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PERJURY STATEMENT

Subject: **1395 MacArthur Boulevard, San Leandro, California**
Cone Penetration Testing Work Plan

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

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

Cone Penetration Testing Work Plan
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

12 October 2016
AGE-Project No. 12 - 2461

PREPARED FOR:

Mr. William Matthew Brooks
ARDENBROOK

***PREPARED BY*:**

Advanced GeoEnvironmental, Inc.

Environmental • Industrial Hygiene • Geotechnical • Contracting
(800) 511-9300
www.advgeoenv.com

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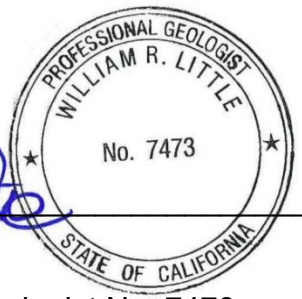

William R. Little
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California Professional Geologist No. 7473

Cone Penetration Testing Work Plan
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

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Cone Penetration Testing Work Plan
SWISS VALLEY CLEANERS
1395 MacArthur Boulevard, San Leandro, California

1.0. INTRODUCTION

At the request of Mr. William Mathews Brooks, *Advanced* GeoEnvironmental, Inc. (AGE) has prepared this, *Cone Penetration Testing Work Plan* for 1395 MacArthur Boulevard, San Leandro, California (site). The work plan was prepared as required by the Alameda County Environmental Health Department (ACEHD) letter dated 03 October 2016 (Appendix A). The proposed scope of work includes the advancement of eight (8) cone penetration testing (CPT) borings for collection of grab groundwater samples to evaluate the lateral and vertical limits of dissolved tetrachloroethene (PCE) and related dry cleaning constituents surrounding the subject site. A site locations map is included as Figure 1. A plot plan of the site showing historical boring locations is included as Figure 2. Proposed boring locations are illustrated in Figure 3. Historical soil, soil-vapor and grab groundwater samples are included in Tables 1 through 3.

2.0. SCOPE OF WORK

Based on analytical data collected at the site and historical analytical data collected from monitoring wells located off-site from an adjacent closed leaking underground storage tank investigation (Appendix B; Haber Oil Product), the lateral and vertical extent of dissolved chlorinated hydrocarbon impact (tetrachloroethene or PCE) is undefined at the site. Based on samples collected surrounding (west and east) the former cleaners building, the source of the impact appears to be the rear (west) of the former building footprint.

The ACEHD has required that additional investigation be performed to investigate the lateral extent of the dissolved PCE impact at the site. The proposed scope of work includes the following tasks:

- Permitting and pre-field work activities;
- CPT soil boring advancement and sample collection; and
- Report preparation.

Each of these tasks is described in greater detail below.

2.1. PRE-FIELD WORK ACTIVITIES

Applicable site assessment permits will be obtained from the Alameda County Public Works Department (ACPWD) and an access agreement will be prepared for the proposed boring location in the St. James Lutheran Church parking lot. In addition, a

health and safety plan will be updated in accordance with *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (National Institute for Occupational Safety and Health Administration, U.S. Coast Guard and U.S. Environmental Protection Agency, 1985). Prior to mobilization, each proposed boring location will be clearly marked and a utility clearance obtained through Underground Service Alert.

2.2. CONE PENETRATION TEST

Utilizing a 25- or 30-ton truck-mounted CPT drill rig equipped with 2-inch diameter hollow-stem rods, AGE proposes to advance a total of eight (8) CPT sounding borings for lithological (soil behavior) evaluation to depths of 100 feet below surface grade (bsg). A total of twenty-four borings will be advanced for collection of grab groundwater samples to investigate the lateral and vertical extent of PCE impact to shallow, intermediate and deep groundwater water both on-site and off-site (west); three sampling intervals are anticipated based on an evaluation of the CPT investigation performed at the Haber Oil Product site (Appendix B).

AGE proposes the following initial CPT boring locations:

- Advancement of one CPT soil boring in the St. James Lutheran parking lot in a general downgradient direction (gradient generally north to northwest). One grab groundwater sample will be collected at first encountered groundwater water (50 to 55 feet bsg), second encountered groundwater (65 to 75 feet bsg) and near the proposed termination depth of 100 feet bsg (deep groundwater sample for vertical delineation);
- Advancement of three CPT soil borings in the alley of the shopping center. At each boring location one grab groundwater sample will be collected at first encountered groundwater water (50 to 55 feet bsg), second encountered groundwater (65 to 75 feet bsg) and near the proposed termination depth of 100 feet bsg (deep groundwater sample for vertical delineation);
- Advancement of one CPT in the front of the former dry cleaning suite. One grab groundwater sample will be collected at first encountered groundwater water (50 to 55 feet bsg), second encountered groundwater (65 to 75 feet bsg) and near the proposed termination depth of 100 feet bsg (deep groundwater sample for vertical delineation);
- Advancement of one CPT soil boring at the southeastern edge of the parking lot to evaluate the assumed cross gradient lateral limits of the dissolved PCE plume One grab groundwater sample will be collected at first encountered groundwater water (50 to 55 feet bsg), second encountered groundwater (65 to 75 feet bsg) and near the proposed termination depth of 100 feet bsg (deep groundwater sample for vertical delineation); and

- Advanced of two CPT soil borings at the northern and northeaster edges of the strip mall parking lot to evaluate the assumed northern downgradient and northeastern cross gradient limits of the dissolved PCE plume. At each locations one grab groundwater sample will be collected at first encountered groundwater water (50 to 55 feet bsg), second encountered groundwater (65 to 75 feet bsg) and near the proposed termination depth of 100 feet bsg (deep groundwater sample for vertical delineation).

Proposed CPT sounding borings and soil boring locations are shown on Figure 3. At each of the CPT locations, one location will be a cone penetration testing boring to evaluate lithology and groundwater flow units (permeability) advanced to a total depth of 100 feet bsg; CPT advancement and testing procedures are outlined in Section 3.1.

Subsequent borings adjacent to sounding borings will be advanced to first, intermediate and deep encountered groundwater as determined by the sounding borings. The initial proposed depth for deep groundwater collection is proposed at 100 feet bsg, but can vary based on lithology encountered during soundings. All collected groundwater samples will be analyzed by a State of California Department of Public Health (CDPH)-certified laboratory for volatile organic compounds (VOC's) by EPA method 8260B.

Laboratory reports for groundwater analysis, testing methods and laboratory quality assurance/quality control (QA/QC), and sample chain of custody documentation will be presented in a report with findings and recommendations.

2.3. REPORT PREPARATION

Upon completion of field work and receipt of final laboratory analysis, a report will be prepared presenting the findings of the investigation. The report will include a description of the work performed and results of the sampling and analysis. Conclusions, applicable recommendations, maps and cross-sections will be included in the report. The report will be in a format acceptable to the ACEHD and/or RWQCB, and will be reviewed and signed by a California Professional Geologist.

3.0. FIELD PROCEDURES

All field procedures will be overseen by an AGE representative under the supervision of a California Professional Geologist. Procedures for the advancement of the CPT borings and groundwater sampling are outlined below.

3.1. CPT ADVANCEMENT

CPT soil borings will be advanced to a depth of 100 feet bsg or until refusal is encountered utilizing a 25- to 30-ton truck-mounted CPT drill rig equipped with 2-inch

diameter hollow-stem rods. The CPT drill rig utilizes a hydraulic ram to advance the rods to the desired depth. At all boring locations, the first of the paired soil borings will advance a cone penetrometer to the desired depth. Soil parameters such as cone bearing, sleeve friction and pore water pressure will be measured as the cone penetrometer is advanced.

