

# WEINGARTEN REALTY

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**RECEIVED**

By Alameda County Environmental Health 2:29 pm, Aug 16, 2016

Mr. Gabe Stivala, P.G  
ATC Group Services LLC  
701 University Drive, Suite 200  
Sacramento, CA 95825

**SUBJECT** Revised Remedial Excavation Work Plan  
Dry Clean 580 and Adjacent Retail Units  
3735 East Castro Valley Boulevard  
Alameda County LOP No. RO 3097

Dear Mr. Stivala:

I have reviewed and approved the subject report. Please submit it to the regulatory agencies listed in the distribution section of the report. Should any of the agencies require it, I am prepared to declare, under penalty of perjury, that to the best of my knowledge, the information contained in the report is true and correct.

Sincerely,



Charles Gurney

Weingarten Realty Investors  
2600 Citadel Plaza Drive, Suite 300  
Houston, Texas 77008

Date: 8-10-16

People-to-People. Coast-to-Coast.

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August 10, 2016

Ms. Karel Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Subject: Revised Remedial Excavation Work Plan  
580 Market Place Shopping Center  
3735-4065 east Castro Valley Boulevard  
Castro Valley, California  
ACEH Case No. RO000309  
ATC Project No. Z075000152

Dear Ms. Detterman:

On behalf of Weingarten Realty, ATC Group Services LLC (ATC) has prepared this Revised Remedial Excavation Work Plan for the 580 Market Place Shopping Center in Castro Valley, California. The work plan describes the recommended course of action for removal of elevated concentrations of tetrachloroethene (PCE) in soil in the suspected source area at the subject site. This document describes remedial objectives and methods, worker safety, sampling protocols, and air monitoring.

If you have questions or comments regarding this work plan, please contact Gabe Stivala at 925-223-7123 or [gabe.stivala@atcassociates.com](mailto:gabe.stivala@atcassociates.com).

Sincerely,



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for ATC  
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## **Revised Remedial Excavation Work Plan**

**580 Market Place Shopping Center  
3735–4065 East Castro Valley Boulevard  
Castro Valley, California  
ACEH Case No. RO0003097**

**Submitted to:**

Ms. Karel Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

**Prepared on Behalf of:**

Mr. Charles Gurney  
Weingarten Realty Investors  
2600 Citadel Plaza Drive, Suite 300  
Houston, Texas 77008

**Submitted by:**

ATC Group Services LLC  
915 Highland Pointe Drive, Suite # 250  
Roseville, California 95678

ATC Project No. 1191600012

August 10, 2016

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Figure 1 – Site Vicinity Map

Figure 2 – Site Plan with Soil Analytical Data for PCE and Proposed Excavation Extents

Figure 3 – Generalized Cross Section A-A'

Figure 4 – Generalized Cross Section A-A'

Cumulative Data Tables- Soil, Soil Gas, Subslab Vapor and Indoor Air

Appendix A – Airborne Monitoring, Personal Protective Equipment & Exposure Control Protocol.



## 1.0 INTRODUCTION

On behalf of Weingarten Realty (Weingarten), ATC Group Services LLC (ATC) has prepared this Revised Remedial Excavation Work Plan (Work Plan) for the 580 Market Place Shopping Center in Castro Valley, California (**Figure 1**). The work plan describes the recommended course of action for removal of elevated concentrations of tetrachloroethene (PCE) in soil in the suspected source area at the subject site. This work plan is a revision of the *Remedial Excavation Work Plan* submitted by ATC to the Alameda County Environmental Health on March 14, 2016. The revisions are based on comments and requests from the ACEH made in a conference call between the ACEH, Weingarten and ATC on July 21, 2016.

The work is being proposed in response to vapor intrusion risks identified during the investigation of the subsurface chlorinated solvent release outside and adjacent to the west side of the DryClean 580 dry cleaning facility on the subject property. The conceptual excavation scope was initially proposed in a meeting with the ACEH on January 13, 2016. The ACEH generally concurred that excavation as an interim action to address vapor intrusion risks was appropriate for this case.

This document describes remedial objectives and methods, worker safety, permit requirements, sampling protocols, and air monitoring.

## 2.0 PROPOSED OBJECTIVE AND SCOPE OF WORK

The objective of the proposed excavation is to remove, to the extent practicable, shallow soil with the highest reported PCE concentrations in an effort to reduce the mass of PCE and other volatile organic compounds (VOCs) in the vicinity of occupied tenant spaces. This contaminant mass may be a contributor to vapor phase VOCs, and through removal, vapor intrusion risks may be reduced. Although impacts have been reported in deeper soil, the proposed excavation is limited to a maximum depth of four feet below ground surface (bgs). The rationale for limiting the excavation depth is three-fold; 1) a deeper excavation is a risk to the integrity of the structure to the north and the large utility corridor to the south, 2) reported soil results generally appear to attenuate with increased depths, and 3) it is generally accepted that the ability of vapors to migrate vertically is inhibited with increased overburden with depth, therefore deeper impacts likely have lower risk for vapor intrusion.

The proposed limits of the excavation, in relation to PCE impacts, are shown on **Figures 2 through 4**. The proposed scope of work is summarized as follows:

- Acquire appropriate permits and make appropriate notifications including acquiring an excavation/grading permit and notification to the Bay Area Air Quality Management District.
- Notify tenants of the 580 Market Place shopping center of the project with a fact sheet.
- Notify Underground Service Alert (USA) and use the information provided by previous investigations by various private utility locators to identify utilities present. Subcontract a private utility locator to resurvey the area before excavating.
- Mobilize a backhoe/excavator, hydrovac excavator, disposal bins, and other equipment, as necessary.
- Uncover the sewer line and utility corridor by hand digging, as necessary.
- Excavate, store, transport, and dispose of impacted soil.
- Collect and analyze excavation sidewall and bottom confirmation soil samples for laboratory analyses.
- Backfill and compact the excavation with clean imported soil.

Cumulative Data for all media collected throughout the investigation have been included as an attachment.

All work described in this work plan will be performed under the direction of a California Registered Professional Geologist or Engineer. A licensed general engineering contractor will be subcontracted by ATC to conduct the excavation activities. An excavation summary report will be prepared and submitted to ACEH following completion of field work and receipt of laboratory analyses,



## **3.0 PRE-FIELD ACTIVITIES**

### **3.1 Permits and Notifications**

ATC and/or their subcontractors will obtain any required local and county permits and approvals, and provide notifications prior to conducting the work. A list of permits, approvals, and notifications identified to date include:

- Public notice as required by ACEH.
- Bay Area Air Quality Management notification, if necessary.
- Underground Service Alert (USA North).
- Any necessary permits from the City of Castro Valley.

### **3.2 Health and Safety**

As with any project of this kind, there are a variety of potential hazards. ATC has established a Safety and Health Program (SHP) to enhance the personal health and safety of site workers, the public, and the environment. The SHP defines safety practices and procedures to be instituted in ATC work places, as applicable. The program meets or exceeds, the requirements promulgated by Occupational Health and Safety Administration (OSHA). As part of the SHP, all ATC personnel are appropriately trained and under a Medical Surveillance Program in accordance with OSHA 40 CFR 1910.120 and Cal-OSHA Title 8 Section 5-1-92(e) and (t).

ATC will prepare and implement a site-specific Health and Safety Plan (HASP) for this project based on the scope of work and the potential project-specific hazards. All individuals working for ATC or subcontracted to ATC will be required to review and sign the HASP prior beginning work to acknowledge their understanding of the information contained within. The HASP will be implemented on-site by ATC personnel.

At a minimum, the HASP will identify: roles and responsibilities of key site personnel; hazard analysis for potential chemical, physical, and physiochemical hazards anticipated; a personnel protection plan; site safety procedures for specific site operations; and an emergency response/contingency plan. The HASP will specify levels of protection for site personnel on a task-specific basis. ATC will provide on-going evaluation of all potentially hazardous conditions as the project is undertaken, and if necessary, will prescribe additional safety protocols to protect personnel, the public, and the environment.

## **4.0 FIELD ACTIVITIES**

### **4.1 SITE SECURITY**

ATC will implement engineering controls to protect the health and safety of on-site workers and the public throughout the duration of the project. During work hours, ATC will be responsible for controlling unauthorized access to the work area. Authorized site visitors entering active remediation areas will be required to participate in a site safety orientation, review job safety analysis, as necessary, and review and sign the Site Health and Safety Plan (HASP). Only authorized visitors will be allowed to enter the active remediation areas. During off working hours, temporary chain link fence will block access the site, and gates will be closed and locked.

### **4.2 AIR MONITORING AND DUST CONTROL**

During excavation activities, ATC will conduct monitoring of organic vapor concentrations to control worker exposure and off-site emissions. Air monitoring will be performed throughout the day in the work zone using a portable PID. The monitoring will be used to evaluate the need to upgrade PPE in accordance with the HASP, and help determine if additional environmental controls are needed to reduce air emissions from the site.



Baseline conditions will be established for all monitored parameters. Calibration checks of monitoring equipment will be performed at a minimum of once per day. Air monitoring data will be recorded and reviewed throughout the workday to evaluate against action levels defined in ATC's Airborne Monitoring, Personal Protective Equipment & Exposure Control Protocol. A copy of the protocol is included in Appendix A. If action levels are exceeded, or any complaints received, the ATC project manager will be informed immediately so corrective actions can be implemented.

#### **4.2.1 Vapor Control**

Excavation of contaminated soil may produce vapors that are a risk to human health. ATC and subcontractors will employ the following vapor control measures as necessary throughout the project:

- Covering soil piles when they are not being actively worked, and at night;
- Minimizing drop heights while loading and unloading soil;
- Minimizing the excavation, loading, or unloading of soil during periods not devoid of winds or when other vapor control measures are not able to prevent explosive atmospheres or nuisance vapors from occurring;
- Use of vapor suppressing agents, if deemed necessary.

#### **4.2.2 Dust Control**

Construction activities such as excavation, backfilling, grading, stockpiling, and equipment traffic may generate dust and particulate matter when the exposed soil surfaces are dry. Wind is also a contributor. To mitigate the release of dust, the following dust control measures will be implemented as needed throughout the project:

- Covering of wetting debris, soil, or other dust-generating materials and equipment when they are not being actively worked, and at night;
- Minimizing drop heights while loading and unloading soil;
- Use of soil binding agents such as surfactants;
- Street sweeping;
- Suspending the excavation, loading, or unloading of soil during periods of high winds or when dust control measures are not able to prevent visible dust plumes.

### **4.3 SOIL EXCAVATION**

Excavation activities will be performed by utilizing a backhoe/excavator, an airknife/airvac excavator, mini-excavator, and/or hand digging. To evaluate extent of impacted soil, ATC will field-screen soil using a photo ionization detector (PID) that measures volatile organics in concentrations in the parts per billion (ppb) range.

The proposed excavation area the maximum anticipated extent and is based on the cumulative soil data collected at the site. The main target area is at Boring CB 12 which has the site's maximum detected PCE concentration in soil, 16 mg/kg at 2 feet bgs. It is believed that this is a likely source of chlorinated hydrocarbon vapors at the site. The selected excavation area is based on encompassing the area of Boring CB-12 to what appears to be the maximum extent of significant chlorinated hydrocarbon impacts to soil. The proposed excavation area was also designed to include a section near the sanitary sewer line that exits the dry cleaning facility. Though there is no data indicating the sanitary sewer is a potential source, sanitary sewers are a frequent release point or conduit for chlorinate hydrocarbon contamination at dry leaning facilities, therefore by excavating the fill around the sanitary sewer it can be verified whether the sanitary sewer is a potential additional source of impacts at the site.

The remedial goal is to excavate shallow soil within the proposed excavation area to a PCE concentration of 0.1 mg/kg, or 100 µg/kg, and will be determined based on laboratory analysis of sidewall confirmation samples. The excavation will be guided using a photoionization detector (PID) capable of measuring to 1 part per billion. For the sake of guiding excavation field screening, a 500 parts per billion measurement on





the PID will be used to limit excavation. Note that the excavation may be extended to the northeast if necessary, however due to the presence of structures and utilities, it will not be expanded in any other direction; expanding the excavation in the other directions will likely require an additional mobilization or an alternate remediation method.

The vertical extent of the excavation will be limited to a maximum depth of 4 feet bgs due to the concern that deeper excavation may undermine adjacent structures and utilities.

The proposed excavation also includes potentially uncovering a portion of the sanitary sewer line that exits the dry cleaning facility. Measures will be taken to protect the sewer line in the event soil beneath it requires excavation. This will allow inspection of the sanitary sewer and surrounding fill to determine if this is a potential source of the impact.

Additional details of implementing excavation include the following:

1. The existing asphalt pavement will be saw cut as directed in the field by the owner representative.
2. Asphalt will be removed and disposed of as clean recyclable debris.
3. Utilities within the planned excavation area will be uncovered by hand cleared and flagged.
4. If necessary, remove and temporarily cap the existing sanitary sewer line within the proposed excavation limits, if necessary.
5. The majority of soil excavation will be accomplished utilizing a track mounted excavator.
6. Excavated soils will be directly loaded into the poly lined 18-yard capacity roll off bins pre-staged directly adjacent to the planned excavation.
7. If direct air monitoring readings exceed action levels for vapor, vapor suppression will be employed using media consisting of Bio-Solve® or like product.
8. As the bins are filled they will be secured with hard top covers, rolled into the temporary bin storage area utilizing a skid-steer loader, and an empty bin will be rolled back and staged adjacent to the excavation area for loading by the excavator equipment. The sequence will be repeated with additional bins as needed. The bins will be staged behind the temporary chain link fence pending offsite disposition.
9. Upon completing the excavation, a temporary chain link fence will be erected around the open excavation. Reflective barricades and banner guard tape will be placed around the temporary fencing.

Excavated soil will be directly loaded into roll-off bins and stored on-site during the project.

