Above ground, the surface around the soil-vapor sampler was sealed with a bentonite sealant to prevent ambient air intrusion. To ensure that a reliable soil vapor sample was collected with no ambient air breakthrough down the probe rod, AGE erected a plastic shroud over the probe rod. A metal bowl placed under the shroud, was filled with cotton balls that had been saturated with an appropriate amount of IPA. The liquid alcohol was exposed tot he air inside the shroud, allowing the alcohol to volatilize and be in contact with the sampling equipment during operation.

The end of the polyethylene tubing, from the soil-vapor probe, was attached to a dedicated sampling inlet manifold using a compression fitting. The sampling inlet manifold was constructed of vapor-tight stainless steel: a particulate filter (5 micron), a calibrated flow restricter (less than 200 milliliters per minute), a tee fitting, two vacuum gauges and connections for both purge and sampling canisters. A purge canister was attached to the manifold at the tee fitting and the sample canister was attached to the end of the sampling manifold assembly. Before attaching the manifold to the polyethylene tubing, a 10 minute vacuum test was conducted on the purge canister and manifold assembly.

The purge canister and manifold valves were opened to purge the exposed soil column, through the sampling tubing and inlet manifold until approximately three system volumes of soil vapor or ambient air was evacuated into the purge canister. Opening the purge canister and the manifold valves creates a decreased volume that is proportional to the volume purged through the line. Once the desired volume was purged, both the canister and the manifold valves were closed. The sample canister valve was then opened and the initial pressure was recorded. However due to a highly restricted flow, potentially due to tight subsurface conditions, sufficient volume could not be collected into the sample canister, from any of the sample locations. AGE collected duplicate soil vapor samples from each boring, using Tedlar bags.

The end of the polyethylene tubing was detached from the sampling inlet manifold, and then attached by a two-way inlet port to a Tedlar bag placed inside an SKC Vac-U-Chamber (lung box) vacuum chamber. A vacuum pump attached to a purge port of the vacuum chamber was then used to purge the exposed soil column, through the sampling tubing and inlet port, until approximately three volumes of soil vapor or ambient air was evacuated through the sampling system. The vacuum chamber was sealed and the vacuum pump attached to a vacuum outlet port of the chamber. Vacuum was applied to the chamber to create negative pressure around the Tedlar bag, which inflated and allowed the soil vapor sample to enter directly into the bag via the inlet port. When the sample was collected, the negative pressure in the chamber was reduced and the sample bag was sealed, labeled, logged on a chain of custody form, and placed into a dry cooler (room temperature). All of the collected soil-vapor samples were delivered to Cal Tech Environmental Laboratories (CTEL), a State of California Department of Public Heath (CDPH)-certified analytical laboratory in Paramount, California. Samples were analyzed for:

- Volatile organic compounds in accordance with Method TO15; and
- IPA (tracer) in accordance with EPA Method TO15.

EQUIPMENT DECONTAMINATION

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

BOREHOLE ABANDONMENT

Following soil boring activities, each borehole was permanently sealed to prevent the vertical migration of contaminants. Under EHD oversight, the boreholes were backfilled with cement slurry from the total depth to surface grade.

APPENDIX H

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

ANALYTICAL RESULTS*

CTEL Project No: CT214-1009032
Client Name: Advanced Geo Environmental, Inc.
837 Shaw Road
Stockton, CA 95215
Phone:(209) 467-1006
Fax: (209) 467-1118
Attention: Mr. Bill Little

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

Date Sampled: 09/02/10 @ 11:16 am
Date Received: 09/03/10 @ 10:00 am
Date Analyzed 09/03/10
Matrix: Air

Laboratory ID:	1009-032-1	1009-032-2	1009-032-3	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	V-1A	V-2A	V-3A			
Dilution	1	1	1			
Dichlorodifluoromethane	ND	ND	ND	TO-15	ug/m3	2.5
Chloromethane	ND	ND	ND	TO-15	ug/m3	2.5
Vinyl Chloride	ND	ND	ND	TO-15	ug/m3	1.0
Bromomethane	ND	ND	ND	TO-15	ug/m3	2.5
Chloroethane	ND	ND	ND	TO-15	ug/m3	2.5
Trichlorofluoromethane	ND	ND	ND	TO-15	ug/m3	2.5
Iodomethane	ND	ND	ND	TO-15	ug/m3	2.5
Acetone	ND	ND	ND	TO-15	ug/m3	5.0
1,1-Dichloroethene	ND	ND	ND	TO-15	ug/m3	2.5
t-Butyl Alcohol (TBA)	ND	ND	ND	TO-15	ug/m3	5.0
Methylene Chloride	ND	ND	ND	TO-15	ug/m3	5.0
Freon 113	ND	ND	ND	TO-15	ug/m3	5.0
Carbon disulfide	ND	ND	ND	TO-15	ug/m3	2.5
trans,1,2-Dichloroethene	ND	ND	ND	TO-15	ug/m3	2.5
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	TO-15	ug/m3	1.0
1,1-Dichloroethane	ND	ND	ND	TO-15	ug/m3	2.5
Vinyl acetate	ND	ND	ND	TO-15	ug/m3	2.5
Diisopropyl Ether (DIPE)	ND	ND	ND	TO-15	ug/m3	2.5
Methyl Ethyl Ketone	ND	ND	ND	TO-15	ug/m3	5.0
cis,1,2-Dichloroethene	ND	ND	ND	TO-15	ug/m3	2.5
Bromochloromethane	ND	ND	ND	TO-15	ug/m3	2.5
Chloroform	ND	ND	ND	TO-15	ug/m3	2.5
2,2-Dichloropropane	ND	ND	ND	TO-15	ug/m3	2.5
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	TO-15	ug/m3	2.5
1,1,1-Trichloroethane	ND	ND	ND	TO-15	ug/m3	2.5
1,2-Dichloroethane	ND	ND	ND	TO-15	ug/m3	2.5
1,1-Dichloropropene	ND	ND	ND	TO-15	ug/m3	2.5
Carbon Tetrachloride	ND	ND	ND	TO-15	ug/m3	2.5
Benzene	ND	ND	ND	TO-15	ug/m3	2.5
t-Amyl Methyl Ether (TAME)	ND	ND	ND	TO-15	ug/m3	2.5
1,2-Dichloropropane	ND	ND	ND	TO-15	ug/m3	2.5
Trichloroethene	ND	ND	ND	TO-15	ug/m3	2.5
Dibromomethane	ND	ND	ND	TO-15	ug/m3	2.5
Bromodichloromethane	ND	ND	ND	TO-15	ug/m3	2.5
2-Chloroethylvinylether	ND	ND	ND	TO-15	ug/m3	2.5
cis,1,3-Dichloropropene	ND	ND	ND	TO-15	ug/m3	2.5
4-Methyl-2-pentanone(MI)	ND	ND	ND	TO-15	ug/m3	2.5
trans,1,3-Dichloropropene	ND	ND	ND	TO-15	ug/m3	2.5
Toluene	ND	ND	ND	TO-15	ug/m3	2.5
1,1,2-Trichloroethane	ND	ND	ND	TO-15	ug/m3	2.5