3.2. CPT GROUNDWATER SAMPLING

At each location a second (paired) soil boring will be advanced for groundwater sample collection. Grab groundwater samples will be collected using a Hydropunch sample tool that will be pushed into specified zones, then withdrawn approximately three feet to expose an inlet screen. The interior of the sampling tool fills with water and a 1-inch outer diameter stainless steel bailer will be lowered and utilized to extract a groundwater sample. Following sample collection, samples will be transferred into four volatile organic analysis (VOAs) vials; all samples will be properly labeled and placed in a chilled container to be transported under chain of custody to a CDPH-certified laboratory for analysis of VOCs by 8260B.

3.3. EQUPMENT DECONTAMINATION

Rinseate generated during drilling activities will be containerized in properly labeled Department of Transportation (DOT)-approved 55-gallon drums, and stored on-site in an area lacking public access. Disposal alternatives will be evaluated at a later date based on laboratory results of rinseate.

3.4. BORING ABANDONMENTS

Following borehole advancements, Portland cement (grout mix) will be utilized to backfill each borehole utilizing a tremie pipe. The ACPWD will be given the opportunity to inspect the grout mix prior to backfilling activities.

FIGURES

N

SCALE
0 2000 4000
FEET

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

LOCATION MAP

SWISS VALLEY CLEANERS
1395 MacArthur Boulevard
SAN LEANDRO, CALIFORNIA

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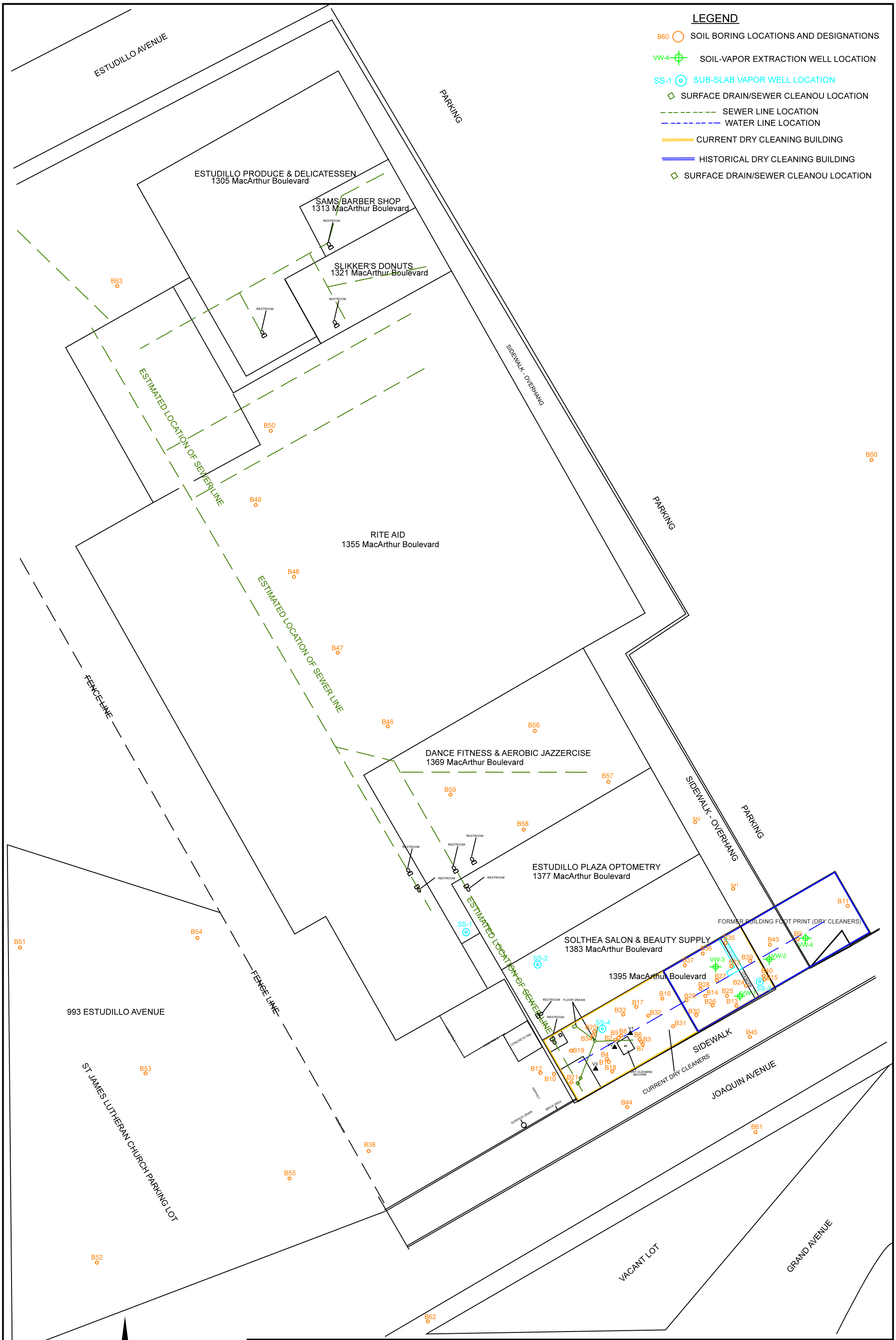
PROJECT NO. AGE-NC-12-2461	FILE: LOCATION	FIGURE: 1
DATE: 21 MAY, 2013	DRAWN BY: MAC	



REGIONAL SITE PLAN - SOIL BORING LOCATIONS

SWISS VALLEY CLEANERS
1395 MACARUTHER BOULEVARD
SAN LEANDRO, CALIFORNIA

Advanced GeoEnvironmental, Inc.
www.advgeoenv.com

PROJECT NO. AGE-NC-SC	FILE: FILE	FIGURE: 2
DATE: MAY 2014	DRAWN BY: MAC	

PROPOSED CPT BORING LOCATIONS
SWISS VALLEY CLEANERS
1395 MACARTHUR BOULEVARD
SAN LEANDRO, CALIFORNIA

Advanced GeoEnvironmental, Inc.
www.advgeoenv.com

PROJECT NO.	AGE - 12-2461	FILE:	FIGURE: 3
DATE:	OCTOBER 2016	DRAWN BY:	MAC

LEGEND

Proposed Cone Penetration Testing Boring Locations
(Multiple borings for depth descrete samples)