#### **4.3.1 Confirmation Sampling**

Following completion of the proposed excavation, confirmation soil samples will be collected from the excavation sidewalls and the base of the excavation. Samples will be collected using hand tools or collected from an excavator bucket. Side wall samples will be collected at 2 feet and 4 feet bgs, and on additional 2-foot intervals if the excavation exceeds 4 feet in depth. The sidewall samples will have a maximum horizontal spacing of 10 feet. Excavation bottom samples will be collected on a 10-foot grid across the entire excavation bottom. Additional samples may be collected based on field observations in areas of suspected impacts. Soil samples will be placed on ice and transported under chain-of-custody documentation to a State-certified laboratory for analyses. Samples will be analyzed for VOCs by 8260B. Samples will be analyzed on a 24-hour TAT in order to limit remediation contractor downtime.

#### **4.3.2 Laboratory Analyses**

Confirmation soil samples will be placed on ice and shipped under chain-of-custody documentation to a California-certified testing laboratory. Samples will be analyzed for full scan volatile organic compounds (VOCs), total petroleum hydrocarbons as quantified as gasoline (TPHg), and naphthalene by EPA Method 8260B.

### **4.4 BACKFILLING THE EXCAVATION**

Following receipt of confirmation sample results, the excavated areas will be backfilled with clean imported soil. Imported fill will be analyzed prior to importation in accordance with the DTSC *Information Advisory-Clean Imported Fill Material*, dated October 2001. Imported fill material will be suitable for compaction as required by the excavation or grading permit. The material shall not include organic or other deleterious





materials. The excavation will be backfilled and compacted in lifts not exceeding 12 inches in depth at the direction of the engineers.

In the conference call between the ACEH, Weingarten and ATC on July 21, 2016. ACEH recommend consideration of a low permeability fill material for backfilling as a means of inhibiting future intrusion of vapors from residual contaminants left in place in the excavation. After consideration, it is ATC's opinion that doing so may result in "pushing" vapors below the low permeable material toward the building and possibly increase vapor intrusion risk. Therefore we feel a coarser material may be beneficial and create a sink that allows vapors beneath the building to escape to the subsurface at the exterior of the building. Therefore, the excavation will be coarse fill material.

#### **4.5 MANAGEMENT OF EXCAVATED SOIL**

Excavated soil will be stored on-site in a roll-off bin. Based on laboratory analytical results, the soil will be profiled for proper disposal at a permitted landfill. Following acceptance by an appropriate landfill, soil will be transported by a certified waste hauler for disposal.

#### **4.6 SITE RESTORATION AND DEMOBILIZATION**

Site restoration will be performed following backfilling and compaction activities. Site restoration will include the following:

- Grading the excavated area.
- Surface restoration by paving with asphalt concrete.



## 5.0 REPORTING

Upon completion of the proposed work, an excavation summary report will be prepared by ATC which, at a minimum will include the following:

- Site history and previous investigation results;
- Summary of the excavation and restoration activities;
- Copies of permits obtained for the project;
- The volumes of material exported and imported;
- A site plan and cross-sections showing pre-remediation and post remediation limits of impacted soil (if encountered), and verification sample locations;
- Copies of the laboratory reports and chain-of custody documentation;
- Copies of waste manifests for soil and any materials disposed at off-site facilities;
- The soil compaction report, if required; and
- Conclusions and recommendations.

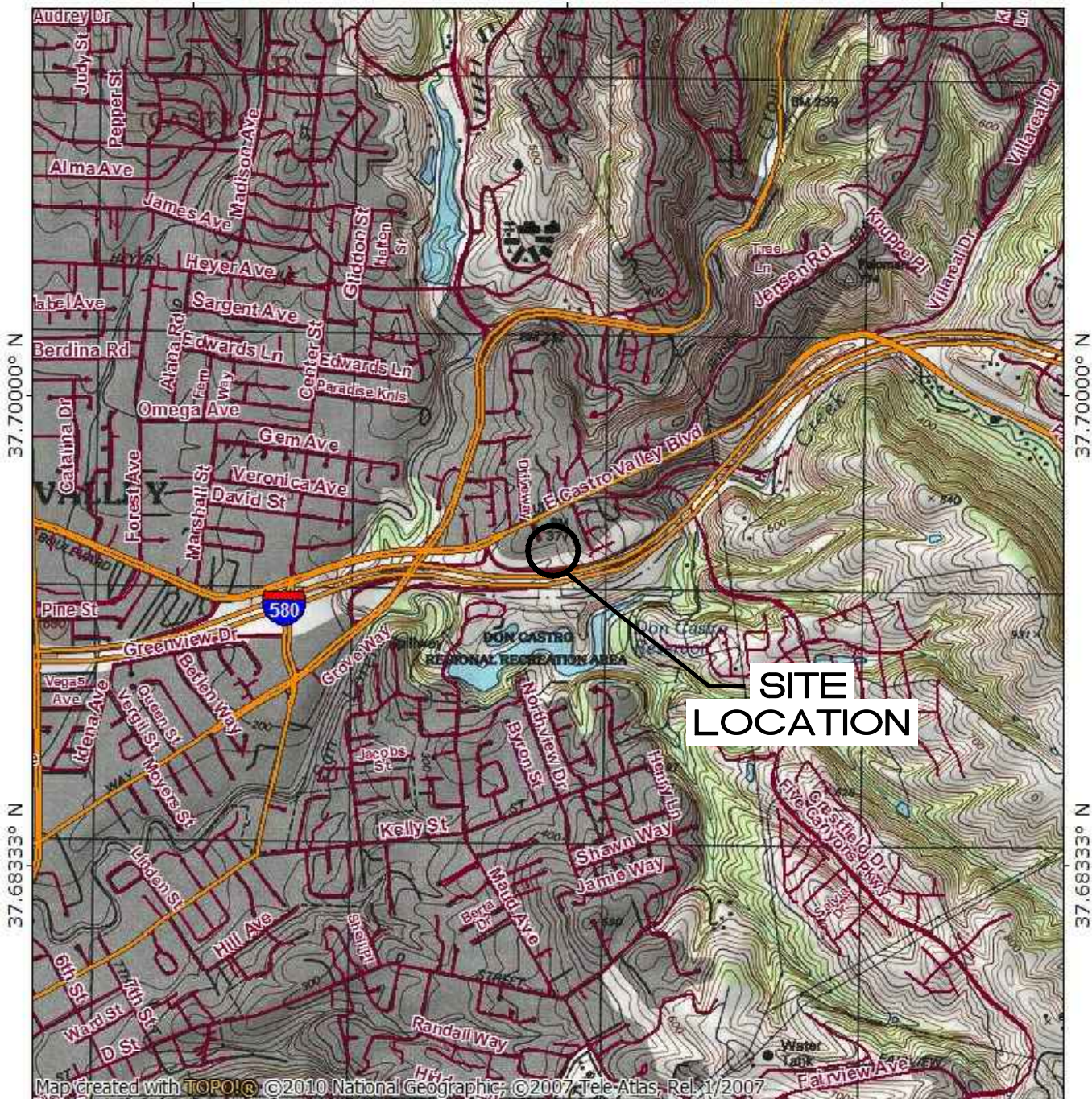
## FIGURES



122.06667° W

122.05000° W

WGS84 122.03333° W

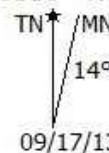
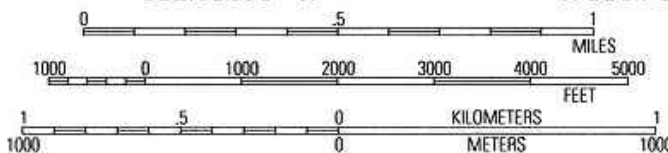


Map created with TOPO!® ©2010 National Geographic, ©2007 Tele Atlas, Rel. 1/2007

122.06667° W

122.05000° W

WGS84 122.03333° W



SOURCE: USGS TOPO MAP, HAYWARD, CA QUAD, 1996

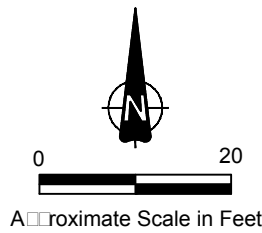
### SITE VICINITY MAP

580 MARKET PLACE SHOPPING CENTER  
 3735 - 4065 CASTRO VALLEY BOULEVARD  
 CASTRO VALLEY, CA

PROJECT NUMBER: 1191600012	DATE: 3/10/16	FIGURE
APPROVED BY: GS	DRAWN BY: BK	1

**ATC** 915 Highland Point Dr., Ste. 250  
 Roseville, California 95678  
 Ph: (916) 924-5247 \*\*\* Fax: (916) 724-5201





ATC-2	
Soil	
Depth	PCE
2-3	<b>0.85</b>
7-8	0.0047
11-12	NA

CB10	
Soil	
Depth	PCE
3	<b>0.87</b>
4	<b>0.0054</b>
8-8.5	0.0046

CB12	
Soil	
Depth	PCE
2-2.5	<b>16</b>
4-4.5	<b>0.12</b>
6-6.5	<b>0.29</b>
7.5-8	<b>0.05</b>
9.5-10	<b>0.1</b>
12-12.5	<b>0.098</b>
14-14.5	<b>3.6</b>
16.5-17	<b>0.091</b>
22-22.5	<b>0.039</b>
23-23.5	<b>0.041</b>

CB11	
Soil	
Depth	PCE
2.5-3	0.021
3-3.5	0.031
6	0.16
8	0.0047
10	0.016
11.5	0.29
19-19.5	0.0047

SV-21	
Soil	
Depth	PCE
5.5	0.0052
10	0.0049
15	0.0052
23.5	0.0052

ATC-4	
Soil	
Depth	PCE
2	0.0049
8	0.0047

ATC-3	
Soil	
Depth	PCE
2	0.0044
8	0.0045

CB8	
Soil	
Depth	PCE
2	0.0048
7.5-8	0.0045
8-8.5	0.0049
10-10.5	0.0043
25-25.5	0.0044

SV-20	
Soil	
Depth	PCE
5	0.0051
9	0.0049
14	0.0053
20	0.0049
25	0.0051

CB7	
Soil	
Depth	PCE
6	0.0043
8	0.0049
15	0.0044
20	0.0048
25	0.0046

SV-19	
Soil	
Depth	PCE
5	
15	0.0051
25	0.0051
	0.0048

SV-24	
Soil	
Depth	PCE
5	0.0053
10	0.0050
15	0.0049
20	0.0051
25	0.0050
27.5	0.0052

SV-23	
Soil	
Depth	PCE
4.5	0.0053
10	0.0050
15	0.0051
23	0.0049

SV-18	
Soil	
Depth	PCE
5	0.0049
10	0.0049
15	0.0050
22	0.0050
27.5	0.0052

SV-17	
Soil	
Depth	PCE
5	0.0050
10	0.0051
15	0.0050
20	0.0051
25	0.0051
29.5	0.0052

SV-22	
Soil	
Depth	PCE
5	0.0050
10	0.0050
15	0.0051
20	0.0049
27.5	0.0049

ATC-1	
Soil	
Depth	PCE
2	0.0048
15	0.0048
31	NA

SV-16	
Soil	
Depth	PCE
5.5	0.0049
11.5	0.0050
14.5	0.0050
19.5	0.0050
25	0.0050
29.5	0.0050

CB9	
Soil	
Depth	PCE
2	<b>0.03</b>
4	0.0049
6-6.5	<b>0.011</b>
8	<b>0.0059</b>
13-13.5	0.0049

CB3A	
Soil	
Depth	PCE
5-5.5	<b>0.02</b>

CB3	
Soil	
Depth	PCE
4.5	0.0049
22-22.5	<b>0.0066</b>

LEGEND	
SV-11	Soil Vapor Sampling Well
ATC-4	Soil Boring
CB11	Confirmation Soil Boring
[Red Outline]	Proposed Excavation Extents
G	Gas Line
E	Electric Line
A-A'	Cross Section
PCE	Tetrachloroethene
EPA	Environmental Protection Agency
<	Less Than the Stated Laboratory Reporting Limit
mg/kg	Milligrams per Kilogram
NA	Not Analyzed
SS	Sanitary Sewer
S	Storm Drain
T	Telecommunications Line

**NOTES**

Soil sample analytical results presented in mg/kg  
 Soil samples analyzed for PCE by EPA test method 8260 B  
 Sample analytical results that exceeded the environmental screening level (ESL) for the respective constituent are presented in bold face font.