(Continued)

CTEL Project No: CT214-1009032

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

Laboratory ID: / **Client Sample ID:**	1009-032-1 V-1A	1009-032-2 V-2A	1009-032-3 V-3A	**Method**	**Units**	**Detection Limit**
1,2-Dibromoethane(EDB)	ND	ND	ND	TO-15	ug/m3	2.5
1,3-Dichloropropane	ND	ND	ND	TO-15	ug/m3	2.5
Dibromochloromethane	ND	ND	ND	TO-15	ug/m3	2.5
2-Hexanone	ND	ND	ND	TO-15	ug/m3	5.0
Tetrachloroethene	ND	ND	ND	TO-15	ug/m3	2.5
Chlorobenzene	ND	ND	ND	TO-15	ug/m3	2.5
1,1,1,2-Tetrachloroethane	ND	ND	ND	TO-15	ug/m3	2.5
Ethylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
m.p-Xylene	ND	ND	ND	TO-15	ug/m3	2.5
Bromoform	ND	ND	ND	TO-15	ug/m3	2.5
Styrene	ND	ND	ND	TO-15	ug/m3	2.5
o-Xylene	ND	ND	ND	TO-15	ug/m3	2.5
1,1,2,2-Tetrachloroethane	ND	ND	ND	TO-15	ug/m3	2.5
1,2,3-Trichloropropane	ND	ND	ND	TO-15	ug/m3	2.5
Isopropylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
Bromobenzene	ND	ND	ND	TO-15	ug/m3	2.5
2-Chlorotoluene	ND	ND	ND	TO-15	ug/m3	2.5
n-Propylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
4-Chlorotoluene	ND	ND	ND	TO-15	ug/m3	2.5
1,3,5-Trimethylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
tert-Butylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
1,2,4-Trimethylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
sec-Butylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
1,3-Dichlorobenzene	ND	ND	ND	TO-15	ug/m3	2.5
1,4-Dichlorobenzene	ND	ND	ND	TO-15	ug/m3	2.5
p-Isopropyltoluene	ND	ND	ND	TO-15	ug/m3	2.5
1,2-Dichlorobenzene	ND	ND	ND	TO-15	ug/m3	2.5
n-Butylbenzene	ND	ND	ND	TO-15	ug/m3	2.5
1,2 Dibromo-3-Chloropropane	ND	ND	ND	TO-15	ug/m3	2.5
1,2,4-Trichlorobenzene	ND	ND	ND	TO-15	ug/m3	2.5
Naphthalene	ND	ND	ND	TO-15	ug/m3	2.5
1,2,3-Trichlorobenzene	ND	ND	ND	TO-15	ug/m3	2.5
Hexachlorobutadiene	ND	ND	ND	TO-15	ug/m3	2.5
IPA	ND	ND	ND	TO-15	ug/m3	2.5

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	94	96	97	70-130
1,2 Dichloromethaned4	115	119	105	70-130
Toluene-d8	100	104	94	70-130
Bromofluorobenzene	111	112	111	70-130

Greg Tejirian
Laboratory Director

*The results are base upon the sample received.

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

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

QA/QC Report

Method: 8260B / TO15

Matrix: Water / Air

Date Analyzed: 9/3/2010

Date Extracted: 9/3/2010

Perimeters	Conc. ug/L		Spike Added	Recovery %		Control Limits		RPD
	MS	MSD		MS	MSD	Rec.	RPD	
1,1-Dichloroethene	44	45	50	88	90	70-130	20	2
Benzene	47	47	50	94	94	70-130	20	0
Trichloroethene	52	51	50	104	102	70-130	20	2
Toluene	49	51	50	98	102	70-130	20	4
Chlorobenzene	47	48	50	94	96	70-130	20	2
m,p-Xylenes	96	96	100	96	96	70-130	20	0

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

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
☐ _____

09-032

Date: 9.2.10 Page 1 of 1

Project Name: Metro Valley Cleaners
Client:
Invoice to: ☒ AGE ☐ Client

Project Manager: William Little
Sampler (initials & signature): REN Rebecca Mathe
Lab Project No.:

Sample ID/Location/Description	Date	Time	Matrix	Number	Notes	Analysis Required: VOCs (TO-15)	Analysis Required: IPA (TO-15)
V-1dup	9.2.10	0947	A	1	HOLD REN	~~X~~	~~X~~
V-1a	9.2.10	1116	A	1		X	X
V-2a	9.2.10	1319	A	1		X	X
V-3a	9.2.10	1348	A	1		X	X

Relinquished by:	Date:	Time:	Laboratory:		
Rebecca Mathe	9.2.10	1700	Cal Tech		
Courier: On Trac			Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: R. Taylor	Date: 9-3-10	Time: 10:00

Requested Turn Around Time (circle): 24 hours 48 hours 72 hours 5 days (standard) Other:_____

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

Special Instructions to lab:

IPA = Tracer Compound

I hereby authorize the performance of the above indicated work.