N

SCALE
0 40 80
FEET

TABLES

TABLE 1

ANALYTICAL RESULTS OF SOIL SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B-1@3'	3	08-19-1998	<0.005	<0.005	<0.005	-	-	<0.005
B-1@5'	5	08-19-1998	<0.005	<0.005	<0.005	-	-	<0.005
B-2@3'	3	08-19-1998	<0.005	<0.005	<0.005	-	-	<0.005
B-2@5'	5	08-19-1998	<0.005	<0.005	<0.005	-	-	<0.005
B-3@3'	3	08-19-1998	<0.005	<0.005	<0.005	-	-	<0.005
B-3@5'	5	08-19-1998	<0.005	<0.005	<0.005	-	-	<0.005
B-4	1.75	04-06-2005	**0.0057**	<0.0049	<0.0049	<0.0049	<0.0049	<0.0098
B-5	1.83	04-06-2005	**0.0074**	<0.0047	<0.0047	<0.0047	<0.0047	<0.0094
B-6	1.67	04-06-2005	**0.022**	<0.0046	<0.0046	<0.0046	<0.0046	<0.0093
B-7	2	07-08-2008	<0.005	<0.0047	<0.0047	<0.0047	<0.0047	<0.0094
B-8	2	07-08-2008	**0.060**	<0.0047	<0.0047	<0.0047	<0.0047	<0.0094
B9-5	5	05-07-2013	**0.028**	<0.005	<0.005	<0.005	<0.005	<0.005
B9-10	10	05-07-2013	**0.012**	<0.005	<0.005	<0.005	<0.005	<0.005
B9-15	15	05-07-2013	**0.022**	<0.005	<0.005	<0.005	<0.005	<0.005
B10-5	5	05-07-2013	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B10-10	10	05-07-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B10-15	15	05-07-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B11-5	5	10-22-2013	**0.009**	<0.005	<0.005	<0.005	<0.005	<0.005
B11-10	10	10-22-2013	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005
B11-15	15	10-22-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B12-5	5	10-22-2013	**0.005**	<0.005	<0.005	<0.005	<0.005	<0.005
B12-10	10	10-22-2013	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005
B12-15	15	10-22-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B13-5	5	10-22-2013	**0.008**	<0.005	<0.005	<0.005	<0.005	<0.005
B13-10	10	10-22-2013	**0.006**	<0.005	<0.005	<0.005	<0.005	<0.005
B13-15	15	10-22-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B14-5	5	10-22-2013	**0.015**	<0.005	<0.005	<0.005	<0.005	<0.005
B14-10	10	10-22-2013	**0.008**	<0.005	<0.005	<0.005	<0.005	<0.005

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(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B14-15	15	10-22-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B15-5	5	10-22-2013	**0.030**	<0.005	<0.005	<0.005	<0.005	<0.005
B15-10	10	10-22-2013	**0.018**	<0.005	<0.005	<0.005	<0.005	<0.005
B15-15	15	10-22-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B16-5	5	10-23-2013	**0.020**	<0.005	<0.005	<0.005	<0.005	<0.005
B16-10	10	10-23-2013	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B16-15	15	10-23-2013	**0.006**	<0.005	<0.005	<0.005	<0.005	<0.005
B17-5	5	10-23-2013	**0.018**	<0.005	<0.005	<0.005	<0.005	<0.005
B17-10	10	10-23-2013	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B17-15	15	10-23-2013	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005
B18-5	5	10-23-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B18-10	10	10-23-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B19-5	5	10-23-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B19-10	10	10-23-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B20-5	5	10-23-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B20-10	10	10-23-2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B21-5	5	10-24-2013	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B21-10	10	10-24-2013	**0.009**	<0.005	<0.005	<0.005	<0.005	<0.005
B23-0.5-1.0	0.5-1.0	04-28-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B23-1.5-2.0	1.5-2.0	04-28-2014	**0.026**	<0.005	<0.005	<0.005	<0.005	<0.005
B23-2.5-3.0	2.5-3.0	04-28-2014	**0.12**	<0.005	<0.005	<0.005	<0.005	<0.005
B23-3.5-4.0	3.5-4.0	04-28-2014	**0.040**	<0.005	<0.005	<0.005	<0.005	<0.005
B23-4.5-5.0	4.5-5.0	04-28-2014	**0.030**	<0.005	<0.005	<0.005	<0.005	<0.005
B24-0.5-1.0	0.5-1.0	04-28-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B24-1.5-2.0	1.5-2.0	04-28-2004	**0.032**	<0.005	<0.005	<0.005	<0.005	<0.005
B24-4.5-5.0	4.5-50	04-28-2014	**0.017**	<0.005	<0.005	<0.005	<0.005	<0.005
B25-0.5-1.0	0.5-1.0	04-28-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B25-1.5-2.0	1.5-2.0	04-28-2014	**0.048**	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1

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(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B25-2.5-3.0	2.5-3.0	04-28-2014	**0.061**	<0.005	<0.005	<0.005	<0.005	<0.005
B25-4.5-5.0	4.5-5.0	04-28-2014	**0.023**	<0.005	<0.005	<0.005	<0.005	<0.005
B26-0.5-1.0	0.5-1.0	04-28-2014	**0.0056**	<0.005	<0.005	<0.005	<0.005	<0.005
B26-1.5-2.0	1.5-2.0	04-29-2014	**0.0063**	<0.005	<0.005	<0.005	<0.005	<0.005
B26-3.0-3.5	3.0-3.5	04-29-2014	**0.043**	<0.005	<0.005	<0.005	<0.005	<0.005
B26-4.5-5.0	4.5-5.0	04-29-2014	**0.018**	<0.005	<0.005	<0.005	<0.005	<0.005
B27-0.5-1.0	0.5-1.0	04-29-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B27-1.5-2.0	1.5-3.0	04-29-2014	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B27-2.5-3.0	2.5-3.0	04-29-2014	**0.045**	<0.005	<0.005	<0.005	<0.005	<0.005
B27-4.5-5.0	4.5-5.0	04-29-2014	**0.043**	<0.005	<0.005	<0.005	<0.005	<0.005
B28-0.5-1.0	1.5-3.0	04-29-2014	**0.0053**	<0.005	<0.005	<0.005	<0.005	<0.005
B28-2.5-3.0	2.5-3.0	04-29-2014	**0.037**	<0.005	<0.005	<0.005	<0.005	<0.005
B28-4.5-5.0	4.5-5.0	04-29-2014	**0.021**	<0.005	<0.005	<0.005	<0.005	<0.005
B29-1.5-2.0	1.5-3.0	04-29-2014	**0.015**	<0.005	<0.005	<0.005	<0.005	<0.005
B29-2.5-3.0	2.5-3.0	04-29-2014	**0.033**	<0.005	<0.005	<0.005	<0.005	<0.005
B29-4.5-5.0	4.5-5.0	04-29-2014	**0.019**	<0.005	<0.005	<0.005	<0.005	<0.005
B30-1.5-2.0	1.5-3.0	04-30-2014	**0.019**	<0.005	<0.005	<0.005	<0.005	<0.005
B30-2.5-3.0	2.5-3.0	04-30-2014	**0.024**	<0.005	<0.005	<0.005	<0.005	<0.005
B30-4.5-5.0	4.5-5.0	04-30-2014	**0.051**	<0.005	<0.005	<0.005	<0.005	<0.005
B31-1.5-2.0	1.5-2.0	04-30-2014	**0.018**	<0.005	<0.005	<0.005	<0.005	<0.005
B31-2.5-3.0	2.5-3.0	04-30-2014	**0.025**	<0.005	<0.005	<0.005	<0.005	<0.005
B32-1.5-2.0	1.5-3.0	04-30-2014	**0.0069**	<0.005	<0.005	<0.005	<0.005	<0.005
B32-2.5-3.0	2.5-3.0	04-30-2014	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005
B32-4.5-5.0	4.5-5.0	04-30-2014	**0.018**	<0.005	<0.005	<0.005	<0.005	<0.005
B33-1.5-2.0	1.5-3.0	04-30-2014	**0.012**	<0.005	<0.005	<0.005	<0.005	<0.005
B33-2.5-3.0	2.5-3.0	04-30-2014	**0.037**	<0.005	<0.005	<0.005	<0.005	<0.005
B33-4.5-5.0	4.5-5.0	04-30-2014	**0.029**	<0.005	<0.005	<0.005	<0.005	<0.005
B34-1.5-2.0	1.5-3.0	05-01-2014	**0.028**	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1