**SITE PLAN WITH SOIL ANALYTICAL DATA FOR PCE AND PROPOSED EXCAVATION EXTENTS**  
 DRYCLEAN 580  
 3735 E. Castro Valley Boulevard  
 Castro Valley, CA

PROJECT NUMBER: 1191600012	DATE: 03/10/2016	FIGURE
APPROVED BY: AH	DRAWN BY: CC	<b>2</b>












**ATC** 3261 S. Higuera Street, Suite 200  
 San Luis Obispo, CA 93401  
 Ph: (805) 543-7007 \*\*\* Fax: (805) 543-7027



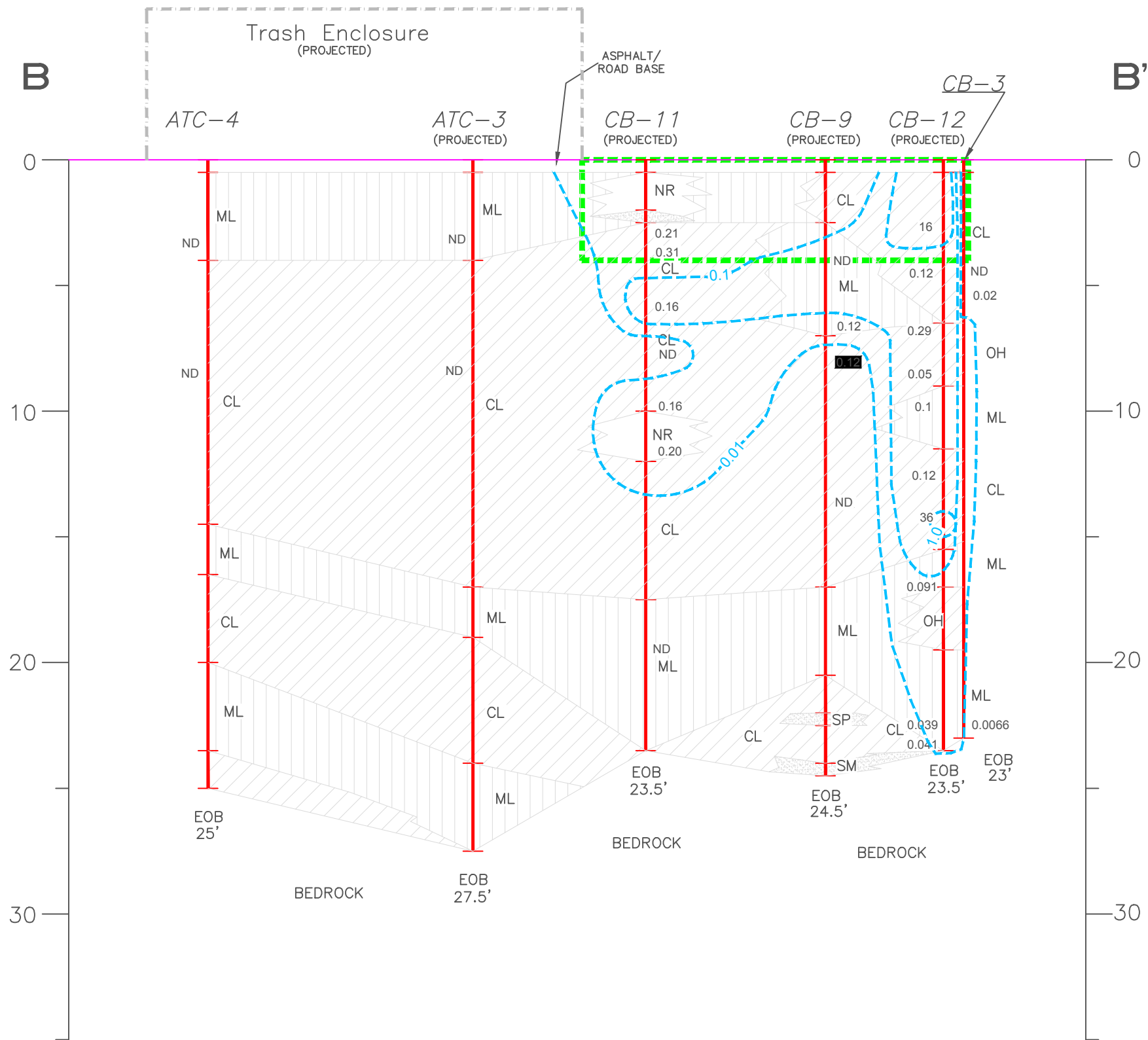
**NOTES:**

1. THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA INDICATED ON THE SECTIONS WERE GENERALIZED FROM AND INTERPOLATED BETWEEN THE SOIL BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE SOIL BORINGS AND IT IS POSSIBLE THAT SUBSURFACE CONDITIONS BETWEEN THE SOIL BORINGS MAY VARY FROM THOSE INDICATED.
2. THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE CONDITIONS AT THESE BORING LOCATIONS.

**LEGEND**

	CLAY (CL)		BOREHOLE
	SILT (ML)		EOB - END OF BORING
	SAND (SP,SC,SM)		ND NOT DETECTED
	NR NO RECOVERY		0.12 PCE, mg/kg
	PCE ISOCONTOUR, mg/kg		
	PROPOSED EXCAVATION EXTENTS		
	TRASH ENCLOSURE		

DEPTH BELOW SURFACE, FT



**GENERALIZED CROSS SECTION B - B'**

580 MARKET PLACE  
3735 - 4065 E. CASTRO VALLEY BOULEVARD  
CASTRO VALLEY, CA

PROJECT NUMBER: 1191600012	DATE: 3/10/2016	FIGURE
APPROVED BY: GS	DRAWN BY: CC	4

**ATC** 701 University Avenue, Ste. #200  
Sacramento, California 95825  
Ph: (916) 923-1097 \*\*\* Fax: (916) 923-6251

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE



## CUMULATIVE DATA TABLES

**TABLE 2  
SELECT SOIL ANALYTICAL RESULTS, DETECTED CONCENTRATIONS**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 1 of 6)

Sampling ID	Sampling Depth	Sampling Date	EPA 8015B	EPA 8260B										
			TPHg (mg/kg)	Ethyl-benzene (mg/kg)	o-Xylenes (mg/kg)	pm-Xylenes (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	Tetrachloro-ethene (mg/kg)	Trichloro-ethene (mg/kg)	c-1,2-dichloro-ethene (mg/kg)	t-1,2-dichloro-ethene (mg/kg)	Acetone (mg/kg)	Additional VOCs (mg/kg)
<b>Environmental Screening Levels, Commercial/Industrial Soil where Groundwater is a Potential Drinking Water Source (December 2013)</b>														
Shallow (≤10 feet bgs), Table A-2			500	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
Deep (>10 feet bgs), Table C-2			770	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
<b>Limited Subsurface Assessment</b>														
ATC-1 (2')	2-3	03/01/12	---	<0.0048	---	---	<0.0097	<0.0097	<0.0048	<0.0048	<0.0048	<0.0048	<0.048	ND
ATC-1 (15')	14-15	03/01/12	---	<0.0048	---	---	<0.0097	<0.0097	<0.0048	<0.0048	<0.0048	<0.0048	0.062	ND
ATC-1 (31')	30-31	03/01/12	---	---	---	---	---	---	---	---	---	---	---	---
ATC-2 (2')	2-3	03/01/12	---	<0.022	---	---	<0.043	<0.043	<b>0.85</b>	0.047	<0.022	<0.022	<0.22	ND
ATC-2 (7.5')	7-8	03/01/12	---	<0.0047	---	---	<0.0093	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	0.071	ND
ATC-2 (12')	11-12	03/01/12	---	---	---	---	---	---	---	---	---	---	---	---
ATC-3 (2')	2-3	03/01/12	---	<0.0044	---	---	<0.0088	<0.0088	<0.0044	<0.0044	<0.0044	<0.0044	<0.044	ND
ATC-3 (8')	7-8	03/01/12	---	<0.0045	---	---	<0.0090	<0.0090	<0.0045	<0.0045	<0.0045	<0.0045	<0.045	ND
ATC-4 (2')	2-3	03/01/12	---	<0.0049	---	---	<0.0097	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.049	ND
ATC-4 (8')	7-8	03/01/12	---	<0.0047	---	---	<0.0094	<0.0094	<0.0047	<0.0047	<0.0047	<0.0047	0.079	ND
<b>Data Gap Assessment</b>														
CB3-4.5	4.5	02/06/14	---	<0.0049	---	---	<0.0097	<0.0097	<0.0049	0.08	0.063	0.0057	<0.049	ND
CB3 22-22.5	22-22.5	02/06/14	---	<0.0046	---	---	<0.0092	<0.0092	0.0066	<0.0046	<0.0046	<0.0046	0.12	ND
CB3A 5-5.5	5-5.5	02/07/14	---	<0.0044	---	---	<0.0088	<0.0088	0.02	0.03	<0.0044	<0.0044	<0.044	ND
CB7-6	6	02/05/14	---	0.014	---	---	0.096	<0.0086	<0.0043	<0.0043	<0.0043	<0.0043	0.15	ND
CB7-8	8	02/05/14	---	0.0062	---	---	0.035	<0.0098	<0.0049	<0.0049	<0.0049	<0.0049	0.11	ND
CB7-15	15	02/05/14	---	0.0063	---	---	0.038	<0.0088	<0.0044	<0.0044	<0.0044	<0.0044	0.092	ND
CB7-20	20	02/05/14	---	0.0049	---	---	0.03	<0.0095	<0.0048	<0.0048	<0.0048	<0.0048	0.073	ND
CB7-25	25	02/05/14	---	<0.0046	---	---	<0.0091	<0.0091	<0.0046	<0.0046	<0.0046	<0.0046	0.077	ND
CB8-2	2	02/05/14	---	<0.0048	---	---	0.018	<0.0097	<0.0048	<0.0048	<0.0048	<0.0048	<0.048	ND
CB8 7.5-8	7.5-8	02/05/14	---	<0.0045	---	---	<0.0091	<0.0091	<0.0045	0.0055	<0.0045	<0.0045	0.052	ND
CB8 8-8.5	8-8.5	02/05/14	---	<0.0049	---	---	0.0098	<0.0098	<0.0049	<0.0049	<0.0049	<0.0049	<0.049	ND
CB8 10-10.5	10-10.5	02/05/14	---	0.025	---	---	0.16	<b>18</b>	<0.0043	<0.0043	<0.0043	<0.0043	0.11	ND
CB8 25-25.5	25-25.5	02/05/14	---	<0.0044	---	---	<0.0088	<0.0088	<0.0044	<0.0044	<0.0044	<0.0044	0.074	ND
CB9-2	2	02/06/14	---	<0.0047	---	---	<0.0094	<0.0094	0.03	0.011	<0.0047	<0.0047	<0.047	ND
CB9-4	4	02/06/14	---	<0.0049	---	---	<0.0099	<0.0099	<0.0049	<0.0049	0.007	<0.0049	<0.049	ND
CB9 6-6.5	6-6.5	02/06/14	---	<0.0048	---	---	<0.0096	<0.0096	0.011	<0.0048	<0.0048	<0.0048	<0.048	ND
CB9-8	8	02/06/14	---	<0.0048	---	---	<0.0096	<0.0096	0.0059	<0.0048	<0.0048	<0.0048	0.067	ND
CB9 13-13.5	13-13.5	02/06/14	---	<0.0049	---	---	<0.0098	<0.0098	<0.0049	<0.0049	<0.0049	<0.0049	0.062	ND

**TABLE 2  
SELECT SOIL ANALYTICAL RESULTS, DETECTED CONCENTRATIONS**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 2 of 6)

Sampling ID	Sampling Depth	Sampling Date	EPA 8015B	EPA 8260B										
			TPHg (mg/kg)	Ethyl-benzene (mg/kg)	o-Xylenes (mg/kg)	pm-Xylenes (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	Tetrachloro-ethene (mg/kg)	Trichloro-ethene (mg/kg)	c-1,2-dichloro-ethene (mg/kg)	t-1,2-dichloro-ethene (mg/kg)	Acetone (mg/kg)	Additional VOCs (mg/kg)
<b>Environmental Screening Levels, Commercial/Industrial Soil where Groundwater is a Potential Drinking Water Source (December 2013)</b>														
Shallow (≤10 feet bgs), Table A-2			500	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
Deep (>10 feet bgs), Table C-2			770	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
CB10-3	3	02/06/14	---	<0.0045	---	---	<0.0090	<0.0090	<b>0.87</b>	0.33	0.054	<0.0045	0.053	ND
CB10-4	4	02/06/14	---	<0.0046	---	---	<0.0091	<0.0091	0.0054	<b>&lt;0.47</b>	<b>0.21</b>	0.0057	0.056	ND
CB10 8-8.5	8-8.5	02/06/14	---	<0.0046	---	---	<0.0091	<0.0091	<0.0046	<0.0046	0.035	<0.0046	<0.046	ND
CB11 2.5-3	2.5-3	02/06/14	---	<0.0042	---	---	<0.0084	<0.0084	0.021	<0.0042	<0.0042	<0.0042	<0.042	ND
CB11 3-3.5	3-3.5	02/06/14	---	<0.0045	---	---	<0.0090	<0.0090	0.031	<0.0045	<0.0045	<0.0045	<0.045	ND
CB11-6	6	02/06/14	---	<0.0044	---	---	<0.0088	<0.0088	0.16	0.012	0.0058	<0.0044	0.076	ND
CB11-8	8	02/06/14	---	<0.0047	---	---	<0.0093	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	0.048	ND
CB11-10	10	02/06/14	---	<0.0045	---	---	<0.0090	<0.0090	0.016	0.021	<0.0045	<0.0045	<0.045	ND
CB11-11.5	11.5	02/06/14	---	0.0077	---	---	0.052	<0.0089	0.29	0.0098	<0.0045	<0.0045	0.11	ND
CB11 19-19.5	19-19.5	02/06/14	---	<0.0047	---	---	<0.0095	<0.0095	<0.0047	<0.0047	<0.0047	<0.0047	0.052	ND
CB12 2-2.5	2-2.5	02/07/14	---	<0.023	---	---	<0.046	0.046	<b>16</b>	0.21	<0.023	<0.023	<0.23	ND
CB12 4-4.5	4-4.5	02/07/14	---	<0.0045	---	---	<0.0090	<0.0090	0.12	0.18	0.052	0.0046	<0.045	ND
CB12 6-6.5	6-6.5	02/07/14	---	<0.0048	---	---	<0.0095	<0.0095	0.29	0.0095	0.01	<0.0048	<0.048	ND
CB12 7.5-8	7.5-8	02/07/14	---	<0.0044	---	---	<0.0088	<0.0088	0.05	<0.0044	<0.0044	<0.0044	<0.049	ND
CB12 9.5-10	9.5-10	02/07/14	---	<0.0046	---	---	<0.0091	<0.0091	0.1	<0.0046	<0.0046	<0.0046	<0.046	ND
CB12 12-12.5	12-12.5	02/07/14	---	<0.0044	---	---	<0.0087	<0.0087	0.098	<0.0044	<0.0044	<0.0044	<0.044	ND
CB12 14-14.5	14-14.5	02/07/14	---	0.0058	---	---	0.035	<0.0089	<b>3.6</b>	0.011	<0.0044	<0.0044	<0.044	ND
CB12 16.5-17	16.5-17	02/07/14	---	<0.0045	---	---	<0.0091	<0.0091	0.091	<0.0045	<0.0045	<0.0045	0.11	ND
CB12 22-22.5	22-22.5	02/07/14	---	<0.0048	---	---	<0.0095	<0.0095	0.039	<0.0048	<0.0048	<0.0048	0.12	ND
CB12 23-23.5	23-23.5	02/07/14	---	<0.0046	---	---	<0.0091	<0.0091	0.041	<0.0046	<0.0046	<0.0046	<0.046	ND
<b>Soil Vapor Well Installation</b>														
S-5.5-SV16	5.5	06/03/15	<0.52	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-11.5-SV16	11.5	06/03/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.13	ND
S-14.5-SV16	14.5	06/03/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.13	ND
S-19.5-SV16	19.5	06/03/15	<0.51	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-25-SV16	25	06/03/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-29.5-SV16	29.5	06/03/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-5-SV17	5	06/03/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-10-SV17	10	06/03/15	<0.50	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-15-SV17	15	06/03/15	<0.49	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-20-SV17	20	06/03/15	<0.50	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-25-SV17	25	06/04/15	<0.48	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND

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Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 3 of 6)

Sampling ID	Sampling Depth	Sampling Date	EPA 8015B	EPA 8260B										
			TPHg (mg/kg)	Ethyl-benzene (mg/kg)	o-Xylenes (mg/kg)	pm-Xylenes (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	Tetrachloroethene (mg/kg)	Trichloroethene (mg/kg)	c-1,2-dichloroethene (mg/kg)	t-1,2-dichloroethene (mg/kg)	Acetone (mg/kg)	Additional VOCs (mg/kg)
<b>Environmental Screening Levels, Commercial/Industrial Soil where Groundwater is a Potential Drinking Water Source (December 2013)</b>														
Shallow (≤10 feet bgs), Table A-2			500	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
Deep (>10 feet bgs), Table C-2			770	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
S-29.5-SV17	29.5	06/04/15	<0.51	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND
S-5-SV18	5	06/04/15	<0.48	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-10-SV18	10	06/04/15	<0.52	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-15-SV18	15	06/04/15	<0.49	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.13	ND
S-22-SV18	22	06/04/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-27.5-SV18	27.5	06/04/15	<0.49	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND
S-5-SV19	5	06/04/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.13	ND
S-10-SV19	10	06/04/15	<0.50	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-15-SV19	15	06/04/15	<0.50	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-17.5-SV19	17.5	06/04/15	<0.48	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND
S-25-SV19	25	06/04/15	<0.53	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-27.5-SV19	27.5	06/04/15	<0.51	<0.0048	<0.0048	<0.0048	---	<0.048	<0.0048	<0.0048	<0.0048	<0.0048	<0.12	ND
S-5-SV20	5	06/04/15	<0.50	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-9-SV20	9	06/04/15	<0.52	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-14-SV20	14	06/04/15	<0.53	<0.0053	<0.0053	<0.0053	---	<0.053	<0.0053	<0.0053	<0.0053	<0.0053	<0.13	ND
S-20-SV20	20	06/04/15	<0.51	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-25-SV20	25	06/04/15	1.0a	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-5.5-SV21	5.5	06/05/15	<0.49	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND
S-10-SV21	10	06/05/15	<0.49	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-15-SV21	15	06/05/15	<0.51	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND
S-23.5-SV21	23.5	06/05/15	<0.51	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND
S-5-SV22	5	06/04/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-10-SV22	10	06/04/15	<0.49	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-15-SV22	15	06/04/15	<0.51	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-20-SV22	20	06/04/15	<0.51	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-27.5-SV22	27.5	06/04/15	<0.48	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-4.5-SV23	4.5	06/05/15	<0.51	<0.0053	<0.0053	<0.0053	---	<0.053	<0.0053	<0.0053	0.083	<0.0053	<0.13	ND
S-10-SV23	10	06/05/15	<0.49	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.13	ND
S-15-SV23	15	06/05/15	<0.53	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-23-SV23	23	06/05/15	<0.53	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND

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Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 4 of 6)

Sampling ID	Sampling Depth	Sampling Date	EPA 8015B	EPA 8260B										
			TPHg (mg/kg)	Ethyl-benzene (mg/kg)	o-Xylenes (mg/kg)	pm-Xylenes (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	Tetrachloroethene (mg/kg)	Trichloroethene (mg/kg)	c-1,2-dichloroethene (mg/kg)	t-1,2-dichloroethene (mg/kg)	Acetone (mg/kg)	Additional VOCs (mg/kg)
<b>Environmental Screening Levels, Commercial/Industrial Soil where Groundwater is a Potential Drinking Water Source (December 2013)</b>														
Shallow (≤10 feet bgs), Table A-2			500	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
Deep (>10 feet bgs), Table C-2			770	3.3	2.3b	2.3b	2.3	1.2	0.7	0.46	0.19	0.67	0.5	---
S-5-SV24	5	06/05/15	<0.50	<0.0053	<0.0053	<0.0053	---	<0.053	<0.0053	<0.0053	<0.0053	<0.0053	<0.13	ND
S-10-SV24	10	06/05/15	<0.50	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-15-SV24	15	06/05/15	<0.50	<0.0049	<0.0049	<0.0049	---	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.12	ND
S-20-SV24	20	06/05/15	<0.52	<0.0051	<0.0051	<0.0051	---	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.13	ND
S-25-SV24	25	06/05/15	<0.48	<0.0050	<0.0050	<0.0050	---	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.12	ND
S-27.5-SV24	27.5	06/05/15	<0.49	<0.0052	<0.0052	<0.0052	---	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.13	ND

Notes:

- TPHg = Total petroleum hydrocarbons as gasoline.
- VOCs = Volatile organic compounds.
- mg/kg = Milligrams per kilogram.
- ND = Not detected at or above the laboratory reporting limit.
- < = Less than the stated laboratory reporting limit.
- = Not analyzed.
- a = Chromatographic pattern does not match that of the specified standard.
- b = Screening level for total xylenes.

**TABLE 3A**  
**SOIL PROPERTIES**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 5 of 6)

Sample Name	Sample Date	Sample Orientation	Moisture Content (% weight)   (cm <sup>3</sup> /cm <sup>3</sup> )		Density		Porosity				Total Pore Fluid Saturations (%Pv)	Organic Carbon		Permeability to Air		Permeability To Water (millidarcy)	Hydraulic Conductivity (cm/s)
					Dry Bulk (g/cm <sup>3</sup> )	Grain (g/cm <sup>3</sup> )	Total (cm <sup>3</sup> /cm <sup>3</sup> )	Air Filled (cm <sup>3</sup> /cm <sup>3</sup> )	Water Filled (cm <sup>3</sup> /cm <sup>3</sup> )	Effective (cm <sup>3</sup> /cm <sup>3</sup> )		Total (mg/kg)	Fraction (g/g)	Effective (millidarcy)	Specific (millidarcy)		
S-6-Shelby23	06/05/15	Vertical	16.66	0.288	1.73	2.67	0.352	0.064	0.288	0.014	81.8	7,600	7.60E-03	6.27	3,689	0.0103	1.02E-08
S-6-Shelby24	06/05/15	Vertical	11.79	0.237	2.01	2.65	0.242	0.005	0.237	0.058	97.9	9,100	9.10E-03	85.0	3,281	0.192	1.90E-07

Notes:

- Particle Size Distribution = Grain size distribution analyzed using ASTM D4464.
- USCS/Plasticity Chart Symbol = Unified Soil Classification System chart symbol analyzed using ATM D4318.
- USCS Classification = Unified Soil Classification System classification analyzed using ASTM D2487.
- USDA/SCS Soil Texture Scheme = United States Department of Agriculture/Soil Conservation Service soil texture scheme analyzed using USDA.
- Atterberg Limits = Atterberg limits analyzed using ASTM D4318.
- Moisture Content = Moisture content analyzed using ASTM D2216.
- Dry Bulk Density = Dry density analyzed using API RP40.
- Grain Density = Grain density analyzed using API RP40.
- Total Porosity = Total porosity analyzed using API RP40.
- Air Filled Porosity = Air filled porosity analyzed using API RP40.
- Water Filled Porosity = Water filled porosity analyzed using API RP40.
- Effective Porosity = Effective porosity analyzed using modified ASTM D425.
- Total Pore Fluid Saturations = Total pore fluid saturations analyzed using API RP40.
- Total Organic Carbon = Total organic carbon analyzed using Walkley-Black.
- Fraction Organic Carbon = Fraction organic carbon analyzed using Walkley-Black.
- Effective Permeability to Air = Effective permeability to air analyzed using API RP40.
- Specific Permeability to Air = Specific permeability to air analyzed using API RP40.
- Permeability to Water = Effective permeability to water analyzed using API RP40.
- Hydraulic Conductivity = Saturated hydraulic conductivity analyzed using EPA Method 9100.
- feet bgs = Feet below ground surface.
- mm = Millimeter.
- %Pv = Percent per pore volume.
- g/cm<sup>3</sup> = Grams per cubic centimeter.
- cm<sup>3</sup>/cm<sup>3</sup> = Cubic centimeter per cubic centimeter.
- cm<sup>2</sup> = Centimeters squared.
- cm/s = Centimeters per second.
- mg/kg = Milligrams per kilogram.
- g/g = Grams per gram.
- = Not available/Not applicable.

**TABLE 3B**  
**ADDITIONAL SOIL PROPERTIES**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 6 of 6)

Sample Name	Sample Date	Atterberg Limits			USCS Chart Symbol	USCS Classification	USDA/SCS Soil Texture Scheme	Grain Size Description	Medium Grain Size	Component Percentages								Silt and Clay
		Liquid Limit	Plastic Limit	Plasticity Index						Sand Size								
										Gravel	Vcoarse	Course	Medium	Fine	Vfine	Silt	Clay	
S-6-Shelby23	06/05/15	37	17	20	CL	Lean Clay with Sand	Loam	Silt	0.019	0.00	0.00	0.00	3.62	10.92	13.78	48.77	22.90	71.7
S-6-Shelby24	06/05/15	23	15	8	CL	Sandy Lean Clay	Loam	Silt	0.033	0.00	0.00	1.36	8.97	12.43	15.26	43.51	18.46	62.0

Particle Size Distribution	=	Grain size distribution analyzed using ASTM D4464.
USCS/Plasticity Chart Symbol	=	Unified Soil Classification System chart symbol analyzed using ATM D4318.
USCS Classification	=	Unified Soil Classification System classification analyzed using ASTM D2487.
USDA/SCS Soil Texture Scheme	=	United States Department of Agriculture/Soil Conservation Service soil texture scheme analyzed using USDA.
Atterberg Limits	=	Atterberg limits analyzed using ASTM D4318.
Moisture Content	=	Moisture content analyzed using ASTM D2216.
Dry Bulk Density	=	Dry density analyzed using API RP40.
Grain Density	=	Grain density analyzed using API RP40.
Total Porosity	=	Total porosity analyzed using API RP40.
Air Filled Porosity	=	Air filled porosity analyzed using API RP40.
Water Filled Porosity	=	Water filled porosity analyzed using API RP40.
Effective Porosity	=	Effective porosity analyzed using modified ASTM D425.
Total Pore Fluid Saturations	=	Total pore fluid saturations analyzed using API RP40.
Total Organic Carbon	=	Total organic carbon analyzed using Walkley-Black.
Fraction Organic Carbon	=	Fraction organic carbon analyzed using Walkley-Black.
Effective Permiability to Air	=	Effective permiability to air analyzed using API RP40.
Specific Permiability to Air	=	Specific permiability to air analyzed using API RP40.
Permiability to Water	=	Effective permiability to water analyzed using API RP40.
Hydraulic Conductivity	=	Saturated hydraulic conductivity analyzed using EPA Method 9100.
feet bgs	=	Feet below ground surface.
mm	=	Millimeter.
%Pv	=	Percent per pore volume.
g/cm <sup>3</sup>	=	Grams per cubic centimeter.
cm <sup>3</sup> /cm <sup>3</sup>	=	Cubic centimeter per cubic centimeter.
cm <sup>2</sup>	=	Centimeters squared.
cm/s	=	Centimeters per second.
mg/kg	=	Milligrams per kilogram.
g/g	=	Grams per gram.
---	=	Not available/Not applicable.