Rebecca Mathe

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

Global ID:

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
☐ _____

09-032A

CHAIN OF CUSTODY RECORD

Date: 9.2.10 Page 1 of 1

Project Name: Metro Valley Cleaners
Client:
Invoice to: ☒ AGE ☐ Client

Project Manager: William Little
Sampler (initials & signature): REN Rebecca Nakel
Lab Project No.:

Analysis Required

Sample ID/Location/Description	Date	Time	Matrix	Number	Initial Volume	Notes	Final Volume	VOCs (TO-15)	IPA (TO-15)
V-1	9.2.10	1016	A	1	-28 in Hg		-27 in Hg	X	X
V-2	9.2.10	1218	A	1	-27 in Hg		-26 in Hg	X	X
V-3	9.2.10	1412	A	1	-29 in Hg		-28 in Hg	X	X
Purge	9.2.10	N/A	A	1	REN ~~-20 in Hg~~ -22 in Hg		-14 in Hg	X	X

Relinquished by:	Date:	Time:	Laboratory:		
Rebecca Nakel	9.2.10	1700	Cal Tech		
Courier: On Trac			Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: R. Taylor	Date: 9-3-10	Time: 10:00

Requested Turn Around Time (circle): 24 hours 48 hours 72 hours 5 days (standard) Other:_____

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

Special Instructions to lab:
2 Shipment Containers
* IPA = Tracer Compound

I hereby authorize the performance of the above indicated work.
Rebecca Nakel

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

Global ID:

APPENDIX I

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-1 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	16000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-2 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	15000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-3 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	38000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-4 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	11000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-5 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	860000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-6 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	25000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-7 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	5700
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-8 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	4300
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-9 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	4100
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-10 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.1
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-11 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	64
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	10
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007. Laboratory duplicate Sample
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	8.7
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-13 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1.3
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-14 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-15 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1.9
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-16 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	15
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Tetrachloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	9.5E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	2.3E+02	-	
Leaching:	mg/kg	7.0E-01	-	
Lowest Soil ESL:	**mg/kg**	**7.0E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	4.2E+02	-	
Impacts to Aquatic Habitats:	µg/L	1.2E+02	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	6.9E-01	Table E-3
Shallow Soil Gas:	µg/m^3	1.4E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Tetrachloroethene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral	5.4E-01	$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation	2.1E-02	$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	1.0E-02	mg/kg-day	Table J
Reference Dose - inhalation	1.1E-01	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	120	ug/L	Table F-2a
Marine Chronic Goal	225	ug/L	Table F-2b
Estuary Chronic Goal	120	ug/L	Table F-2c
*Bioaccumulation Goal	8.85	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	166	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	1.6E+02	cm^3/g	Table J
Diffusivity in air	7.2E-02	cm^2/s	Table J
Diffusivity in water	8.2E-06	cm^2/s	Table J
Solubility (water)	2.0E+02	mg/L	Table J
Henry's Law Constant (H)	1.8E-02	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	7.5E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	
Alimentary Tract	X
Cardiovascular	
Developmental	
Endocrine	
Eye	
Hematologic	
Immune	
Kidney	
Nervous	X
Reproductive	
Respiratory	
Skin	
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-1 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	150
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-2 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	480
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-3 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	18000
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-4 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1200
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-5 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	4600000
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-6 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1300
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-7 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	3000
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-8 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	310
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-9 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	3100
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-10 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.86
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-11 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.83
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.82
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007. Laboratory Duplicate Sample.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.78
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-13 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.55
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-14 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.87
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-15 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.77
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-16 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	22
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Trichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.1E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	8.2E+02	-	
Leaching:	mg/kg	4.6E-01	-	
Lowest Soil ESL:	**mg/kg**	**4.6E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	3.6E+02	-	
Gross Contamination:	µg/L	3.1E+02	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+00	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Trichloroethene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral	1.3E-02	$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation	7.0E-03	$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	3.0E-04	mg/kg-day	Table J
Reference Dose - inhalation	1.7E-01	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	360	ug/L	Table F-2a
Marine Chronic Goal	2190	ug/L	Table F-2b
Estuary Chronic Goal	360	ug/L	Table F-2c
*Bioaccumulation Goal	81	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	131	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	1.7E+02	cm^3/g	Table J
Diffusivity in air	7.9E-02	cm^2/s	Table J
Diffusivity in water	9.1E-06	cm^2/s	Table J
Solubility (water)	1.1E+03	mg/L	Table J
Henry's Law Constant (H)	1.0E-02	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	4.2E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	X
Alimentary Tract	X
Cardiovascular	
Developmental	X
Endocrine	
Eye	X
Hematologic	X
Immune	X
Kidney	X
Nervous	X
Reproductive	X
Respiratory	
Skin	
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-1, SG-2, SG-3, SG-4, SG-6, SG-7, SG-8 and SG-9 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	100
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name: METRO VALLEY CLEANERS
Site Address: 244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA
Boring SG-5 at 5 feet bsg on 22 January 2007.