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Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B34-2.5-3.0	2.5-3.0	05-01-2014	**0.020**	<0.005	<0.005	<0.005	<0.005	<0.005
B34-4.5-5.0	4.5-5.0	05-01-2014	**0.016**	<0.005	<0.005	<0.005	<0.005	<0.005
B35-1.5-2.0	1.5-3.0	05-01-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B35-2.5-3.0	2.5-3.0	05-01-2014	**0.092**	<0.005	<0.005	<0.005	<0.005	<0.005
B35-4.5-5.0	4.5-5.0	05-01-2014	**0.058**	<0.005	<0.005	<0.005	<0.005	<0.005
B36-1.5-2.0	1.5-3.0	05-01-2014	**0.11**	<0.005	<0.005	<0.005	<0.005	<0.005
B36-2.5-3.0	2.5-3.0	05-01-2014	**0.015**	<0.005	<0.005	<0.005	<0.005	<0.005
B36-4.5-5.0	4.5-5.0	05-01-2014	**0.012**	<0.005	<0.005	<0.005	<0.005	<0.005
B37-1.5-2.0	1.5-3.0	05-01-2014	**0.018**	<0.005	<0.005	<0.005	<0.005	<0.005
B37-2.5-3.0	2.5-3.0	05-01-2014	**0.038**	<0.005	<0.005	<0.005	<0.005	<0.005
B37-4.5-5.0	4.5-5.0	05-01-2014	**0.016**	<0.005	<0.005	<0.005	<0.005	<0.005
B38-1.0-1.5	1.0-1.5	05-02-2014	**0.023**	<0.005	<0.005	<0.005	<0.005	<0.005
B38-1.5-2.0	1.5-2.0	05-02-2014	**0.023**	<0.005	<0.005	<0.005	<0.005	<0.005
B38-2.5-3.0	2.5-3.0	05-02-2014	**0.014**	<0.005	<0.005	<0.005	<0.005	<0.005
B38-4.5-5.0	4.5-5.0	05-02-2014	**0.0061**	<0.005	<0.005	<0.005	<0.005	<0.005
B39-1.5-2.0	1.5-3.0	05-02-2014	**0.016**	<0.005	<0.005	<0.005	<0.005	<0.005
B39-2.5-3.0	2.5-3.0	05-02-2014	**0.021**	<0.005	<0.005	<0.005	<0.005	<0.005
B39-4.5-5.0	4.5-5.0	05-02-2014	**0.034**	<0.005	<0.005	<0.005	<0.005	<0.005
B40-1.5-2.0	1.5-3.0	05-02-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B40-2.5-3.0	2.5-3.0	05-02-2014	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B40-4.5-5.0	4.5-5.0	05-02-2014	**0.029**	<0.005	<0.005	<0.005	<0.005	<0.005
B41-1.5-2.0	1.5-2.0	05-05-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B41-4.5-5.0	4.5-5.0	05-05-2014	**0.0076**	<0.005	<0.005	<0.005	<0.005	<0.005
B42-1.5-2.0	1.5-3.0	05-05-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B42-2.5-3.0	2.5-3.0	05-05-2014	**0.010**	<0.005	<0.005	<0.005	<0.005	<0.005
B42-4.5-5.0	4.5-5.0	05-05-2014	**0.022**	<0.005	<0.005	<0.005	<0.005	<0.005
B43-1.5-2.0	1.5-2.0	05-06-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B43-2.5-3.0	2.5-3.0	05-06-2014	**0.022**	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1

ANALYTICAL RESULTS OF SOIL SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B43-4.5-5.0	4.5-5.0	05-06-2014	**0.015**	<0.005	<0.005	<0.005	<0.005	<0.005
B44-1.5-2.0	1.5-3.0	05-07-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B44-2.5-3.0	2.5-3.0	05-07-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B44-4.5-5.0	4.5-5.0	05-07-2014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B45-1.5-2.0	1.5-3.0	05-07-2014	**0.0052**	<0.005	<0.005	<0.005	<0.005	<0.005
B45-2.5-3.0	2.5-3.0	05-07-2014	**0.0052**	<0.005	<0.005	<0.005	<0.005	<0.005
B45-4.5-5.0	4.5-5.0	05-07-2014	**0.0068**	<0.005	<0.005	<0.005	<0.005	<0.005
B46-1.5-2.0	1.5-2.0	02-09-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B46-2.5-3.0	2.5-3.0	02-09-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B47-1.5-2.0	1.5-2.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B47-2.5-3.0	2.5-3.0	02-10-2015	**0.0060**	<0.005	<0.005	<0.005	<0.005	<0.005
B48-1.5-2.0	1.5-2.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B48-2.5-3.0	2.5-3.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B49-1.5-2.0	1.5-2.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B49-2.5-3.0	2.5-3.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B50-1.5-2.0	1.5-2.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B50-2.5-3.0	2.5-3.0	02-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B51-4.5-5.0	4.5-5.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B51-9.5-10	9.5-10	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B52-4.5-5.0	4.5-5.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B52-9.5-10	9.5-10	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B53-4.5-5.0	4.5-5.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B53-6.5-7.0	6.5-7.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B53-9.5-10	9.5-10	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B54-0.5-1.0	0.5-1.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B54-1.5-2.0	1.5-2.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B54-3.5-4.0	3.5-4.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B54-4.5-5.0	4.5-5.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1

ANALYTICAL RESULTS OF SOIL SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B54-9.5-10	9.5-10	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B55-0.5-1.0	0.5-1.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B55-2.5-3.0	2.5-3.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B55-4.5-5.0	4.5-5.0	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B55-9.5-10	9.5-10	02-26-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B56-4.5-5.0	4.5-5.0	02-27-2015	**0.040**	<0.005	<0.005	<0.005	<0.005	<0.005
B56-6.5-7.0	6.5-7.0	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B56-8.5-9.0	8.5-9.0	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B56-9.5-10	9.5-10	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B57-0.5-1.0	0.5-1.0	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B57-4.5-5.0	4.5-5.0	02-27-2015	**0.014**	<0.005	<0.005	<0.005	<0.005	<0.005
B58-4.5-5.0	4.5-5.0	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B58-6.5-7.0	6.5-7.0	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B58-9.5-10	9.5-10	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B59-1.5-2.0	1.5-2.0	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B59-4.5-5.0	4.5-5.0	02-27-2015	**0.050**	<0.005	<0.005	<0.005	<0.005	<0.005
B59-9.5-10	9.5-10	02-27-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B60-4.5-5.0	4.5-5.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B60-9.5-10	9.5-10	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B61-1.5-2.0	1.5-2.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B61-4.5-5.0	4.5-5.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B61-9.5-10	9.5-10	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B62-2.5-3.0	2.5-3.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B62-4.5-5.0	4.5-5.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1

ANALYTICAL RESULTS OF SOIL SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(mg/kg)