**TABLE 4A**  
**SELECT SOIL VAPOR ANALYTICAL RESULTS, DETECTED CONCENTRATIONS**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 1 of 4)

Sampling ID	Sampling Date	ASTM D-1946				GC/MS	EPA TO-15										
		Helium (%V)	Methane (%V)	CO <sub>2</sub> (%V)	O <sub>2</sub> + Ar (%V)	TPHg (µg/m <sup>3</sup> )	MTBE (µg/m <sup>3</sup> )	B (µg/m <sup>3</sup> )	T (µg/m <sup>3</sup> )	E (µg/m <sup>3</sup> )	o-X (µg/m <sup>3</sup> )	pm-X (µg/m <sup>3</sup> )	1,2-DCA (µg/m <sup>3</sup> )	TBA (µg/m <sup>3</sup> )	PCE (µg/m <sup>3</sup> )	TCE (µg/m <sup>3</sup> )	Ethanol (µg/m <sup>3</sup> )
<b>Environmental Screening Levels, Shallow Soil Gas, Table E-2 (December 2013)</b>																	
Commercial/Industrial		---	---	---	---	2,500,000	47,000	420	1,300,000	4,900	440,000d	440,000d	580	---	2,100	3,000	---
<b>Phase II Subsurface Investigation</b>																	
SG-1	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---
SG-2	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---
SG-3	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---
SG-4	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>5,800</b>	<1,000	---
SG-4	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>4,000</b>	<1,000	---
SG-5	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>65,000</b>	<1,000	---
SG-5	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>119,700</b>	<b>6,800</b>	---
SG-5	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---
SG-6	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	1,700	<1,000	---
SG-7	11/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---
SG-8	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>29,700</b>	2,100	---
SG-8	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>30,300</b>	1,400	---
SG-8 Dup	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>24,600</b>	1,100	---
SG-9	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>33,500</b>	<1,000	---
SG-10	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>14,000</b>	<1,000	---
SG-10	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>4,700</b>	<1,000	---
SG-11	11/12/97	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>105,900</b>	1,400	---
<b>Data Gap Assessment</b>																	
SV-1	01/06/14	---	---	---	---	---	---	<35	<200	<100	<100	<200	<45	---	<b>9,500</b>	600	---
SV-2	01/06/14	---	---	---	---	---	---	110	<200	<100	<100	<200	<45	---	190	<100	---
SV-3	01/06/14	---	---	---	---	---	---	170	<200	<100	<100	<200	<45	---	<100	<100	---
SV-4	01/07/14	---	---	---	---	---	---	72	<200	<100	<100	<200	<45	---	<100	<100	---
SV-5	01/07/14	---	---	---	---	---	---	56	<200	<100	<100	<200	<45	---	<100	450	---
SV-6	01/07/14	---	---	---	---	---	---	83	<200	<100	<100	<200	<45	---	1,800	1,400	---
SV-7	01/07/14	---	---	---	---	---	---	<35	<200	<100	<100	<200	<45	---	<b>3,600</b>	<100	---
SV-8	01/07/14	---	---	---	---	---	---	<35	<200	<100	<100	<200	<45	---	<100	<100	---
SV-9	01/17/14	---	---	---	---	---	---	170	<200	190	160	560	<45	---	160	<100	---
SV-10	01/17/14	---	---	---	---	---	---	170	<200	270	270	910	<45	---	<100	<100	---
SV-11	01/17/14	---	---	---	---	---	---	91	<200	<100	<100	270	<45	---	<b>2,200</b>	<100	---
SV-12	01/17/14	---	---	---	---	---	---	290	<200	<100	<100	<200	<45	---	<100	<100	---
SV-13	01/17/14	---	---	---	---	---	---	400	280	<100	<100	<200	<45	---	<100	<100	---
SV-14	01/17/14	---	---	---	---	---	---	150	<200	<100	<100	<200	<45	---	<100	<100	---
SV-15	01/17/14	---	---	---	---	---	---	150	<200	<100	<100	<200	<45	---	<100	<100	---

**TABLE 4A**  
**SELECT SOIL VAPOR ANALYTICAL RESULTS, DETECTED CONCENTRATIONS**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 2 of 4)

Sampling ID	Sampling Date	ASTM D-1946				GC/MS	EPA TO-15										
		Helium (%V)	Methane (%V)	CO <sub>2</sub> (%V)	O <sub>2</sub> + Ar (%V)	TPHg (µg/m <sup>3</sup> )	MTBE (µg/m <sup>3</sup> )	B (µg/m <sup>3</sup> )	T (µg/m <sup>3</sup> )	E (µg/m <sup>3</sup> )	o-X (µg/m <sup>3</sup> )	pm-X (µg/m <sup>3</sup> )	1,2-DCA (µg/m <sup>3</sup> )	TBA (µg/m <sup>3</sup> )	PCE (µg/m <sup>3</sup> )	TCE (µg/m <sup>3</sup> )	Ethanol (µg/m <sup>3</sup> )
<b>Environmental Screening Levels, Shallow Soil Gas, Table E-2 (December 2013)</b>																	
Commercial/Industrial		---	---	---	---	2,500,000	47,000	420	1,300,000	4,900	440,000d	440,000d	580	---	2,100	3,000	---
<b>Soil Vapor Well Installation</b>																	
SV-16A	06/25/15	0.0687	0.25	2.6	3.8	15,000	<11	74	63	13	12	36	<3.0	<9.1	<5.1	<4.0	<14
SV-16B	06/25/15	0.0215	0.41	21	2.4	38,000	<9.4	56	40	12	9.0	22	3.0	<7.9	<4.4	<3.5	<12
SV-17A	06/25/15	0.0286	0.026	0.75	8.7	4,500	<7.2	12	18	4.0	4.4	13	<2.0	43	<3.4	<2.7	<9.4
SV-17B	06/25/15	0.0301	0.36	17	4.8	38,000	14	63	34	13	12	24	<2.7	160	<4.6	<3.6	<13
SV-18A	06/25/15	0.0137	0.026	0.69	8.0	5,500	<8.7	6.1	8.3	3.7	17	29	<2.4	22	<4.1	<3.2	<11
SV-18B	06/25/15	0.0219	0.38	23	6.4	14,000	<7.6	65	17	11	9.3	21	<2.1	<6.4	<3.6	<2.8	<10
SV-19A	06/25/15	0.0717	0.0043	0.14	8.8	8400	<9.7	270	15	130	3.8	<12	<2.7	24	25	<3.6	<13
SV-19B	06/25/15	0.0355	0.018	20	8.1	5,900	<7.2	25	11	<2.2	<2.2	<8.7	<2.0	74	<3.4	<2.7	14
SV-20A	06/25/15	0.0241	0.0039	4.6	4.1	8,800	<10	11	12	3.5	<3.1	<12	<2.9	25	<4.8	<3.8	<13
SV-20B	06/25/15	0.0297	0.041	11	7.6	25,000	30	37	27	13	10	18	<2.6	180	<4.3	<3.4	12
SV-21A	06/26/15	0.0316	0.61	3.8	5.0	29,000	<10	69	33	14	9.5	19	<2.9	<8.5	420	7.9	<13
SV-21B	06/26/15	0.0220	0.13	28	3.7	21,000	<9.7	63	25	23	23	56	<2.7	<8.1	140	4.3	<13
SV-22A	06/26/15	0.0279	0.82	1.1	4.8	21,000	<10	46	33	8.7	7.8	15	<2.9	18	<4.8	<3.8	<13
SV-22B	06/26/15	0.0187	0.55	56	2.2	16,000	<8.1	42	9.3	10	7.8	16	<2.3	55	<3.8	<3.0	11
SV-23A	06/26/15	0.0159	0.45	0.85	13	89,000	<29	90	37	<8.7	<8.7	<35	<8.1	<24	<b>20,000</b>	<b>40,000</b>	<38
SV-23A Dup	06/26/15	0.0139	0.49	1.1	10	86,000	<29	110	34	14	<8.7	<35	<8.1	<24	<b>14,000</b>	<b>33,000</b>	<38
SV-23B	06/26/15	0.0140	0.41	28	2.8	47,000	<8.8	54	82	21	16	27	<2.5	<7.4	<b>17,000</b>	530	<11
SV-24A	06/26/15	0.0169	0.025	2.1	7.9	14,000	<9.2	18	8.5	<2.8	<2.8	<11	<2.6	<7.7	<b>3,000</b>	210	<12
SV-24B	06/26/15	0.0186	0.19	17	8.2	21,000	<8.6	40	26	12	8.6	16	<2.4	30	7.8	11	12

Notes:

- TPHg = Total petroleum hydrocarbons as gasoline.
- MTBE = Methyl tertiary butyl ether.
- BTEX = Benzene, ethylbenzene, toluene, and total xylenes.
- 1,2-DCA = 1,2-dichloroethane.
- TBA = Tertiary butyl alcohol.
- PCE = Tetrachloroethene.
- TCE = Trichloroethene.
- VOCs = Volatile organic compounds.
- CO<sub>2</sub> = Carbon dioxide.
- O<sub>2</sub> + Ar = Oxygen plus argon.
- µg/m<sup>3</sup> = Micrograms per cubic meter.
- %V = Percent by volume.
- ND = Not detected at or above the laboratory reporting limit.
- < = Less than the stated laboratory reporting limit.
- a = Chloroethane.
- b = 4-methyl-2-pentanone.
- c = 4-ethyltoluene.
- d = ESL for total xylenes.
- e = 1,1-dichloroethene.

**TABLE 4B**  
**ADDITIONAL SELECT SOIL VAPOR ANALYTICAL RESULTS, DETECTED CONCENTRATIONS**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 3 of 4)

Sampling ID	Sampling Date	EPA TO-17		EPA TO-15 (EPA 8010 in 1997)															
		Naphthalene (µg/m <sup>3</sup> )	Naphthalene (µg/m <sup>3</sup> )	Acetone (µg/m <sup>3</sup> )	Bromo-dichloro-methane (µg/m <sup>3</sup> )	2-Butanone (µg/m <sup>3</sup> )	Carbon Disulfide (µg/m <sup>3</sup> )	Chloro-benzene (µg/m <sup>3</sup> )	Chloro-methane (µg/m <sup>3</sup> )	Chloro-form (µg/m <sup>3</sup> )	1,1-dichloro-ethane (µg/m <sup>3</sup> )	c-1,2-dichloro-ethene (µg/m <sup>3</sup> )	t-1,2-dichloro-ethene (µg/m <sup>3</sup> )	Dichloro-difluoro-methane (µg/m <sup>3</sup> )	1,2,4-trimethyl-benzene (µg/m <sup>3</sup> )	1,3,5-trimethyl-benzene (µg/m <sup>3</sup> )	Vinyl Chloride (µg/m <sup>3</sup> )	Additional VOCs (µg/m <sup>3</sup> )	
<b>Environmental Screening Levels, Shallow Soil Gas, Table E-2 (December 2013)</b>																			
Commercial/Industrial		360	360	140,000,000	330	---	---	4,400,000	390,000	2,300	7,700	31,000	260,000	---	---	---	160	---	
<b>Phase II Subsurface Investigation</b>																			
SG-1	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-2	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-3	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-4	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-4	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-5	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-5	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-5	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-6	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-7	11/11/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-8	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-8	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-8 Dup	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-9	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-10	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-10	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
SG-11	11/12/97	---	---	---	---	---	---	---	---	---	---	---	<1,000	<1,000	---	---	---	<1,000	ND
<b>Data Gap Assessment</b>																			
SV-1	01/06/14	---	---	---	---	---	---	---	---	<100	280	7,400	330	<100	---	---	---	190	ND
SV-2	01/06/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-3	01/06/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-4	01/07/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-5	01/07/14	---	---	---	---	---	---	---	---	<100	<100	650	<100	<100	---	---	---	110	ND
SV-6	01/07/14	---	---	---	---	---	---	---	---	<100	110	960	<100	<100	---	---	---	110	ND
SV-7	01/07/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-8	01/07/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-9	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-10	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-11	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-12	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	43	ND
SV-13	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-14	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND
SV-15	01/17/14	---	---	---	---	---	---	---	---	<100	<100	<100	<100	<100	---	---	---	<13	ND

**TABLE 4B  
ADDITIONAL SELECT SOIL VAPOR ANALYTICAL RESULTS, DETECTED CONCENTRATIONS**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 4 of 4)

Sampling ID	Sampling Date	EPA TO-17		EPA TO-15 (EPA 8010 in 1997)														
		Naphthalene (µg/m <sup>3</sup> )	Naphthalene (µg/m <sup>3</sup> )	Acetone (µg/m <sup>3</sup> )	Bromo-dichloro-methane (µg/m <sup>3</sup> )	2-Butanone (µg/m <sup>3</sup> )	Carbon Disulfide (µg/m <sup>3</sup> )	Chloro-benzene (µg/m <sup>3</sup> )	Chloro-methane (µg/m <sup>3</sup> )	Chloro-form (µg/m <sup>3</sup> )	1,1-dichloro-ethane (µg/m <sup>3</sup> )	c-1,2-dichloro-ethene (µg/m <sup>3</sup> )	t-1,2-dichloro-ethene (µg/m <sup>3</sup> )	Dichloro-difluoro-methane (µg/m <sup>3</sup> )	1,2,4-trimethyl-benzene (µg/m <sup>3</sup> )	1,3,5-trimethyl-benzene (µg/m <sup>3</sup> )	Vinyl Chloride (µg/m <sup>3</sup> )	Additional VOCs (µg/m <sup>3</sup> )
<b>Environmental Screening Levels, Shallow Soil Gas, Table E-2 (December 2013)</b>																		
Commercial/Industrial		360	360	140,000,000	330	---	---	4,400,000	390,000	2,300	7,700	31,000	260,000	---	---	---	160	---
<b>Soil Vapor Well Installation</b>																		
SV-16A	06/25/15	<20	<39	50	<5.0	<6.6	580	4.4	<1.5	16	<3.0	<3.0	<3.0	5.3	<11	<3.7	<1.9	ND
SV-16B	06/25/15	<20	<34	<6.2	<4.4	<5.8	690	4.0	<1.3	11	<2.6	<2.6	<2.6	<3.2	<9.6	<3.2	<1.7	ND
SV-17A	06/25/15	<20	<26	56	4.0	<4.4	55	3.6	3.2	12	<2.0	<2.0	<2.0	3.3	<7.4	<2.5	<1.3	ND
SV-17B	06/25/15	<20	<35	180	<4.5	8.2	510	8.0	2.3	3.9	<2.7	<2.7	<2.7	6.6	13	4.7	<1.7	ND
SV-18A	06/25/15	<20	<32	<5.7	15	<5.3	170	5.2	2.1	45	<2.4	<2.4	<2.4	4.8	24	11	<1.5	4.8c
SV-18B	06/25/15	<20	<28	<5.0	<3.6	<4.7	380	10	1.2	5.1	<2.1	<2.1	<2.1	<2.6	<7.8	<2.6	<1.4	ND
SV-19A	06/25/15	<20	<35	<6.4	22	9.2	190	4.6	3.3	57	<2.7	<2.7	<2.7	5.1	<9.9	<3.3	<1.7	ND
SV-19B	06/25/15	<20	<26	150	7.4	5.3	710	7.9	<1.0	11	<2.0	<2.0	<2.0	<2.5	<7.4	<2.5	<1.3	ND
SV-20A	06/25/15	<20	<37	<6.7	6.0	10	100	5.0	3.2	19	<2.9	<2.8	<2.8	<3.5	<10	<3.5	<1.8	ND
SV-20B	06/25/15	<20	<33	220	<4.3	14	1,100	4.8	1.9	7.7	<2.6	<2.5	<2.5	<3.1	<9.4	3.1	<1.6	ND
SV-21A	06/25/15	<20	<37	<6.7	<4.7	7.6	350	10	3.2	16	<2.9	<2.8	<2.8	3.8	<10	<3.5	2.5	ND
SV-21B	06/25/15	<20	<35	150	<4.5	13	480	38	<1.4	4.6	<2.7	<2.7	<2.7	<3.3	10	3.8	<1.7	ND
SV-22A	06/25/15	<b>410</b>	<37	<6.7	<4.7	8.8	82	<3.2	2.0	29	<2.9	<2.8	<2.8	4.7	<10	<3.5	<1.8	9.9b
SV-22B	06/25/15	<20	<30	100	<3.8	9.9	250	<2.6	<1.2	<2.8	<2.3	<2.2	<2.2	<2.8	<8.3	<2.8	<1.4	20b
SV-23A	06/25/15	---	<100	<19	<13	<18	600	<9.2	4.7	55	3,700	<b>53,000</b>	4,700	<9.9	<29	<9.8	<b>1,700</b>	ND
SV-23A Dup	06/25/15	---	<100	<19	<13	<18	910	<9.2	6.5	67	<8.1	<b>47,000</b>	4,300	<9.9	<29	<9.8	<b>1,300</b>	2,500e
SV-23B	06/25/15	<20	<32	<5.8	<4.1	<5.4	820	5.0	2.5	6.8	<2.5	1,000	86	<3.0	61	17	37	2.9a, 11c, 80e
SV-24A	06/25/15	<20	<33	<6.0	8.3	<5.6	410	4.7	5.9	51	<2.6	270	61	3.2	<9.4	<3.1	23	19e
SV-24B	06/25/15	<20	<31	<5.7	<4.0	19	2,400	11	3.8	3.9	<2.4	23	4.1	<2.9	<8.8	3.1	<1.5	ND