Site ID Number: T06019748481
Date of ESL Search: 8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **1,1-Dichloroethene**

Input Site Concentrations:

Soil (mg/kg):	-
Soil Gas (µg/m^3)	4700
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-10 and SG-11 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1.3
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-12, SG-14, SG-15 and SG-16 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1.2
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-13 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.79
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**1,1-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	6.5E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	1.0E+00	-	
Lowest Soil ESL:	**mg/kg**	**1.0E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+04	-	
Impacts to Aquatic Habitats:	µg/L	2.5E+01	-	
Gross Contamination:	µg/L	1.5E+03	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.2E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
1,1-Dichloroethene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral		$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation		$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	5.0E-02	mg/kg-day	Table J
Reference Dose - inhalation	5.7E-02	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	25	ug/L	Table F-2a
Marine Chronic Goal	22400	ug/L	Table F-2b
Estuary Chronic Goal	25	ug/L	Table F-2c
*Bioaccumulation Goal	3.2	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	97	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	5.9E+01	cm^3/g	Table J
Diffusivity in air	9.0E-02	cm^2/s	Table J
Diffusivity in water	1.0E-05	cm^2/s	Table J
Solubility (water)	2.3E+03	mg/L	Table J
Henry's Law Constant (H)	2.6E-02	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	1.1E+00	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	X
Alimentary Tract	X
Cardiovascular	
Developmental	
Endocrine	
Eye	
Hematologic	
Immune	
Kidney	
Nervous	X
Reproductive	X
Respiratory	
Skin	X
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-1, SG-2, SG-3, SG-4, SG-6, SG-7 and SG-8 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	100
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-5 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	140000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name: METRO VALLEY CLEANERS
Site Address: 244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA
Boring SG-9 at 5 feet bsg on 22 January 2007.

Site ID Number: T06019748481
Date of ESL Search: 8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	500
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name: METRO VALLEY CLEANERS
Site Address: 244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA
Boring SG-10 at 5 feet bsg on 17 December 2007.

Site ID Number: T06019748481
Date of ESL Search: 8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.9
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-11 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.88
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.86
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name: METRO VALLEY CLEANERS
Site Address: 244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA
Boring SG-12 at 5 feet bsg on 17 December 2007. Laboratory duplicate sample.

Site ID Number: T06019748481
Date of ESL Search: 8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.82
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-13 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.55
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-14 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.87
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-15 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.81
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-16 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	8.2
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**trans-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	3.4E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	6.7E-01	-	
Lowest Soil ESL:	**mg/kg**	**6.7E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.9E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	2.6E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	4.1E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
trans-1,2-Dichloroethene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral		$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation		$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	2.0E-02	mg/kg-day	Table J
Reference Dose - inhalation	2.0E-02	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	590	ug/L	Table F-2a
Marine Chronic Goal	22400	ug/L	Table F-2b
Estuary Chronic Goal	590	ug/L	Table F-2c
*Bioaccumulation Goal	140000	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	97	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	5.3E+01	cm^3/g	Table J
Diffusivity in air	7.1E-02	cm^2/s	Table J
Diffusivity in water	1.2E-05	cm^2/s	Table J
Solubility (water)	6.3E+03	mg/L	Table J
Henry's Law Constant (H)	9.4E-03	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	3.8E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	
Alimentary Tract	X
Cardiovascular	
Developmental	
Endocrine	
Eye	
Hematologic	
Immune	X
Kidney	
Nervous	
Reproductive	
Respiratory	
Skin	X
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-1, SG-2, SG-6 and SG-8 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	100
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-3 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	17000
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-4 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	450
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-5 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	780000
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-7 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	470
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-9 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1700
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-10 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.9
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-11 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.88
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.86
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-12 at 5 feet bsg on 17 December 2007. Laboratory duplicate sample.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.82
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-13 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.55
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-14 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.87
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-15 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.81
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-16 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	7.9
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**cis-1,2-Dichloroethene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.2E+01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	5.0E+02	-	
Leaching:	mg/kg	1.9E-01	-	
Lowest Soil ESL:	**mg/kg**	**1.9E-01**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	6.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+04	-	
Impacts to Aquatic Habitats:	µg/L	5.9E+02	-	
Gross Contamination:	µg/L	5.0E+04	-	
Lowest Groundwater ESL:	**µg/L**	**6.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.0E+01	Table E-3
Shallow Soil Gas:	µg/m^3	2.0E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
cis-1,2-Dichloroethene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral		$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation		$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	1.0E-02	mg/kg-day	Table J
Reference Dose - inhalation	1.0E-02	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	590	ug/L	Table F-2a
Marine Chronic Goal	22400	ug/L	Table F-2b
Estuary Chronic Goal	590	ug/L	Table F-2c
*Bioaccumulation Goal		ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	97	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	3.6E+01	cm^3/g	Table J
Diffusivity in air	7.4E-02	cm^2/s	Table J
Diffusivity in water	1.1E-05	cm^2/s	Table J
Solubility (water)	3.5E+03	mg/L	Table J
Henry's Law Constant (H)	4.1E-03	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	1.7E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	
Alimentary Tract	X
Cardiovascular	
Developmental	
Endocrine	
Eye	
Hematologic	
Immune	X
Kidney	
Nervous	
Reproductive	
Respiratory	
Skin	
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-1, SG-2, SG-3, SG-4, SG-6, SG-7, SG-8 and SG-9 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	100
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-5 at 5 feet bsg on 22 January 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1800
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name: METRO VALLEY CLEANERS
Site Address: 244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA
Boring SG-10 at 5 feet bsg on 17 December 2007.