Sample ID	Depth (feet bsg)	Date	EPA SW 846/8260B					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)
B62-9.5-10	9.5-10	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B63-1.5-2.0	1.5-2.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B63-4.5-5.0	4.5-5.0	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B63-9.5-10	9.5-10	03-10-2015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

mg/kg: milligrams per kilogram

bsg: below surface grade

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

TABLE 2

ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	Depth (feet bsg)	EPA Method 8260B						
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Chloroform
V-1	05-08-2013	5	**29,000**	<2	<2	<2	<2	<2	<1
V-2	05-08-2013	5	**23,000**	<2	<2	<2	<2	<2	<1
V-3	05-08-2013	5	**15,000**	<2	<2	<2	<2	<2	<1
VP-1 (1 puge volume)	10-15-2013	5	**33,000**	<100	<100	<100	<100	<100	<100
VP-1 (3 purge volumes)	10-15-2013	5	**33,000**	<100	<100	<100	<100	<100	<100
VP-1 (10 purge volumes)	10-15-2013	5	**33,000**	<100	<100	<100	<100	<100	<100
VP-2	10-15-2013	5	**27,000**	<100	<100	<100	<100	<100	<100
VP-3	10-15-2013	3	**13,000**	<100	<100	<100	<100	<100	<100
VP-4	10-15-2013	5	**43,000**	<100	<100	<100	<100	<100	<100
VP-5	10-15-2013	5	**4,400**	<100	<100	<100	<100	<100	**240**
VP-6	10-15-2013	5	**36,000**	<100	<100	<100	<100	<100	<100
VP-7	10-15-2013	5	**39,000**	<100	<100	<100	<100	<100	<100
VP-7 (dup)	10-15-2013	5	**37,000**	<100	<100	<100	<100	<100	<100
VP-8	10-15-2013	5	**67,000***	<100	<100	<100	<100	<100	<100
VP-9	10-16-2013	5	**42,000**	<100	<100	<100	<100	<100	<100
VP-10	10-16-2013	5	**54,000***	<100	<100	<100	<100	<100	<100
VP-11	10-16-2013	5	**110,000**	<100	<100	<100	<100	<100	<100
VP-12	10-16-2013	5	**95,000**	<100	<100	<100	<100	<100	<100

TABLE 2

ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	Depth (feet bsg)	EPA Method 8260B						
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Chloroform
VP-13	10-16-2013	5	**80,000**	<100	<100	<100	<100	<100	<100
VP-14	10-16-2013	5	**55,000**	<100	<100	<100	<100	<100	<100
VP-14 (dup)	10-16-2013	5	**57,000**	<100	<100	<100	<100	<100	<100
VP-15	10-16-2013	5	**83,000**	<100	<100	<100	<100	<100	<100
VP-16	10-16-2013	5	**110,000**	<100	<100	<100	<100	<100	<100
VP-17	10-16-2013	5	**80,000**	<100	<100	<100	<100	<100	<100
VP-18	10-16-2013	5	**95,000**	<100	<100	<100	<100	<100	<100
VP-19	10-16-2013	5	**76,000**	<100	<100	<100	<100	<100	<100
VP-20	not completed								
VP-21	10-17-2013	5	**100,000**	<100	<100	<100	<100	<100	<100
VP-22	10-17-2013	5	**110,000**	<100	<100	<100	<100	<100	<100
VP-23	10-17-2013	5	**77,000**	<100	<100	<100	<100	<100	<100
VP-24	10-17-2013	3	**400,000**	<100	<100	<100	<100	<100	<100
VP-25	10-17-2013	5	**190,000**	<100	<100	<100	<100	<100	<100
VP-26	10-17-2013	5	**84,000**	<100	<100	<100	<100	<100	<100
VP-27	10-17-2013	5	**100,000**	<100	<100	<100	<100	<100	<100
VP-28	10-17-2013	5	**110,000**	<100	<100	<100	<100	<100	<100
VP-29	10-17-2013	5	**50,000**	<100	<100	<100	<100	<100	<100

TABLE 2

ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	Depth (feet bsg)	EPA Method 8260B						
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Chloroform
VP-30	10-17-2013	5	**1,200**	<100	<100	<100	<100	<100	<100
VP-31	10-18-2013	5	**100,000**	<100	<100	<100	<100	<100	<100
VP-32	10-18-2013	5	**2,500**	<100	<100	<100	<100	<100	<100
VP-32 (dup)	10-18-2013	5	**2,100**	<100	<100	<100	<100	<100	<100
VP-33	10-18-2013	5	**18,000**	<100	<100	<100	<100	<100	<100
VP-34	10-18-2013	5	**20,000**	<100	<100	<100	<100	<100	<100
VP-35	10-18-2013	5	**14,000**	<100	<100	<100	<100	<100	<100
VP-36	10-18-2013	5	**5,900**	<100	<100	<100	<100	<100	<100
VP-37	10-18-2013	5	**14,000**	<100	<100	<100	<100	<100	<100
VP-38	10-18-2013	5	**37,000**	<100	<100	<100	<100	<100	<100
VP-39	10-18-2013	5	**24,000**	<100	<100	<100	<100	<100	<100
VP-40	10-18-2013	5	**17,000**	**220**	<100	<100	<100	<100	<100
VP-41	05-05-2014	5	**7,300**	<100	<100	<100	<100	<100	<100
VP-42	05-05-2014	5	**14,000**	<100	<100	<100	<100	<100	<100
VP-43	05-05-2014	5	**32,000**	<100	<100	<100	<100	<100	<100
VP-43 (dup)	05-05-2014	5	**30,000**	<100	<100	<100	<100	<100	<100
VP-44	05-05-2014	5	**38,000**	<100	<100	<100	<100	<100	<100
VP-45	05-06-2014	5	**1,200**	<100	<100	<100	<100	<100	<100

TABLE 2

ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	Depth (feet bsg)	EPA Method 8260B						
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Chloroform
VP-46	05-06-2014	5	**24,000**	<100	<100	<100	<100	<100	<100
VP-46 (dup)	05-06-2014	5	**21,000**	<100	<100	<100	<100	<100	<100
VP-47	05-07-2014	5	**1,400**	<100	<100	<100	<100	<100	<100
VP-48	05-07-2014	5	**3,400**	<100	<100	<100	<100	<100	<100
VP-49	05-07-2014	5	**3,000**	<100	<100	<100	<100	<100	<100
VP-50	05-07-2014	5	**570**	<100	<100	<100	<100	<100	<100
VP-51	05-07-2014	5	**2,100**	<100	<100	<100	<100	<100	<100
VP-52	05-07-2014	5	**1,300**	<100	<100	<100	<100	<100	<100
VP-52 (dup)	05-07-2014	5	**1,500**	<100	<100	<100	<100	<100	<100
B46-Vapor	02-10-2015	3	**1,400**	<250	<250	<250	<250	<250	<250
B47-Vapor	02-10-2015	3	**800**	<250	<250	<250	<250	<250	<250
B48-Vapor	02-10-2015	3	**410**	<250	<250	<250	<250	<250	<250
B49-Vapor	02-10-2015	3	**440**	<250	<250	<250	<250	<250	<250
B50-Vapor	02-10-2015	3	**1,500**	<250	<250	<250	<250	<250	<250
B51-Vapor	02-26-2015	5	**170**	<100	<100	<100	<100	<100	<100
B52-Vapor	02-26-2015	5	**260**	<100	<100	<100	<100	<100	<100
B53-Vapor	02-26-2015	5	**350**	<100	<100	<100	<100	<100	<100
B54-Vapor	02-26-2015	5	**1,300**	<100	<100	<100	<100	<100	<100