- Notes:
- TPHg = Total petroleum hydrocarbons as gasoline.
  - MTBE = Methyl tertiary butyl ether.
  - BTEX = Benzene, ethylbenzene, toluene, and total xylenes.
  - 1,2-DCA = 1,2-dichloroethane.
  - TBA = Tertiary butyl alcohol.
  - PCE = Tetrachloroethene.
  - TCE = Trichloroethene.
  - VOCs = Volatile organic compounds.
  - CO<sub>2</sub> = Carbon dioxide.
  - O<sub>2</sub> + Ar = Oxygen plus argon.
  - µg/m<sup>3</sup> = Micrograms per cubic meter.
  - %V = Percent by volume.
  - ND = Not detected at or above the laboratory reporting limit.
  - < = Less than the stated laboratory reporting limit.
  - a = Chloroethane.
  - b = 4-methyl-2-pentanone.
  - c = 4-ethyltoluene.
  - d = ESL for total xylenes.
  - e = 1,1-dichloroethene.

**TABLE 1A  
SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS - HVOCs**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 1 of 11)

Sample ID	Date	Dichlorodifluoro-methane		Methylene Chloride		Tetrachloro-ethene		Trichloro-ethene		1,1,1-Trichloroethane		1,1,2-Trichloro-1,2,2-Trifluoroethane		Trichlorofluoro-methane		Vinyl Chloride		Add'l HVOCs	
		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	
		EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15/ EPA TO-15 SIM	
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																			
Commercial/Industrial		---	---	26	26	2.1	2.1	3.0	3.0	22,000	22,000	---	---	---	---	0.16	0.16	---	
Calculated Sub-Slab (b)		---	---	520	520	42	42	60	60	440,000	440,000	---	---	---	---	3.2	3.2	---	

SS-1R	03/04/15	<5.7	2.0	<40	<0.13	<b>390</b>	c	19	22	<6.2	<0.20	<26	0.51	<13	1.2	<2.9	<0.037	ND
SS-1R Dup	03/04/15	<5.4	2.1	<38	<0.13	<b>210</b>	c	14	24	<5.9	<0.20	<25	0.52	<12	1.1	<2.8	<0.038	ND
SS-2	03/04/15	<3.3	2.1	<23	0.19	9.4	21	<3.6	0.42	<3.7	<0.19	<16	0.54	<7.6	1.2	<1.7	0.049	ND
SS-3	03/04/15	<3.3	2.0	<23	0.39	<4.6	5.8	<3.6	1.8	<3.7	<0.14	<16	0.51	<7.6	1.1	<1.7	0.032	ND
SS-4	03/04/15	<3.5	1.8	<24	0.18	<b>350</b>	c	<b>62</b>	c	<3.8	<0.15	<16	0.50	<7.9	1.0	<1.8	0.041	ND
SSV-1	03/04/15	<3.3	2.1	<23	0.18	<b>110</b>	c	5.4	11	<3.7	<0.19	<15	0.53	<7.5	1.3	<1.7	0.10	ND
SSA-1	03/04/15	<5.0	2.3	<35	<0.17	59	c	8.0	10	<5.5	<0.26	<23	0.55	<11	1.2	<2.6	0.21	ND

- Notes:
- TPHg = Total petroleum hydrocarbons as gasoline.
  - MTBE = Methyl tertiary butyl ether.
  - TBA = Tertiary butyl alcohol.
  - Add'l VOCs = Additional volatile organic compounds.
  - SCAQMD = South Coast Air Quality Management District.
  - ASTM = American Society of Testing and Materials.
  - EPA = Environmental Protection Agency.
  - % V = Percent by volume.
  - in Hg = Inches of mercury.
  - µg/m<sup>3</sup> = Micrograms per meter cubed.
  - ND = Not detected.
  - < = Less than the stated laboratory reporting limit.
  - = Not applicable/Not specified.
  - a = Value for total xylenes.
  - b = Protective sub-slab concentration calculated using the DTSC default attenuation factor of 0.05.
  - c = Concentration exceeds calibration limit.

**TABLE 1B  
SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS - HVOCs**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 2 of 11)

Sample ID	Date	Bromodichloromethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		c-1,2-Dichloroethene		t-1,2-Dichloroethene	
		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	
		EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																	
Commercial/Industrial		0.33	0.33	0.29	0.29	4,400	4,400	130,000	130,000	2.3	2.3	390	390	31	31	260	260
Calculated Sub-Slab (b)		6.6	6.6	5.8	5.8	88,000	88,000	2,600,000	2,600,000	46	46	7,800	7,800	620	620	5,200	5,200
SS-1R	03/04/15	<7.7	<0.24	<7.2	0.39	<5.3	<0.17	<3.0	<0.096	<5.6	<0.18	<2.4	0.33	<4.5	<0.16	<4.5	<0.16
SS-1R Dup	03/04/15	<7.3	<0.25	<6.9	0.42	<5.0	<0.17	<2.9	<0.099	<5.3	<0.18	<2.3	0.38	<4.3	<0.17	<4.3	<0.17
SS-2	03/04/15	<4.5	<0.24	<4.2	0.42	<3.1	<0.16	<1.8	<0.094	<3.3	1.3	<1.4	0.70	<2.7	<0.16	<2.7	<0.16
SS-3	03/04/15	<4.5	<0.17	<4.2	0.42	<3.1	<0.12	<1.8	<0.066	<3.3	<0.12	1.4	1.1	<2.7	<0.11	<2.7	<0.11
SS-4	03/04/15	<4.7	<0.19	<4.4	0.41	<3.2	<0.13	<1.8	<0.075	<3.4	0.20	<1.4	0.48	<2.8	<0.13	<2.8	<0.13
SSV-1	03/04/15	<4.5	<0.23	<4.2	0.38	<3.1	<0.16	<1.8	<0.092	<3.3	0.29	<1.4	0.59	<2.7	<0.16	<2.7	<0.16
SSA-1	03/04/15	<6.8	<0.32	<6.4	0.46	<4.7	<0.22	<2.7	<0.13	<5.0	0.48	<2.1	0.63	<4.0	<0.22	<4.0	<0.22

- Notes:
- TPHg = Total petroleum hydrocarbons as gasoline.
  - MTBE = Methyl tertiary butyl ether.
  - TBA = Tertiary butyl alcohol.
  - Add'l VOCs = Additional volatile organic compounds.
  - SCAQMD = South Coast Air Quality Management District.
  - ASTM = American Society of Testing and Materials.
  - EPA = Environmental Protection Agency.
  - % V = Percent by volume.
  - in Hg = Inches of mercury.
  - µg/m<sup>3</sup> = Micrograms per meter cubed.
  - ND = Not detected.
  - < = Less than the stated laboratory reporting limit.
  - = Not applicable/Not specified.
  - a = Value for total xylenes.
  - b = Protective sub-slab concentration calculated using the DTSC default attenuation factor of 0.05.
  - c = Concentration exceeds calibration limit.

**TABLE 1C**  
**SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS - ATMOSPHERIC GASES AND HYDROCARBONS**

Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 3 of 11)

Sample ID	Date	Methane	Carbon Dioxide	Oxygen + Argon	Helium	Vacuum	TPHg	MTBE		Benzene		Toluene		Ethylbenzene		o-Xylenes		pm-Xylenes		TBA	Naphthalene		Ethanol
		(%V)	(%V)	(%V)	(%V)	(in Hg)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		
		SCAQMD 25.1M	SCAQMD 25.1M	SCAQMD 25.1M	ASTM D-1946 (M)	Meter Reading	GC/MS C6-C12 as Gasoline	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15	EPA TO-15 SIM	EPA TO-15
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																							
Commercial/Industrial		---	---	---	---	---	2,500	47	47	0.42	0.42	1,300	1,300	4.9	4.9	440a	440a	440a	440a	---	0.36	0.36	---
Calculated Sub-Slab (b)		---	---	---	---	---	50,000	940	940	8.4	8.4	26,000	26,000	98	98	8,800a	8,800a	8,800a	8,800a	---	7.2	7.2	---
SS-1R	03/04/15	0.00014	0.12	22	0.0548	-4.60	<1,100	<17	<0.13	<3.7	2.1	<4.3	1.1	<5.0	0.52	<5.0	0.67	<20	1.7	<14	<60	0.33	<22
SS-1R Dup	03/04/15	0.00013	0.12	22	0.0252	-6.30	<1,000	<16	<0.14	<3.5	2.1	<4.1	1.2	<4.7	0.54	<4.7	0.62	<19	1.6	<13	<57	0.25	<21
SS-2	03/04/15	0.00012	0.036	22	<0.0100	-6.00	<630	<9.7	0.13	3.5	5.0	4.6	2.4	<2.9	0.94	<2.9	1.1	<12	2.6	<8.2	<35	0.22	30
SS-3	03/04/15	0.00017	0.035	22	<0.0100	-4.40	<630	<9.7	<0.090	<2.2	2.2	3.0	1.9	<2.9	0.51	<2.9	0.59	<12	1.5	<8.2	<35	0.16	23
SS-4	03/04/15	0.00016	0.020	22	0.0195	-5.90	1,300	<10	<0.10	<2.2	1.7	4.0	2.2	<3.0	1.1	<3.0	0.96	<12	3.1	<8.5	<37	1.7	45
SSV-1	03/04/15	0.00015	0.0073	22	0.0458	-4.20	<620	<9.7	0.23	<2.1	2.3	<2.5	1.6	<2.9	0.71	<2.9	0.65	<12	1.6	10	<35	0.24	1,000
SSA-1	03/04/15	0.00016	0.0089	22	0.0182	-7.40	<950	<15	0.36	<3.2	4.0	<3.8	1.9	<4.4	0.91	<4.4	1.0	<18	2.7	<12	<53	0.36	<19

- Notes:
- TPHg = Total petroleum hydrocarbons as gasoline.
  - MTBE = Methyl tertiary butyl ether.
  - TBA = Tertiary butyl alcohol.
  - Add'l VOCs = Additional volatile organic compounds.
  - SCAQMD = South Coast Air Quality Management District.
  - ASTM = American Society of Testing and Materials.
  - EPA = Environmental Protection Agency.
  - % V = Percent by volume.
  - in Hg = Inches of mercury.
  - µg/m<sup>3</sup> = Micrograms per meter cubed.
  - ND = Not detected.
  - < = Less than the stated laboratory reporting limit.
  - = Not applicable/Not specified.
  - a = Value for total xylenes.
  - b = Protective sub-slab concentration calculated using the DTSC default attenuation factor of 0.05.
  - c = Concentration exceeds calibration limit.