Site ID Number: T06019748481
Date of ESL Search: 8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern: **Vinyl chloride**

Input Site Concentrations:

Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.4
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-11, SG-12 and SG-14 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.39
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring SG-13 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.25
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Borings SG-15 and SG-16 at 5 feet bsg on 17 December 2007.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	0.37
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Vinyl chloride**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	1
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	4.7E-02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	6.0E+01	-	
Gross Contamination:	mg/kg	1.0E+03	-	
Leaching:	mg/kg	8.5E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.7E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	5.0E-01	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.3E+01	-	
Impacts to Aquatic Habitats:	µg/L	7.8E+02	-	
Gross Contamination:	µg/L	3.4E+03	-	
Lowest Groundwater ESL:	**µg/L**	**5.0E-01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	5.2E-02	Table E-3
Shallow Soil Gas:	µg/m^3	1.0E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Vinyl chloride

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral	1.5E+00	$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation	2.7E-01	$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	3.0E-03	mg/kg-day	Table J
Reference Dose - inhalation	2.9E-02	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	782	ug/L	Table F-2a
Marine Chronic Goal	782	ug/L	Table F-2b
Estuary Chronic Goal	782	ug/L	Table F-2c
*Bioaccumulation Goal	525	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	63	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	1.9E+01	cm^3/g	Table J
Diffusivity in air	1.1E-01	cm^2/s	Table J
Diffusivity in water	1.2E-06	cm^2/s	Table J
Solubility (water)	2.8E+03	mg/L	Table J
Henry's Law Constant (H)	2.7E-02	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	1.1E+00	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	X
Alimentary Tract	X
Cardiovascular	
Developmental	X
Endocrine	
Eye	
Hematologic	
Immune	X
Kidney	X
Nervous	
Reproductive	X
Respiratory	X
Skin	
Other	X

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Benzene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.7E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	2.5E+01	-	
Gross Contamination:	mg/kg	8.7E+02	-	
Leaching:	mg/kg	4.4E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.4E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**		**Referenced Table**
Drinking Water:	µg/L	1.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	4.6E+01	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.4E-01	Table E-3
Shallow Soil Gas:	µg/m^3	2.8E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Benzene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.7E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	2.5E+01	-	
Gross Contamination:	mg/kg	8.7E+02	-	
Leaching:	mg/kg	4.4E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.4E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	4.6E+01	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.4E-01	Table E-3
Shallow Soil Gas:	µg/m^3	2.8E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Benzene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.7E-01	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	2.5E+01	-	
Gross Contamination:	mg/kg	8.7E+02	-	
Leaching:	mg/kg	4.4E-02	-	
Lowest Soil ESL:	**mg/kg**	**4.4E-02**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.0E+00	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.8E+03	-	
Impacts to Aquatic Habitats:	µg/L	4.6E+01	-	
Gross Contamination:	µg/L	1.7E+02	-	
Lowest Groundwater ESL:	**µg/L**	**1.0E+00**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.4E-01	Table E-3
Shallow Soil Gas:	µg/m^3	2.8E+02	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Benzene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral	1.0E-01	$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation	1.0E-01	$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	4.0E-03	mg/kg-day	Table J
Reference Dose - inhalation	8.6E-03	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	46	ug/L	Table F-2a
Marine Chronic Goal	350	ug/L	Table F-2b
Estuary Chronic Goal	46	ug/L	Table F-2c
*Bioaccumulation Goal	71	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	78	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	5.9E+01	cm^3/g	Table J
Diffusivity in air	8.8E-02	cm^2/s	Table J
Diffusivity in water	9.8E-06	cm^2/s	Table J
Solubility (water)	1.8E+03	mg/L	Table J
Henry's Law Constant (H)	5.6E-03	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	2.3E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	X
Alimentary Tract	X
Cardiovascular	
Developmental	X
Endocrine	
Eye	
Hematologic	
Immune	X
Kidney	X
Nervous	
Reproductive	X
Respiratory	
Skin	
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Toluene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.1E+02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	6.5E+02	-	
Leaching:	mg/kg	2.9E+00	-	
Lowest Soil ESL:	**mg/kg**	**2.9E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.5E+02	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	5.3E+05	-	
Impacts to Aquatic Habitats:	µg/L	1.3E+02	-	
Gross Contamination:	µg/L	4.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**4.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	8.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.8E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Toluene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.1E+02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	6.5E+02	-	
Leaching:	mg/kg	2.9E+00	-	
Lowest Soil ESL:	**mg/kg**	**2.9E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.5E+02	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	5.3E+05	-	
Impacts to Aquatic Habitats:	µg/L	1.3E+02	-	
Gross Contamination:	µg/L	4.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**4.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	8.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.8E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Toluene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	2.1E+02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	6.5E+02	-	
Leaching:	mg/kg	2.9E+00	-	
Lowest Soil ESL:	**mg/kg**	**2.9E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.5E+02	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	5.3E+05	-	
Impacts to Aquatic Habitats:	µg/L	1.3E+02	-	
Gross Contamination:	µg/L	4.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**4.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	8.8E+01	Table E-3
Shallow Soil Gas:	µg/m^3	1.8E+05	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Toluene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral		$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation		$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	2.0E-01	mg/kg-day	Table J
Reference Dose - inhalation	8.6E-02	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	130	ug/L	Table F-2a
Marine Chronic Goal	2500	ug/L	Table F-2b
Estuary Chronic Goal	130	ug/L	Table F-2c
*Bioaccumulation Goal	200000	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	92	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	1.8E+02	cm^3/g	Table J
Diffusivity in air	8.7E-02	cm^2/s	Table J
Diffusivity in water	8.6E-06	cm^2/s	Table J
Solubility (water)	5.3E+02	mg/L	Table J
Henry's Law Constant (H)	6.6E-03	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	2.7E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	
Alimentary Tract	X
Cardiovascular	
Developmental	X
Endocrine	
Eye	
Hematologic	
Immune	
Kidney	
Nervous	X
Reproductive	X
Respiratory	X
Skin	X
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Ethylbenzene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	5.0E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	4.0E+02	-	
Leaching:	mg/kg	3.3E+00	-	
Lowest Soil ESL:	**mg/kg**	**3.3E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	3.0E+02	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+05	-	
Impacts to Aquatic Habitats:	µg/L	4.3E+01	-	
Gross Contamination:	µg/L	3.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**3.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.6E+00	Table E-3
Shallow Soil Gas:	µg/m^3	3.3E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Ethylbenzene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	5.0E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	4.0E+02	-	
Leaching:	mg/kg	3.3E+00	-	
Lowest Soil ESL:	**mg/kg**	**3.3E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	3.0E+02	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+05	-	
Impacts to Aquatic Habitats:	µg/L	4.3E+01	-	
Gross Contamination:	µg/L	3.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**3.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.6E+00	Table E-3
Shallow Soil Gas:	µg/m^3	3.3E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Ethylbenzene**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	5.0E+00	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	4.0E+02	-	
Leaching:	mg/kg	3.3E+00	-	
Lowest Soil ESL:	**mg/kg**	**3.3E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	3.0E+02	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.7E+05	-	
Impacts to Aquatic Habitats:	µg/L	4.3E+01	-	
Gross Contamination:	µg/L	3.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**3.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	1.6E+00	Table E-3
Shallow Soil Gas:	µg/m^3	3.3E+03	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Surfer
SFBRWQCB California EPA