TABLE 2

ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	Depth (feet bsg)	EPA Method 8260B						
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Chloroform
B55-Vapor	02-26-2015	5	**1,700**	<100	<100	<100	<100	<100	<100
B55-Vapor (dup.)	02-26-2015	5	**1,700**	<100	<100	<100	<100	<100	<100
B56-Vapor	02-27-2015	5	**36,000**	<100	<100	<100	<100	<100	<100
B58-Vapor	02-27-2015	5	**68,000**	<100	<100	<100	<100	<100	<100
B58-Vapor (dup.)	02-27-2015	5	**70,000**	<100	<100	<100	<100	<100	<100
B59-Vapor	02-27-2015	5	**18,000**	<100	**140**	<100	<100	<100	<100
B60-Vapor	03-10-2015	5	<100	<100	<100	<100	<100	<100	<100
B61-Vapor	03-10-2015	5	**210**	<100	<100	<100	<100	<100	<100
B62-Vapor	03-10-2015	5	<100	<100	<100	<100	<100	<100	<100
B63-Vapor	03-10-2015	5	<100	<100	<100	<100	<100	<100	<100
VP-53	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100
VP-54	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100
VP-55	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100
VP-56	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100

TABLE 2

ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(micrograms per cubic meter)

Sample ID	Date	Depth (feet bsg)	EPA Method 8260B						
			PCE	TCE	1,1-DCE	Trans 1,2-DCE	Cis 1,2-DCE	VC	Chloroform
VP-57	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100
VP-57 (dup.)	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100
VP-58	06-23-2016	5	<100	<100	<100	<100	<100	<100	<100
CHHSLs (Residential)			180	528	-	31,900	15,900	13.3	-
SFBRWCB ESL Shallow Soil Gas (Commercial)			2,100	3,000	100,000	260,000	-	16	230
SFBRWCB ESL Shallow Soil Gas (Residential)			210	300	880,000	31,000	-	160	2,300

Notes:
SFBRWCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for shallow soil gas
<: Indicates constituents were not detected at a concentration greater than the reporting limit shown.
CHHSLs: California Human Health Screening Levels
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
bsg: below surface grade
* : notation for detection above the liner range of calibration

TABLE 3

ANALYTICAL RESULTS OF GRAB GROUNDWATER SAMPLES
Swiss Valley Cleaners
1395 MacArthur Boulevard, San Leandro, California
(ug/l)

Sample ID	Date	EPA 8260B						
		Tetrachloroethene (PCE)	Trichloroethene (TCE)	1,1-Dichloroethene (1,1-DCE)	Trans 1,2-Dichloroethene (Trans 1,2-DCE)	Cis 1,2-Dichloroethene (Cis 1,2-DCE)	Vinyl Chloride (VC)	Acetone
SVC-1	08-19-1998	<0.5	<0.5	<0.5	-	-	-	-
B9W@46-50	05-07-2013	**7.6**	<0.5	<1	<1	<1	<0.5	<10
B10W@46-50	05-07-2013	**2.7**	<0.5	<1	<1	<1	<0.5	<10
US EPA MCL		5	5	7	100	70	2	-
CDPH MCL		5	5	6	10	6	0.5	-
SFBRWCB ESL		5	5	6	10	6	0.5	6,300

Notes: <:

µg/l: micrograms per liter bsg: below surface grade

US EPA MCL: United State Environmental Protection Agency Maximum Contaminant Level

CDPH MCL: California Department of Public Health Maximum Contaminant Level

SFBRWCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Level

SVC-1: Sample I.D refers to sample collected from floor drain inside unit.

APPENDIX A

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBECCA GEBHART, Interim Director

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

October 3, 2016

Mr. William Mathews Brooks
4725 Thornton Avenue
Fremont, CA 94536
(Sent via electronic mail to: REWMB@aol.com)

Subject: Request for Groundwater Investigation Work Plan; Site Cleanup Program (SCP) Case No. RO0003120 and GeoTracker Global ID T10000005063, Swiss Valley Cleaners, 1395 MacArthur Blvd, San Leandro, CA 94577

Dear Mr. Brooks:

Alameda County Department of Environmental Health (ACDEH) has reviewed the *Off-Site Assessment Report,* dated August 11, 2016, which was prepared and submitted on your behalf by Advanced GeoEnvironmental, Inc, (AGE). The report documented the investigation of the potential for a vapor intrusion risk that was conducted in the vicinity of a series of off-site buildings associated with the St. James Lutheran Church property. Thank you for undertaking the work and submitting the report.

Based on the review of the case file ACDEH requests that you address the following technical comments and send us the documents requested below.

TECHNICAL COMMENTS

1. **Off-Site Soil Vapor Investigation** – The initial collection of data indicates that a vapor intrusion risk may not be present in the vicinity of the off-site structures. Conversely, the initial collection of data in the off-site parking lot appears to indicate the potential for vapor intrusion should the parking lot be converted to non-parking uses in the future. ACDEH recognizes that the planned corrective actions may affect off-site contaminant concentrations, and consistent with Department of Toxic Substance Control (DTSC) guidelines, a future re-assessment of off-site vapor concentrations in both areas of that site is appropriate to determine any induced, or seasonal, changes.
2. **Groundwater Investigation** – To date, in order to focus on vapor intrusion risks at the site and vicinity, very limited investigative effort has been focused on the delineation of the PCE groundwater plume that was initially documented beneath the site. As a consequence and concurrent with site corrective actions, ACDEH requests the generation of a work plan to delineate the PCE groundwater contaminate plume by the date identified below.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACDEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with Attachment 1 and the specified file naming convention below, according to the following schedule:

- **December 16, 2016** – Work Plan
  File to be named: RO3120_WP_R_yyyy-mm-dd

Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Digitally signed by Mark Detterman
DN: cn=Mark Detterman, o=ACEH, ou=ACEH, email=mark.detterman@acgov.org, c=US
Date: 2016.10.03 11:10:20 -07'00'

Mark E. Detterman, P.G., C.E.G.
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations
Electronic Report Upload (ftp) Instructions

cc: Daniel Villanueva, Advanced GeoEnvironmental, Inc, 837 Shaw Road, Stockton, CA 95215
(Sent via electronic mail to: DVillanueva@advgeoenv.com)

William Little, Advanced GeoEnvironmental, Inc, 837 Shaw Road, Stockton, CA 95215
(Sent via electronic mail to: WLittle@advgeoenv.com)

Dilan Roe, ACDEH, (Sent via electronic mail to: dilan.roe@acgov.org)
Mark Detterman, ACDEH, (Sent via electronic mail to: mark.detterman@acgov.org)
Geotracker, Electronic File

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

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

REQUIREMENTS

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

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

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

APPENDIX B


N
LEGEND
MW-3 GROUNDWATER MONITORING WELL LOCATION
VE-1 SOIL VAPOR EXTRACTION WELL LOCATION
MW-1 ABANDONED MONITORING WELL LOCATION
CPT-1 CPT BORING LOCATION
B-1 SOIL BORING LOCATION
ELECTRICAL LINE
WATER LINE
SANITARY SEWER LINE
GAS LINE
STORM DRAIN
COMMUNICATION LINE
JOAQUIN AVENUE
GRAND AVENUE
DRIVEWAY
FENCE
WALL
SIGN
CANOPY
FORMER UST
CURRENT UST COMPLEX
CONCRETE
FORMER WASTE OIL UST
UNKNOWN UTILITY
TANK COMMUNICATION LINE
BUILDING
AC PAVING
MW-3
MW-6
MW-7
MW-8
MW-9
MW-10
MW-1R
MW-2R
MW-4
VE-1
CPT-1
CPT-2
B-1
B-4
B-5
B-6
B-7
B-10
NOTES:
1. SOIL BORING AND FORMER UST LOCATIONS ARE APPROXIMATE
2. BASE MAP PROVIDED BY MORROW SURVEYING

STRATUS ENVIRONMENTAL, INC.