**TABLE 1D**  
**SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS - VOCs**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 4 of 11)

Sample ID	Date	Acetone		Bromomethane		2-Butanone		1,3-Butadiene	1,1-Diflouroethane	4-Ethyltoluene		1,3,5-Trimethylbenzene		1,2,4-Trimethylbenzene		Hexane		Styrene		Additional VOCs
		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		
		EPA TO-15	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																				
Commercial/Industrial		140,000	22	22	---	---	---	---	---	---	---	---	---	---	---	---	---	3,900	3,900	---
Calculated Sub-Slab (b)		2,800,000	440	440	---	---	---	---	---	---	---	---	---	---	---	---	---	78,000	78,000	---
SS-1R	03/04/15	46	<4.4	<0.14	<10	<2.1	<0.080	<0.98	<5.6	0.50	<5.6	0.31	<17	1.1	<0.51	<15	<0.15	ND		
SS-1R Dup	03/04/15	40	<4.2	<0.15	<9.6	<2.2	<0.083	1.0	<5.4	0.48	<5.4	0.29	<16	1.1	<0.53	<14	<0.16	ND		
SS-2	03/04/15	40	<2.6	0.25	19	2.9	<0.079	<0.96	<3.3	0.51	<3.3	0.31	<10	1.3	0.53	<8.6	0.32	ND		
SS-3	03/04/15	52	<2.6	<0.097	7.9	3.7	<0.055	<0.68	<3.3	0.28	<3.3	0.17	<10	0.62	0.55	<8.6	0.31	ND		
SS-4	03/04/15	71	<2.7	<0.11	20	4.8	0.097	<0.76	<3.4	0.81	<3.4	0.56	<10	1.7	0.82	<8.9	0.20	ND		
SSV-1	03/04/15	77	<2.6	<0.14	8.2	7.3	<0.077	7.8	<3.3	0.46	<3.3	0.26	<9.9	0.92	0.57	<8.6	0.67	ND		
SSA-1	03/04/15	56	<3.9	<0.19	<9.0	6.3	<0.11	<1.3	<5.0	0.71	<5.0	0.45	<15	1.4	0.84	<13	0.20	ND		

- Notes:
- TPHg = Total petroleum hydrocarbons as gasoline.
  - MTBE = Methyl tertiary butyl ether.
  - TBA = Tertiary butyl alcohol.
  - Add'l VOCs = Additional volatile organic compounds.
  - SCAQMD = South Coast Air Quality Management District.
  - ASTM = American Society of Testing and Materials.
  - EPA = Environmental Protection Agency.
  - % V = Percent by volume.
  - in Hg = Inches of mercury.
  - µg/m<sup>3</sup> = Micrograms per meter cubed.
  - ND = Not detected.
  - < = Less than the stated laboratory reporting limit.
  - = Not applicable/Not specified.
  - a = Value for total xylenes.
  - b = Protective sub-slab concentration calculated using the DTSC default attenuation factor of 0.05.
  - c = Concentration exceeds calibration limit.

**TABLE 2A  
INDOOR AIR ANALYTICAL RESULTS - HVOCs**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 5 of 11)

Sample ID	Date	Dichlorodifluoro-methane		Methylene Chloride		Tetrachloro-ethene		Trichloro-ethene		1,1,1-Trichloroethane		1,1,2-Trichloro-1,2,2-Trifluoroethane		Trichlorofluoro-methane		Vinyl Chloride		Add'l HVOCs	
		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	
		EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																			
Commercial/Industrial		---	---	26	26	2.1	2.1	3.0	3.0	22,000	22,000	---	---	---	---	0.16	0.16	---	
<b>Human Health Risk Assessment Note Number 3 (DTSC, 2014)</b>																			
Industrial		---	---	12	12	2.08	2.08	---	---	4,380	4,380	---	---	---	---	0.157	0.157	---	
<b>Interim TCE Indoor Air Response Action Levels (EPA, 2014)</b>																			
<b>Commercial/Industrial Accelerated Response Action Level</b>																			
8-hour Work Day		---	---	---	---	---	---	8	8	---	---	---	---	---	---	---	---	---	---
10-hour Work Day		---	---	---	---	---	---	7	7	---	---	---	---	---	---	---	---	---	---
<b>Commercial/Industrial Urgent Response Action Level</b>																			
8-hour Work Day		---	---	---	---	---	---	24	24	---	---	---	---	---	---	---	---	---	---
10-hour Work Day		---	---	---	---	---	---	21	21	---	---	---	---	---	---	---	---	---	---
<b>Background Outdoor Air</b>																			
<b>Livermore (BAAQMD)</b>																			
Minimum		---	---	0	0	0	0	0	0	---	---	---	---	---	---	---	---	---	---
Average		---	---	0.65	0.65	0.11	0.11	0.0098	0.0098	---	---	---	---	---	---	---	---	---	---
Maximum		---	---	4.14	4.14	2.11	2.11	0.11	0.11	---	---	---	---	---	---	---	---	---	---
<b>East Oakland (BAAQMD)</b>																			
Minimum		---	---	0	0	0	0	0	0	---	---	---	---	---	---	---	---	---	---
Average		---	---	0.70	0.70	0.17	0.17	0.05	0.05	---	---	---	---	---	---	---	---	---	---
Maximum		---	---	7.71	7.71	0.82	0.82	1.45	1.45	---	---	---	---	---	---	---	---	---	---

**Dry Clean 580 Unit**

IA1	03/05/15	2.9	1.9	<17	0.55	<3.4	0.58	3.0	3.1	<2.7	0.14	<11	0.51	<5.6	1.1	<1.3	<0.026	ND
IA1 Dup	03/05/15	2.9	2.0	<17	0.43	<3.4	0.65	3.5	3.5	<2.7	0.16	<11	0.52	<5.6	1.1	<1.3	<0.026	ND
IA2	03/05/15	2.9	1.9	<17	0.51	<3.4	0.43	<2.7	1.2	<2.7	<0.14	<11	0.51	<5.6	1.0	<1.3	<0.026	ND

**Verizon**

**3935 East Castro Valley Boulevard**

IAV1	03/05/15	2.9	2.0	<17	0.30	<3.4	1.5	<2.7	0.25	<2.7	<0.14	<11	0.40	<5.6	1.1	<1.3	<0.026	ND
IAV2	03/05/15	2.8	1.9	<17	0.64	<3.4	1.4	<2.7	0.31	<2.7	<0.14	<11	0.52	<5.6	1.1	<1.3	<0.026	ND

**AT&T**

**3949 East Castro Valley Boulevard**

IAA1	03/05/15	2.9	2.0	<17	0.68	<3.4	0.63	<2.7	0.43	<2.7	<0.14	<11	0.53	<5.6	1.1	<1.3	<0.026	ND
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**Outdoor Air**

OA1	03/05/15	2.9	2.0	<17	0.45	<3.4	<0.17	<2.7	<0.13	<2.7	<0.14	<11	0.53	<5.6	1.1	<1.3	<0.026	ND
-----	----------	-----	-----	-----	------	------	-------	------	-------	------	-------	-----	------	------	-----	------	--------	----

**TABLE 2A**  
**INDOOR AIR ANALYTICAL RESULTS - HVOCs**  
Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 6 of 11)

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Notes:		
TPHg	=	Total petroleum hydrocarbons as gasoline.
MTBE	=	Methyl tertiary butyl ether.
TBA	=	Tertiary butyl alcohol.
Add'l VOCs	=	Additional volatile organic compounds.
SCAQMD	=	South Coast Air Quality Management District.
ASTM	=	American Society of Testing and Materials.
EPA	=	Environmental Protection Agency.
% V	=	Percent by volume.
in Hg	=	Inches of mercury.
µg/m <sup>3</sup>	=	Micrograms per meter cubed.
ND	=	Not detected.
<	=	Less than the stated laboratory reporting limit.
---	=	Not applicable/Not specified.

**TABLE 2B**  
**INDOOR AIR ANALYTICAL RESULTS - HVOCs**  
 Dry Clean 580  
 3735 East Castro Valley Boulevard  
 Castro Valley, California  
 (Page 7 of 11)

Sample ID	Date	Bromodichloromethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		c-1,2-Dichloroethene		t-1,2-Dichloroethene	
		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	
		EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																	
Commercial/Industrial		0.33	0.33	0.29	0.29	4,400	4,400	130,000	130,000	2.3	2.3	390	390	31	31	260	260
<b>Human Health Risk Assessment Note Number 3 (DTSC, 2014)</b>																	
Industrial		370	370	175	175	---	---	---	---	---	---	---	---	31	31	---	---
<b>Background Outdoor Air</b>																	
<b>Livermore (BAAQMD)</b>																	
Minimum		---	---	0.37	0.37	---	---	---	---	---	---	---	---	---	---	---	---
Average		---	---	0.67	0.67	---	---	---	---	---	---	---	---	---	---	---	---
Maximum		---	---	1.22	1.22	---	---	---	---	---	---	---	---	---	---	---	---
<b>East Oakland (BAAQMD)</b>																	
Minimum		---	---	0.35	0.35	---	---	---	---	---	---	---	---	---	---	---	---
Average		---	---	0.67	0.67	---	---	---	---	---	---	---	---	---	---	---	---
Maximum		---	---	1.38	1.38	---	---	---	---	---	---	---	---	---	---	---	---

**Dry Clean 580 Unit**

IA1	03/05/15	<3.4	<0.17	<3.1	0.43	<2.3	<0.12	<1.3	<0.066	<2.4	0.27	1.6	1.2	<2.0	<0.099	<2.0	<0.099
IA1 Dup	03/05/15	<3.4	<0.17	<3.1	0.44	<2.3	<0.12	<1.3	<0.066	<2.4	0.28	1.6	1.2	<2.0	<0.099	<2.0	<0.099
IA2	03/05/15	<3.4	<0.17	<3.1	0.41	<2.3	<0.12	<1.3	<0.066	<2.4	0.21	1.6	1.2	<2.0	<0.099	<2.0	<0.099

**Verizon**

**3935 East Castro Valley Boulevard**

IAV1	03/05/15	<3.4	<0.17	<3.1	0.46	<2.3	<0.12	<1.3	<0.066	<2.4	0.27	1.6	1.1	<2.0	<0.099	<2.0	<0.099
IAV2	03/05/15	<3.4	<0.17	<3.1	0.43	<2.3	<0.12	<1.3	<0.066	<2.4	0.31	1.7	1.3	<2.0	<0.099	<2.0	<0.099

**AT&T**

**3949 East Castro Valley Boulevard**

IAA1	03/05/15	<3.4	<0.17	<3.1	0.46	<2.3	<0.12	<1.3	<0.066	<2.4	0.27	1.9	1.3	<2.0	<0.099	<2.0	<0.099
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**Outdoor Air**

OA1	03/05/15	<3.4	<0.17	<3.1	0.46	<2.3	<0.12	<1.3	<0.066	<2.4	<0.12	1.6	<0.12	<2.0	<0.099	<2.0	<0.099
-----	----------	------	-------	------	------	------	-------	------	--------	------	-------	-----	-------	------	--------	------	--------

**TABLE 2B**  
**INDOOR AIR ANALYTICAL RESULTS - HVOCs**  
Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 8 of 11)

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Notes:		
TPHg	=	Total petroleum hydrocarbons as gasoline.
MTBE	=	Methyl tertiary butyl ether.
TBA	=	Tertiary butyl alcohol.
Add'l VOCs	=	Additional volatile organic compounds.
SCAQMD	=	South Coast Air Quality Management District.
ASTM	=	American Society of Testing and Materials.
EPA	=	Environmental Protection Agency.
% V	=	Percent by volume.
in Hg	=	Inches of mercury.
µg/m <sup>3</sup>	=	Micrograms per meter cubed.
ND	=	Not detected.
<	=	Less than the stated laboratory reporting limit.
---	=	Not applicable/Not specified.
a	=	Value for total xylenes.

**TABLE 2C  
INDOOR AIR ANALYTICAL RESULTS - ATMOSPHERIC GASES AND HYDROCARBONS**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 9 of 11)

Sample ID	Date	Methane	Carbon Dioxide	Oxygen + Argon	TPHg	MTBE		Benzene		Toluene		Ethylbenzene		o-Xylenes		pm-Xylenes		TBA	Naphthalene		Ethanol
		(%V)	(%V)	(%V)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		
		SCAQMD 25.1M	SCAQMD 25.1M	SCAQMD 25.1M	GC/MS C6-C12 as Gasoline	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15	EPA TO-15 SIM	EPA TO-15
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																					
Commercial/Industrial	---	---	---	---	2,500	47	47	0.42	0.42	1,300	1,300	4.9	4.9	440a	440a	440a	440a	---	0.36	0.36	---
<b>Background Outdoor Air</b>																					
<b>Livermore (BAAQMD)</b>																					
Minimum	---	---	---	---	---	---	---	0.11	0.11	---	---	---	---	---	---	---	---	---	---	---	---
Average	---	---	---	---	---	---	---	0.71	0.71	---	---	---	---	---	---	---	---	---	---	---	---
Maximum	---	---	---	---	---	---	---	2.63	2.63	---	---	---	---	---	---	---	---	---	---	---	---
<b>East Oakland (BAAQMD)</b>																					
Minimum	---	---	---	---	---	---	---	0	0	---	---	---	---	---	---	---	---	---	---	---	---
Average	---	---	---	---	---	---	---	0.95	0.95	---	---	---	---	---	---	---	---	---	---	---	---
Maximum	---	---	---	---	---	---	---	4.03	4.03	---	---	---	---	---	---	---	---	---	---	---	---

**Dry Clean 580 Unit**

IA1	03/05/15	0.00019	0.043	22	<b>9,100</b>	<7.2	0.26	<b>1.8</b>	<b>1.3</b>	5.1	3.6	<2.2	0.38	<2.2	0.50	<8.7	1.3	<6.1	<b>&lt;26</b>	0.30	220
IA1 Dup	03/05/15	0.00018	0.043	22	<b>12,000</b>	<7.2	<0.090	<b>&lt;1.6</b>	<b>1.2</b>	3.8	2.9	<2.2	0.32	<2.2	0.35	<8.7	0.92	<6.1	<b>&lt;26</b>	0.25	240
IA2	03/05/15	0.00018	0.041	22	2,100	<7.2	<0.090	<b>&lt;1.6</b>	<b>1.1</b>	3.3	2.7	<2.2	0.31	<2.2	0.36	<8.7	0.90	<6.1	<b>&lt;26</b>	0.22	230

**Verizon**

**3935 East Castro Valley Boulevard**

IAV1	03/05/15	0.00019	0.049	22	<470	<7.2	<0.090	<b>&lt;1.6</b>	<b>1.5</b>	5.0	4.3	<2.2	0.34	<2.2	0.34	<8.7	0.86	<6.1	<b>&lt;26</b>	0.12	1,100
IAV2	03/05/15	0.00019	0.050	22	610	<7.2	<0.090	<b>2.0</b>	<b>1.8</b>	3.7	3.2	2.2	0.30	<2.2	0.35	<8.7	0.82	<6.1	<b>&lt;26</b>	0.12	1,500

**AT&T**

**3949 East Castro Valley Boulevard**

IAA1	03/05/15	0.00019	0.070	22	680	<7.2	<0.090	<b>2.0</b>	<b>1.9</b>	5.2	4.3	<2.2	0.71	<2.2	0.53	<8.7	1.4	<6.1	<b>&lt;26</b>	0.30	4,600
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**Outdoor Air**

OA1	03/05/15	0.00018	0.038	22	<470	<7.2	<0.090	<b>1.9</b>	<b>1.7</b>	<1.9	0.86	<2.2	0.16	<2.2	0.22	<8.7	0.56	<6.1	<b>&lt;26</b>	0.10	19
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Notes:

- TPHg = Total petroleum hydrocarbons as gasoline.
- MTBE = Methyl tertiary butyl ether.
- TBA = Tertiary butyl alcohol.
- Add'l VOCs = Additional volatile organic compounds.
- SCAQMD = South Coast Air Quality Management District.
- ASTM = American Society of Testing and Materials.
- EPA = Environmental Protection Agency.
- % V = Percent by volume.
- in Hg = Inches of mercury.
- µg/m<sup>3</sup> = Micrograms per meter cubed.
- ND = Not detected.
- < = Less than the stated laboratory reporting limit.
- = Not applicable/Not specified.
- a = Value for total xylenes.