Glossary

Site Scenarios

Land Use: Residential land use includes single-family homes and high-density housing areas. Also appropriate for other sensitive property uses, including schools, day care centers, etc.

Depth to Impacted Soil: Shallow soil defined as soil that may be exposed during future landscaping or other digging activities. More conservative exposure assumptions apply. Default depth of 0-3 m assumed for single-family home lots. Depth of one-meter or less may be appropriate for high-density residential complexes or commercial/industrial sites with proper safeguards to prevent future exposure.

Groundwater Use: Refer to local guidelines for determination of areas where groundwater may be a current or potential source of drinking water.

Soil ESLs:

Direct Exposure: Address direct exposure and toxicity to humans. Includes incidental ingestion, dermal contact and inhalation of vapors or dust particles in outdoor air.

Terrestrial Ecological Impacts: Address potential toxicity to terrestrial flora and fauna. For use in developed urban areas only.

Gross Contamination: Address odor, nuisance and general gross pollution concerns ("Ceiling Values").

Leaching: Address potential leaching of chemicals from soil and subsequent impact on shallow groundwater. Leaching of inorganic chemicals must be addressed on a site-by-site basis.

Groundwater ESLs:

Drinking Water (Toxicity): Address potential toxicity to humans using the water as a drinking water resource. Promulgated Primary Maximum Contaminant Level or equivalent.

Vapor Emissions To Indoor Air: Address potential indoor-air impacts and toxicity to humans due to the emission of subsurface vapors from contaminated soil into a building. Assumes high permeability soils.

Discharges to Surface Water: Address potential chronic impacts to aquatic organisms. Promulgated chronic surface water standard or equivalent.

Gross Contamination: Address odor, nuisance and general gross pollution concerns. For drinking water resources, Secondary Maximum Contaminant Level or equivalent for taste and odor concerns also considered.

Indoor Air and Soil Gas ESLs:

Indoor Air: Address direct exposure to volatile chemicals through inhalation of air inside of an enclosed building.

Shallow Soil Gas: Address intrusion of subsurface vapors into a building and subsequent direct exposure via inhalation. Shallow soil gas defined as soil gas situated immediately beneath an existing building slab or from a depth of approximately 1.5 meters (5.0 feet) in open areas where buildings may be constructed in the future.

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Ethylbenzene

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral	1.1E-02	$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation	8.7E-03	$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	1.0E-01	mg/kg-day	Table J
Reference Dose - inhalation	2.9E-01	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	290	ug/L	Table F-2a
Marine Chronic Goal	43	ug/L	Table F-2b
Estuary Chronic Goal	43	ug/L	Table F-2c
*Bioaccumulation Goal	29000	ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	106	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	3.6E+02	cm^3/g	Table J
Diffusivity in air	7.5E-02	cm^2/s	Table J
Diffusivity in water	7.8E-06	cm^2/s	Table J
Solubility (water)	1.7E+02	mg/L	Table J
Henry's Law Constant (H)	7.9E-03	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	3.2E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	
Alimentary Tract	X
Cardiovascular	
Developmental	X
Endocrine	X
Eye	
Hematologic	
Immune	
Kidney	
Nervous	X
Reproductive	X
Respiratory	X
Skin	
Other	X

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-1 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Xylenes**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	1.0E+02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	4.2E+02	-	
Leaching:	mg/kg	2.3E+00	-	
Lowest Soil ESL:	**mg/kg**	**2.3E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.8E+03	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.6E+05	-	
Impacts to Aquatic Habitats:	µg/L	1.0E+02	-	
Gross Contamination:	µg/L	2.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**2.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.9E+01	Table E-3
Shallow Soil Gas:	µg/m^3	5.8E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-2 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Xylenes**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	1.0E+02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	4.2E+02	-	
Leaching:	mg/kg	2.3E+00	-	
Lowest Soil ESL:	**mg/kg**	**2.3E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.8E+03	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.6E+05	-	
Impacts to Aquatic Habitats:	µg/L	1.0E+02	-	
Gross Contamination:	µg/L	2.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**2.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.9E+01	Table E-3
Shallow Soil Gas:	µg/m^3	5.8E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Search
Summary Form
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency

Site Name:	METRO VALLEY CLEANERS
Site Address:	244 RICKENBACKER CIRCLE, LIVERMORE, CALIFORNIA Boring V-3 at 5 feet bsg on 02 September 2010.
Site ID Number:	T06019748481
Date of ESL Search:	8-Nov-10

Selected Site Scenario	
Land Use:	Commercial or Industrial
Depth to Impacted Soil:	Shallow Soil
Groundwater Use:	Drinking Water Resource

Selected Chemical of Concern:	**Xylenes**

Input Site Concentrations:	
Soil (mg/kg):	-
Soil Gas (µg/m^3)	2.5
Groundwater (µg/L):	-