0 40 FT
SCALE

FORMER HABER OIL PRODUCT
1401 GRAND AVENUE
SAN LEANDRO, CALIFORNIA

UNDERGROUND UTILITY LOCATION MAP

FIGURE 5

PROJECT NO. 2120-1401-01

GREGG

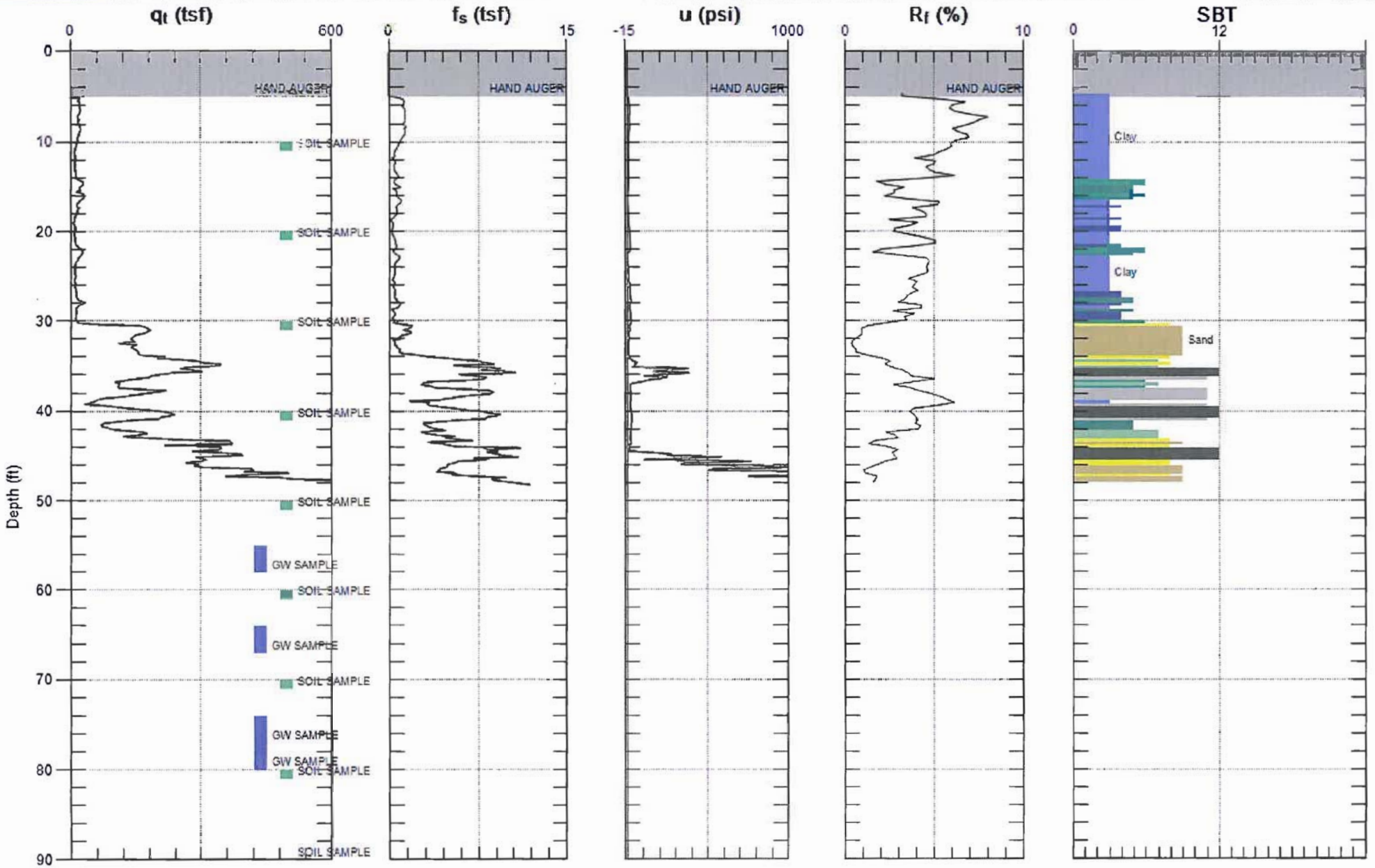
STRATUS

Site: HABER OIL

Sounding: CPT-1

Engineer: S.BITTINGER

Date: 6/29/2012 08:10



Max. Depth: 48.228 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BOREHOLE LOG

CPT-1

STRATUS Project No.: 2120-1401-1	**Site: Haber Oil**	**Drilling Company: Gregg In Situ, Inc.**
	1401 Grand Avenue, San Leandro	**Driller: German**
Date: June 29, 2012		**Field Geologist: Shane Edmunds**

Drilling Rig:	CPT	**Drilling Method:**	Direct Push (CPT Truck)
Borehole Diameter:	2 inches	**Soil Sample Equipment:**	12-inch piston sampler
Total Sampling Depth:	90 feet bgs	**Water Sampling Equipment:**	Hydropunch™

Well Completion Data

Slotted Interval:	**Casing Material:**
Filter Pack Material:	**Casing Diameter:**
Seal Material:	**Slot Size:**
Backfill Material: Neat Cement	

Sample ID	Depth (ft.)	Sample Interval	% Rec.	Sample Time	PID (ppm)	Soil Class.	Description:
CPT-1-10-S	10	10-11		0948		CL	Silty Clay, olive brown, est. 75% clay, 25% silt, Dry to moist
CPT-1-20-S	20	20-21		0956		CL	Sandy clay, olive brown, est. 70% clay, 20% Fine grained sand, 5% silt, moist
CPT-1-30-S	30	30-31		1007		SW-SM	Sand, fine to medium grained with 10% fines, Moist
CPT-1-40-S	40	40-41		1024		SC	Clayey sand, greenish gray, est. 65-75% fine Grained sand, 25-35% clayey fines, dry to moist
CPT-1-50-S	50	50-51		1106		CL	Sandy clay, light greenish gray, est. 70% clayey Fines, 30% fine grained sand, wet, soft
CPT-1-56-W	56	54-57		1609			Water
CPT-1-60-S	60	60-61		1131		CL	Sandy clay with silt and caliche, yellowish brown, Est.60% clay, 20% sand, 10% silt, 10% caliche
CPT-1-66-W	66	64-67		1652			Water
CPT-1-70-S	70	70-71		1216		SC	Clayey sand, est. 70% fine grained sand, 30% Clayey fines, wet
CPT-1-76-W	76	74-77		1755			Water
CPT-1-80-S	80	80-81		1349		SC	Clayey sand, est. 70% fine grained sand, 10% Medium grained sand, 20% clayey fines, wet
CPT-1-80-W	80	77.5-80.5		1836			Water, direct push refusal at 80.5 feet bgs.
CPT-1-90-S	90	89-90		1433		SC	Clayey sand, gray, est. 65% sand, 35% clayey Fines, wet

STRATUS ENVIRONMENTAL, INC.