**TABLE 2D  
INDOOR AIR ANALYTICAL RESULTS - VOCs**

Dry Clean 580  
3735 East Castro Valley Boulevard  
Castro Valley, California  
(Page 10 of 11)

Sample ID	Date	Acetone	Bromomethane			2-Butanone		1,3-Butadiene	1,1-Difluoroethane	4-Ethyltoluene		1,3,5-Trimethylbenzene		1,2,4-Trimethylbenzene		Hexane	Styrene		Additional VOCs
		(µg/m³)	(µg/m³)			(µg/m³)		(µg/m³)	(µg/m³)	(µg/m³)		(µg/m³)		(µg/m³)	(µg/m³)		(µg/m³)		
		EPA TO-15	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15 SIM	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15 SIM	EPA TO-15	EPA TO-15 SIM	EPA TO-15/ EPA TO-15 SIM	
<b>Environmental Screening Levels, Ambient and Indoor Air, Table E-3 (December 2013)</b>																			
Commercial/Industrial		140,000	22	22	---	---	---	---	---	---	---	---	---	---	---	---	3,900	3,900	---
<b>Background Outdoor Air</b>																			
<b>Livermore (BAAQMD)</b>																			
Minimum		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Average		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Maximum		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>East Oakland (BAAQMD)</b>																			
Minimum		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Average		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Maximum		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**Dry Clean 580 Unit**

IA1	03/05/15	25	<1.9	<0.097	<4.4	<1.5	0.17	<0.68	<2.5	<0.25	<2.5	0.12	<7.4	0.55	0.63	<6.4	0.16	ND
IA1 Dup	03/05/15	25	<1.9	<0.097	<4.4	<1.5	0.14	<0.68	<2.5	<0.25	<2.5	<0.12	<7.4	0.46	<0.35	<6.4	0.16	ND
IA2	03/05/15	25	<1.9	<0.097	<4.4	<1.5	0.14	<0.68	<2.5	<0.25	<2.5	<0.12	<7.4	0.42	0.39	<6.4	0.15	ND

**Verizon**

**3935 East Castro Valley Boulevard**

IAV1	03/05/15	29	<1.9	<0.097	<4.4	<1.5	0.18	4.5	<2.5	<0.25	<2.5	<0.12	<7.4	0.39	<0.35	<6.4	0.59	ND
IAV2	03/05/15	29	<1.9	<0.097	<4.4	<1.5	0.24	3.5	<2.5	<0.25	<2.5	<0.12	<7.4	0.43	<0.35	<6.4	0.49	ND

**AT&T**

**3949 East Castro Valley Boulevard**

IAA1	03/05/15	43	<1.9	<0.097	<4.4	1.7	1.1	<0.68	<2.5	<0.25	<2.5	0.12	<7.4	0.54	0.48	<6.4	0.67	ND
------	----------	----	------	--------	------	-----	-----	-------	------	-------	------	------	------	------	------	------	------	----

**Outdoor Air**

OA1	03/05/15	14	<1.9	8.0	<4.4	<1.5	0.059	<0.68	<2.5	<0.25	<2.5	<0.12	<7.4	0.32	<0.35	<6.4	<0.11	ND
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## CUMULATIVE DATA TABLES





## **Airborne Monitoring, Personal Protective Equipment & Exposure Control Protocol Remedial Excavation 580 Market Place, Castro valley CA**

This Airborne Monitoring, Personal Protective Equipment & Exposure Protocol document has been prepared for the planned remedial excavation to occur at 580 Market Place in Castro Valley. This document has been prepared by ATC Group Services LLC (ATC) on behalf Weingarten Realty, the property owner.

Based on selected shallow soil sample results from sampling performed on March 1, 2012 and February 5-7, 2014 at the excavation and surrounding site, volatile organic compounds (VOCs) such as tetrachloroethene (PERC), trichloroethylene (TCE), cis-1, 2, dichloroethene (c-1,2 DCE) and naphthalene were detected at levels that exceeded the Environmental Screening Levels (ESLs) as developed by the San Francisco Bay Regional Water Quality Board (Water Board). However, naphthalene was not identified within the proposed excavation site and is not expected to be a contaminant of concern during these excavation activities.

When this soil is disturbed and released into the air, a route of exposure via inhalation could occur to those receptors in the vicinity. Therefore, mitigation measures to control the release of construction related dust and associated organic vapors is to be implemented. The construction contractor will minimize the generation of airborne dust within the excavation site and off-site.

During the physical excavation and soil disturbance activities such as digging, soil movement and relocation, best management practices will be used to minimize dust generation.

### **Airborne Monitoring, General**

To prevent exposure to hazardous work conditions and to aid in the selection of personal protective equipment (PPE), airborne monitoring for the presence of total VOCs and dust will occur during work activities at the excavation site. Photoionization detectors (PIDs) will be used to measure non-specific organic gases and vapors. Readings will be adjusted with appropriate correction factors to address specific VOCs that have been previously identified under a worst case scenario. Airborne dust, total and respirable, will be monitored with datalogging direct reading aerosol monitors.

Ambient air perimeter and personal operator breathing zone (OBZ) monitoring will be conducted. The ambient air monitoring locations at the perimeter of the work site will be determined daily dependent upon the wind direction. Two monitoring sites will be designated, one downwind and one upwind from the excavation activities.

The results will be compared to the adopted Cal/OSHA permissible exposure limits as found in Title 8, California Code of Regulations, Section 5155, Table AC-1 (T8-5155, Table AC-1) for occupational exposures and the California and National Ambient Air Quality Standards (CAAQS and NAAQS) and

the California Health Hazard Screening Limits (CHHSLs) for environmental particulate and VOC exposures, respectively.

Monitors will use the datalogging mode with 5 minute logging intervals and an audible alarm initially set at 5 ppm; the action level for the VOC with the lowest PEL, TCE; or 2.5 milligram per cubic meter of respirable dust; to indicate when response actions may be need to be initiated during the work activities. The logged data will be evaluated daily to determine personal exposure assessment, for upgrading of PPE or for making changes in work practices. If PPE requires upgrading, the alarm levels for the monitors will be adjusted to a higher level that is appropriate for the additional protection factor provided by the PPE. At any time that the monitoring equipment appears to have erratic readings, re-calibration or bump-testing shall be performed.



Monitoring Equipment (proposed)		
	VOC	Dust
Ambient	RAE MiniRAE 3000 PID	TSI 8530 DustTrak DRX
Personal	RAE ToxiRAE Pro PID	TSI AM520 SidePak

### Excavator Operator

The dust and organic vapor generation at the excavation site will be monitored in the operator breathing zone of the excavator operator during his entire work shift for the entire duration of the project. A personal dust monitor such as a TSI SidePak AM520 or equivalent will be used to log airborne concentrations for total and respirable (particulate materials, PM10 and PM 2.5). A personal PID such as a RAE ToxiRAE Pro PID or equivalent will be used to log airborne concentrations of total organic chemicals. Data points will be integrated every five (5) minutes and will averaged the exposure during that duration. At the end of each work shift, the data will be down loaded. Correction factors will be applied to the VOC results to adjust for specific VOCs previously identified as exceeding an ESL. A results will be compared to the occupational permissible exposure limits as found T8-5155, Table AC-1. The results will be also used to determine the appropriateness of the personal protective equipment, in particular respiratory protection, and work practices.

In addition, both personal monitors are equipped with audible alarms set to indicate possible real time unsafe working conditions. When an alarm is audible for 5 continuous minutes or more, the excavator operator will enact the following response actions: stop work, exit the excavation site and move to a location with fresh air, such as upwind of the work area. The operator will not resume work activities until after all perimeter monitor levels for the contaminant of concern have been checked and ensured that their alarms are not audible. If alarm(s) continues beyond 5 minutes, additional work practice for dust suppression, such as the misting of the soil with water, should be initiated until the alarm ceases. Since the aerosol monitor can detect aerosolized water vapor, care should be used when misting in the vicinity of the monitoring locations, so as to not inadvertently activate the alarms.

### Site Operations

Dust generation at the excavation site will also be monitored at the periphery of the work site at 3 locations during each work shift throughout the entire duration of the excavation. TSI 8533 DustTrak DRX datalogging aerosol monitors and RAE MiniRAE 3000 PID or the equivalent will be set up so that airborne particulate and organic vapor data are collected at one upwind and two downwind sites as determined at the beginning of each work shift.

A tripod enclosure assembly with the monitors will be set up at each site to sample at a height of about 5 feet (') to simulate a standing individual's breathing zone. Particulate and organic vapor results will be compared to environmental CAAQS and NAAQS and CHHSL, respectively. The results will be used to determine the appropriateness of the work practices and dust suppression methods used.

In addition, monitors will be equipped with audible alarms set to indicate possible real time unsafe working conditions. When an alarm is audible for 5 continuous minutes or more at any of the monitoring locations, the following response actions will be enacted: stop work, exit the work site and move to a location with fresh air, such as upwind of the work area. No work activities will resume until all perimeter monitors have been checked and their alarms are silent. If and alarm continues beyond 5 minutes, additional work practice for dust



suppression, such as the misting of the soil with water, should be initiated until the alarm ceases. Since the aerosol monitor can detect aerosolized water vapor, care should be used when misting in the vicinity of the monitoring locations, so as to not inadvertently activate the alarms.

### **Personal Protective Equipment and Hygiene**

Although the hierarchy of controlling occupational exposure to airborne contaminants utilizes engineering controls first, followed by administrative controls, the use of personal protective equipment (PPE) is often needed when the other control methods are not feasible to sufficiently minimize exposure.

Prior to the beginning of the excavation activities, all site employees must have documentation of his/her ability of wearing respiratory protection and must show that the requirements for training and fit-testing as defined in T8-5144 have been met.

At the beginning of the excavation activities, all site employees will be donned in Level D PPE. In addition, any employee working directly with/in soil shall be double gloved, nitrile and work gloves. The interior nitrile gloves shall be disposed of after each use, not to be reused. The outer work glove may be reused, as long as, the interior surfaces have not come in direct contact with the soil. Due to a possible skin absorption pathway for exposure from some of the VOCs identified in the soil (vinyl chloride and naphthalene), good personal hygiene practices shall be used, such as thorough washing of hands and face with warm soapy water prior to eating or smoking, no touching of the face/mouth with gloves donned, bagging of removed soil contaminated clothing/shoes.

If the evaluation of the daily logged data suggests that action levels were exceeded during the work shift, the level of PPE will be upgraded and work practices evaluated for their effectiveness in controlling exposures.

Level D:

- Work uniform - Long pants and shirt with sleeves (no tank tops)
- Disposable nitrile (inner) gloves
- Outer work gloves
- Chemical resistant boots with steel toe
- Safety glasses with side shields or Vented goggles
- High visibility reflective vest
- Hard hat
- Hearing protection (depending on working conditions)

Level C: (in addition to Level D), based on daily monitoring results

- Half- or Full-face air purifying respirator, with HEPA and/or OV cartridges
- Disposable, hooded, chemical resistant clothing
- Disposable boot covers

### **Work Practices, Dust Suppression**



Dust control methods during excavation activities shall be implemented by the construction contractor to prevent excessive airborne levels of dust and associated organic vapors. These methods shall restrict off-site dispersal, minimize the accumulation of contaminated soil and comply with applicable regulations pertaining to air quality and nuisance control of construction activities that could potentially generate dust.

The adequacy of dust control will be monitored throughout the duration of the project and will be evaluated continuously by on-site personnel. In addition, logged data will be reviewed nightly to verify that work practices are controlling airborne contaminants within acceptable levels. In the case that improvement/upgrades are needed, relevant information (recommendations and supporting data) will be immediately conveyed to the contractor by phone and/or in writing. The contractor will be responsible to enact the changes on the work day.

Recommendations for suppressing dust generation may include, but not be limited to the following:

- Thorough misting of surface soil, prior to and at least several times during actual excavation (dependant on weather conditions);
- Use of a chemical surfactant, in addition to water misting;
- Use of additive chemical dust suppressants;
- Control excavation techniques:
  - Minimizing drop distances
  - Removing loose dust from excavator
  - Planning the excavation route/details
  - Driving at lower speeds
- Cover stockpiles with wind impervious fabric/material;
- Control excessive winds with installation of windbreaks to redirect flow; and
- Remove excessive amount of accumulated stockpiles.