Soil Tier 1 ESLS:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Direct Exposure:	mg/kg	1.0E+02	-	Table A-2:
Terrestrial Ecological Impacts:	mg/kg	-	-	
Gross Contamination:	mg/kg	4.2E+02	-	
Leaching:	mg/kg	2.3E+00	-	
Lowest Soil ESL:	**mg/kg**	**2.3E+00**		

Groundwater Tier 1 ESLs:	**Units**	**ESL**	**Tier 1 ESL Exceeded?**	**Referenced Table**
Drinking Water:	µg/L	1.8E+03	-	Table F-1a
Vapor Emissions To Indoor Air:	µg/L	1.6E+05	-	
Impacts to Aquatic Habitats:	µg/L	1.0E+02	-	
Gross Contamination:	µg/L	2.0E+01	-	
Lowest Groundwater ESL:	**µg/L**	**2.0E+01**		

Other Tier 1 ESLs:	**Units**	**ESL**	**Referenced Table**
Indoor Air:	µg/m^3	2.9E+01	Table E-3
Shallow Soil Gas:	µg/m^3	5.8E+04	Table E-2

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (November 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

ESL Surfer
San Francisco Bay Regional Water Quality Control Board
California Environmental Protection Agency
Summary of Toxicity and Fate & Transport Information
Xylenes

Human Toxicty Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral		$(mg/kg\text{-}day)^{-1}$	Table J
Cancer Slope Factor - inhalation		$(mg/kg\text{-}day)^{-1}$	Table J
Reference Dose - oral	2.0E-01	mg/kg-day	Table J
Reference Dose - inhalation	2.9E-02	mg/kg-day	Table J
Skin Absorption Factor		unitless	Table J
Target Excess Cancer Risk Used:		unitless	Table K-2
Target Hazard Quotient Used:		unitless	Table K-2

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	100	ug/L	Table F-2a
Marine Chronic Goal	100	ug/L	Table F-2b
Estuary Chronic Goal	100	ug/L	Table F-2c
*Bioaccumulation Goal		ug/L	Table F-4c

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of ESL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	106	g/mole	Table J
Physical State	nonvolatile gas		Table J
Organic Carbon Partition Coeff. (K_{oc})	4.1E+02	cm^3/g	Table J
Diffusivity in air	7.0E-02	cm^2/s	Table J
Diffusivity in water	7.8E-06	cm^2/s	Table J
Solubility (water)	1.6E+02	mg/L	Table J
Henry's Law Constant (H)	7.3E-03	$atm\text{-}m^3/mol$	Table J
Henry's Law Constant (H')	3.0E-01	unitless	Table J

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	
Alimentary Tract	
Cardiovascular	
Developmental	
Endocrine	
Eye	
Hematologic	
Immune	
Kidney	
Nervous	
Reproductive	X
Respiratory	
Skin	X
Other	

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table L for specific references.

Reference:

Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (August 2007), San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm

Environmental Screening Levels Surfer
SFBRWQCB California EPA

Glossary

Site Scenarios

Land Use: Residential land use includes single-family homes and high-density housing areas. Also appropriate for other sensitive property uses, including schools, day care centers, etc.

Depth to Impacted Soil: Shallow soil defined as soil that may be exposed during future landscaping or other digging activities. More conservative exposure assumptions apply. Default depth of 0-3 m assumed for single-family home lots. Depth of one-meter or less may be appropriate for high-density residential complexes or commercial/industrial sites with proper safeguards to prevent future exposure.

Groundwater Use: Refer to local guidelines for determination of areas where groundwater may be a current or potential source of drinking water.

Soil ESLs:

Direct Exposure: Address direct exposure and toxicity to humans. Includes incidental ingestion, dermal contact and inhalation of vapors or dust particles in outdoor air.

Terrestrial Ecological Impacts: Address potential toxicity to terrestrial flora and fauna. For use in developed urban areas only.

Gross Contamination: Address odor, nuisance and general gross pollution concerns ("Ceiling Values").

Leaching: Address potential leaching of chemicals from soil and subsequent impact on shallow groundwater. Leaching of inorganic chemicals must be addressed on a site-by-site basis.

Groundwater ESLs:

Drinking Water (Toxicity): Address potential toxicity to humans using the water as a drinking water resource. Promulgated Primary Maximum Contaminant Level or equivalent.

Vapor Emissions To Indoor Air: Address potential indoor-air impacts and toxicity to humans due to the emission of subsurface vapors from contaminated soil into a building. Assumes high permeability soils.

Discharges to Surface Water: Address potential chronic impacts to aquatic organisms. Promulgated chronic surface water standard or equivalent.