GREGG

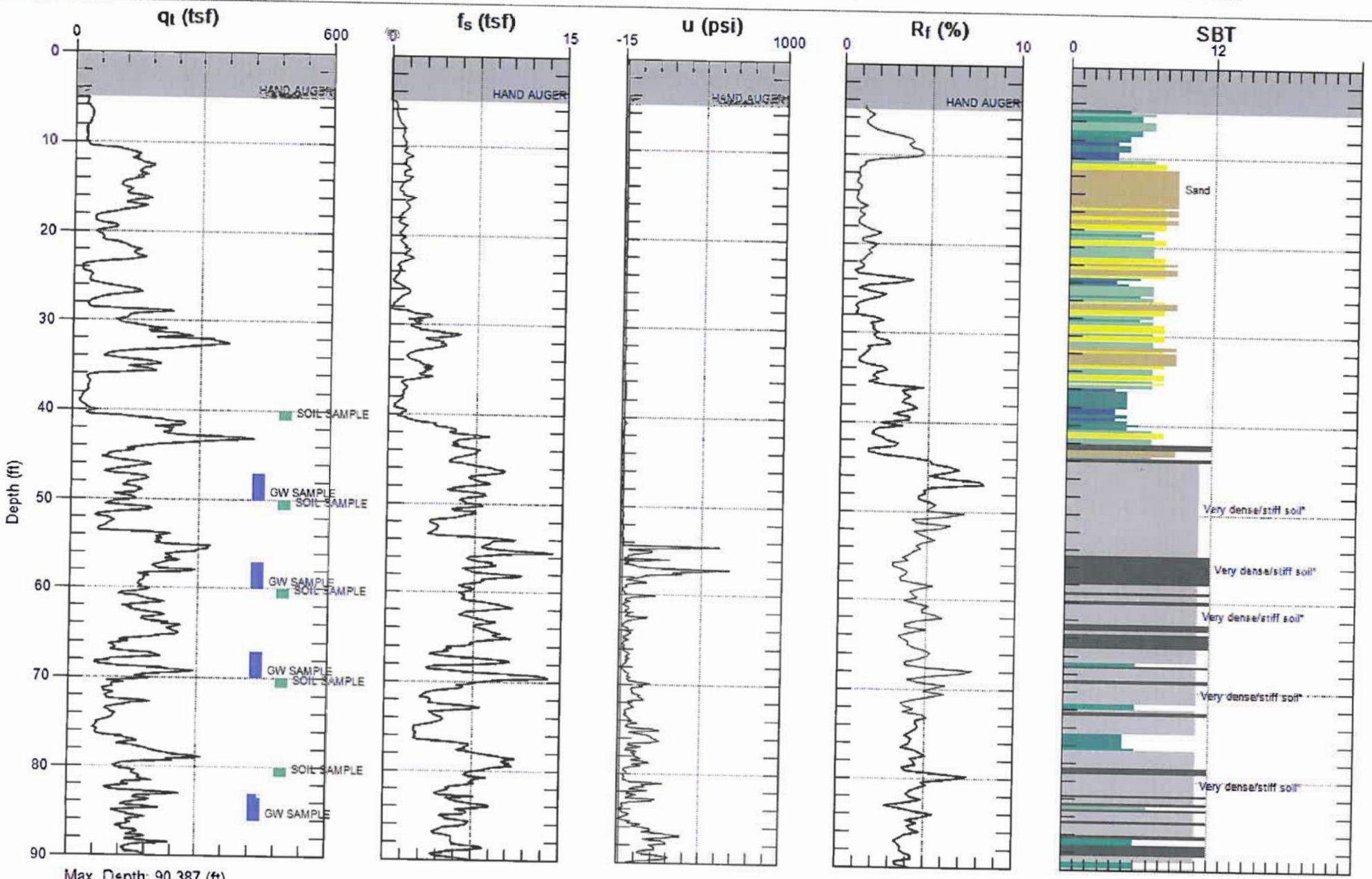
STRATUS

Site: HABER OIL

Sounding: CPT-2

Engineer: S.BITTINGER

Date: 6/28/2012 07:25



Max. Depth: 90.387 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BOREHOLE LOG

CPT-2

STRATUS Project No.: 2120-1401-1	**Site: Haber Oil**	**Drilling Company: Gregg In Situ, Inc.**
	1401 Grand Avenue, San Leandro	**Driller: German**
Date: June 28, 2012		**Field Geologist: Shane Edmunds**

Drilling Rig:	CPT	**Drilling Method:**	Direct Push (CPT Truck)
Borehole Diameter:	2 inches	**Soil Sample Equipment:**	12-inch piston sampler
Total Sampling Depth:	86 feet bgs	**Water Sampling Equipment:**	Hydropunch™

Well Completion Data

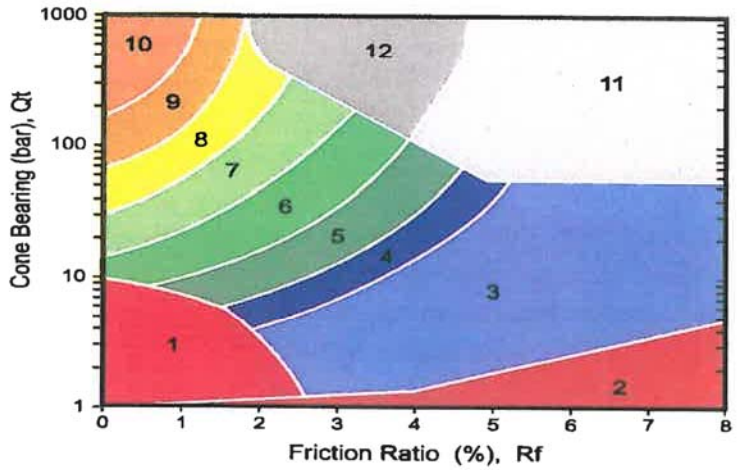
Slotted Interval:	**Casing Material:**
Filter Pack Material:	**Casing Diameter:**
Seal Material:	**Slot Size:**
Backfill Material: Neat Cement	

Sample ID	Depth (ft.)	Sample Interval	% Rec.	Sample Time	PID (ppm)	Soil Class.	Description:
CPT-2-40-S	40	40-41		1048		SC	Clayey sand, light olive brown, est. 60% fine gr.
							Sand, 35% clayey fines, 5% silt, wet
CPT-2-48-W	48	47-50		1430			Water
CPT-2-50-S	50	50-51		1113		SC	Clayey sand, est. 85-90% fine grained sand, trace
							Medium sand, 10-15% clayey fines, wet
CPT-2-58-W	58	57-60		1511			Water
CPT-2-60-S	60	60-61		1142		CL	Clay with sand & silt, est. 80% clay, 10% silt, 10%
							Fine grained sand
CPT-2-68-W	68	67-70		1559			Water
CPT-2-70-S	70	70-71		1216		SC	Clayey sand, est. 70% fine grained sand, 30%
							Clayey fines, wet
CPT-2-80-S	80	80-81		1240		SC	Clayey sand, light olive brown, est. 60% sand,
							40% clay, damp to wet
CPT-2-85-W	85	83-86		1336			Water

STRATUS ENVIRONMENTAL, INC.

CPT Classification Chart
(after Robertson 1990)

Non-Normalized Classification Chart



Zone	Q_t / N	Soil Behaviour Type
1	2	sensitive fine grained
2	1	organic material
3	1	clay
4	1.5	silty clay to clay
5	2	clayey silt to silty clay
6	2.5	sandy silt to clayey silt
7	3	silty sand to sandy silt
8	4	sand to silty sand
9	5	sand
10	6	gravelly sand to sand
11	1	very stiff fine grained *
12	2	sand to clayey sand *

* overconsolidated or cemented

GREGG

Geotechnical and Environmental In Situ Testing Contractors

Los Angeles · San Francisco · Houston · Aiken
Vancouver · Edmonton · Salt Lake City · New Jersey

Tel: (925)313-5800 · Fax: (925)313-0302 · E-mail: gregg@ecis.com