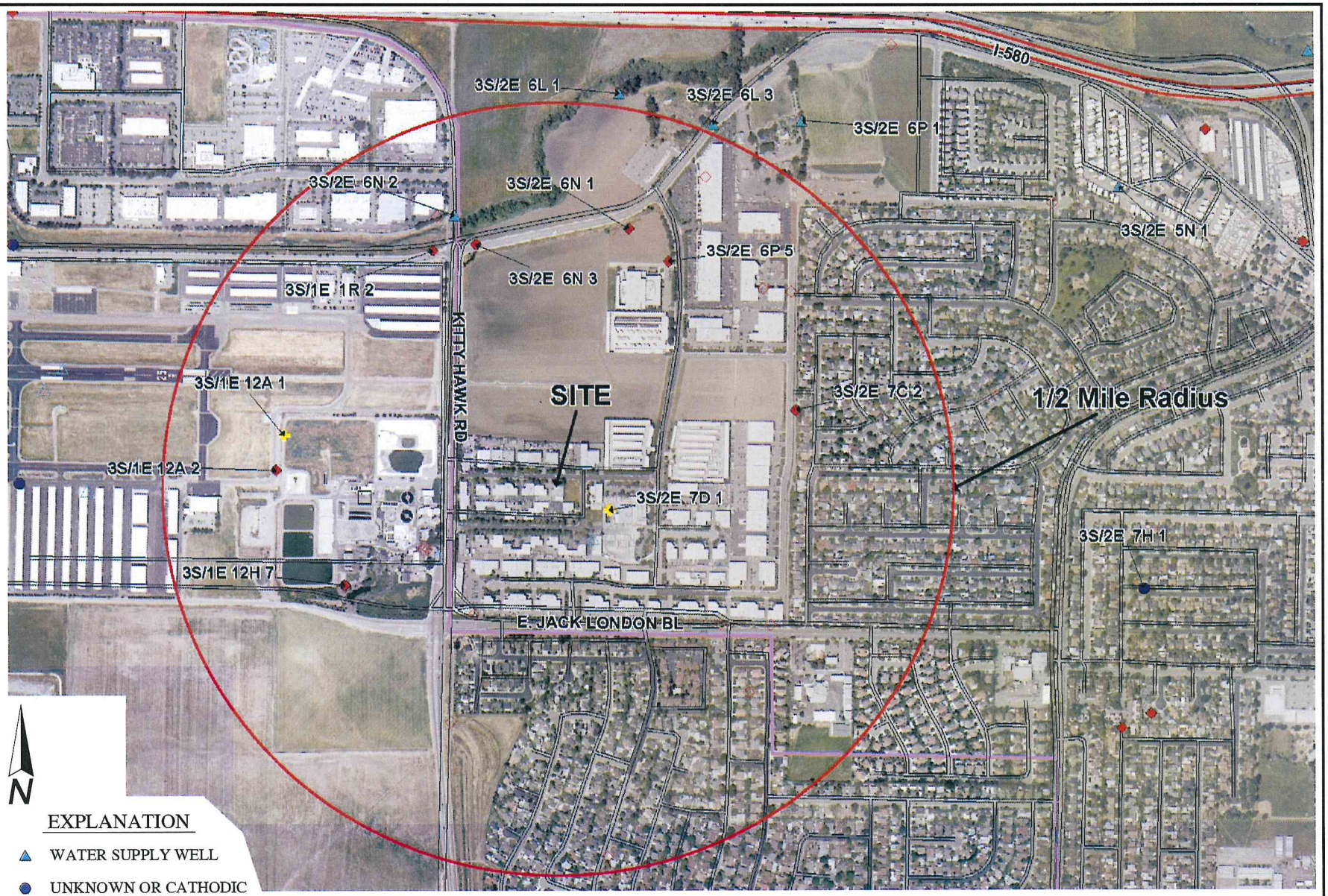
Gross Contamination: Address odor, nuisance and general gross pollution concerns. For drinking water resources, Secondary Maximum Contaminant Level or equivalent for taste and odor concerns also considered.

Indoor Air and Soil Gas ESLs:

Indoor Air: Address direct exposure to volatile chemicals through inhalation of air inside of an enclosed building.

Shallow Soil Gas: Address intrusion of subsurface vapors into a building and subsequent direct exposure via inhalation. Shallow soil gas defined as soil gas situated immediately beneath an existing building slab or from a depth of approximately 1.5 meters (5.0 feet) in open areas where buildings may be constructed in the future.

APPENDIX J



BASE MAP SOURCE: ZONE 7 WATER AGENCY

NO SCALE

ENGEO INCORPORATED
EXCELLENT SERVICE SINCE 1971

WELL LOCATION MAP

RICKENBACKER CIRCLE

LIVERMORE, CALIFORNIA

PROJECT NO.:	7584.P.001.01
DATE:	APRIL 2007
DRAWN BY: DLB	CHECKED BY: JB

APPENDIX NO. C1

ORIGINAL FIGURE PRINTED IN COLOR

APPENDIX K

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of

3. Generator's Name and Mailing Address
SITE @ METRO VALLEY CLEANERS
224 RICKENBACKER CR.
LIVERMORE, CA. 94551
ADVANCED GEO
837 SHAW ROAD
STOCKTON, CA. 95215

4. Generator's Phone ( )

5. Transporter 1 Company Name
SIABY ENVIRONMENTAL INC.

6. US EPA ID Number
N/A

A. State Transporter's ID

B. Transporter 1 Phone (888) 701-6600

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
WESTERN ENVIRONMENTAL
62-150 GENE WEIMAS DRIVE
MECCA, CA. 92254

10. US EPA ID Number
CAR000157206

E. State Facility's ID

F. Facility's Phone
(760) 396-0222

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON HAZARDOUS WASTE SOLID (SOIL CUTTING)	010	DM	4950	P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: MATT BUCKLEW

Signature

Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JULIO ARIAS

Signature

Date: Month 7 Day 22 Year 10

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name

Signature

Date: Month Day Year

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 01846

2. Page 1 of

3. Generator's Name and Mailing Address
SITE @ METRO VALLEY CLEANERS
224 RICKENBACKER CR.
LIVERMORE, CA. 94551

ADVANCED GEO
837 SHAW ROAD
STOCKTON, CA 95215

4. Generator's Phone ( )

5. Transporter 1 Company Name
SIABY ENVIRONMENTAL INC.

6. US EPA ID Number
N/A

A. State Transporter's ID

B. Transporter 1 Phone (888) 701-6600

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
WESTERN ENVIRONMENTAL
62-150 GENE WEIMAS DRIVE
MECCA, CA. 92254

10. US EPA ID Number
CAR000157206

E. State Facility's ID

F. Facility's Phone
(760) 396-0222

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON HAZARDOUS WASTE SOLID (SOIL CUTTING)	010	DM	4950	P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: MATT BUCKREW

Signature: M Buckrew

Date: Month 7 Day 22 Year 10

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JULIO ARIAS

Signature: J Arias

Date: Month 7 Day 22 Year 10

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.

Printed/Typed Name

Signature

Date: Month Day Year

NON-HAZARDOUS WASTE