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By Alameda County Environmental Health 3:48 pm, Jun 30, 2017

June 30, 2017

Mr. Paresh Khatri  
Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

Re: Acknowledgement **Statement-**  
**2017 Sub-Slab Vapor Depressurization System Performance Report**  
Searway Property (SLIC Case No. RO0002584)  
649 Pacific Avenue  
Alameda, California

Dear Mr. Khatri,

"I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website".

Timber Dell Properties, LLC



Donald W. Lindsey, member



June 30, 2017  
Trinity Project: 103.001.001

Mr. Paresh Khatri  
Alameda County Health Care Services Agency  
Environmental Health Services, Environmental Protection  
1131 Harbor Parkway, Suite 250  
Alameda, CA 94502-6577

Re: *2017 Sub-Slab Vapor Depressurization System Performance Report*  
Searway Property  
649 Pacific Avenue  
Alameda, California

Dear Mr. Khatri:

Trinity Source Group, Inc. (Trinity) has prepared this *2017 Sub-Slab Vapor Depressurization System Performance Report (Report)* on behalf of Timber Del Properties, for the referenced site (Figure 1). The operations and maintenance (O&M) activities are described in the following sections.

The sub-slab vapor depressurization (SSVD) system was installed at the existing commercial building at the site in order to prevent volatile organic compounds (VOCs) from migrating from the sub-slab area into indoor air. The SSVD system was installed in 2008 and operates continuously. Monitoring is currently conducted annually.

#### **SUB-SLAB VAPOR DEPRESSURIZATION SYSTEM DESCRIPTION**

Sub-slab air is withdrawn from the sub-slab material by means of an applied vacuum. The extracted air is routed through piping and discharged to the atmosphere.

The SSVD system includes two horizontal extraction wells located near former depressurization points DPT-1 and DPT-2, with extraction well pipe runs trenched to nearby walls. The pipe runs continue up to the first floor ceiling, where they are connected to a manifold and then a suction fan located in the attic. The exhaust air is piped to the southwest corner of the roof and discharged through a 6-foot tall stack. Vacuum is applied to the extraction wells using an electric fan blower equipped with a flow meter. The SSVD system was originally constructed with carbon treatment, but the carbon was removed in May 2009 due to very low VOC influent concentrations. The system layout is presented on Figure 2. The Sub-Slab System Process and Instrumentation Diagram is shown on Figure 3.

Sub-slab extraction system influent and effluent analytical data are summarized in Table 1. Sub-slab extraction system influent throughput and mass removal of VOCs are summarized in Table 2. Sub-slab extraction system effluent throughput and discharge of VOCs are summarized in Table 3.

The Sub-Slab System Extraction Well Detail is shown on Figure 4. Each extraction well is a 3-foot long, 4-inch diameter, horizontal slotted PVC casing, which is connected to 4-inch diameter PVC blank pipe runs. The slotted pipe is set in the middle of the sub-base material. PVC screen extends across the sub-base material.

The Sub-Slab System Monitoring Point Detail is shown on Figure 5. The monitoring points (VS-1 through VS-22) were constructed in accordance with the design specifications presented in the EPA document, "Assessment of Vapor Intrusion in Homes Near the Raymark Superfund Site using Basement and Sub-Slab Air Samples" (EPA 600 R-05/147, March 2006). These monitoring points have proven to be effective in sample collection and measuring the pressure field established by an applied vacuum. Monitoring point locations are shown on Figure 2.

The Bay Area Air Quality Management District (BAAQMD) application number is 17506 and the plant number is 18970. In February 2017, Trinity provided information to BAAQMD necessary to acquire an updated Permit to Operate (PTO) for the SSVD system. It is our understanding that the BAAQMD invoice for the updated PTO was submitted to Timber Del Properties former address at 2424 Central Avenue in Alameda which is currently vacant. Correct billing information has recently been submitted to BAAQMD, and after payment is received, BAAQMD will submit an updated PTO. The PTO will be submitted to the Alameda County Health Care Services Agency under separate cover. The 2016 Permit to Operate is included in Attachment A for reference.

On March 19, 2012 Trinity requested a change in monitoring frequency from quarterly to annually, which was granted by BAAQMD. An approval letter of the monitoring frequency change is included in Attachment B.

## **SSVD SYSTEM O&M SUMMARY**

<b>Date of O&amp;M Event:</b>	May 26, 2017
<b>Sample Containers:</b>	1-Liter Tedlar Bag
<b>Sample Collection Point:</b>	Effluent
<b>System Conditions:</b>	System running and passed smoke pen test for O&M event

Trinity collected an effluent sample and delivered it to Torrent Laboratory, Inc., a California-certified laboratory (ELAP# 1991). The sample was analyzed for Stoddard solvent and a full scan of VOCs using Method TO-15 during this annual sampling event. The O&M field data sheets are included in Attachment C and the certified analytical report is included in Attachment D. The laboratory noted that for the TPH Stoddard analysis; "Does not match typical gasoline pattern. TPH value includes amount of non-target compounds within gasoline range. The chromatogram pattern does not indicate the presence of Stoddard solvent in the sample."

## SSVD SYSTEM PERFORMANCE

- SSVD has discharged a total of approximately 9.86 pounds of VOCs from March 10, 2016 to May 26, 2017, during approximately 442 days of operation.
- VOC removal rate for the period of March 10, 2016 to May 26, 2017 is 0.02231 pounds per day.
- The system is performing as expected with removal of VOCs and depressurization of the sub-slab area.
- The low concentrations of VOCs discharged to the atmosphere are well within the permitted discharge allowed for specific compounds and for the total limit of 10 pounds per day. No violations of the BAAQMD permit have occurred.
- The Residential and Commercial Indoor Air Environmental Screening Levels<sup>1</sup> (ESLs) for each VOC were divided by the calculated Site-Specific Attenuation Factor to derive the Site-Specific Screening Levels. All effluent VOC concentrations from May 26, 2017 are less than Residential and Commercial Land Use Site-Specific Screening Levels<sup>2</sup> (Table 1).
- Effluent VOC concentrations were also compared directly to the corresponding Residential and Commercial Sub-Slab/Soil Gas Vapor ESLs. The only exceedance was for carbon tetrachloride at a concentration of 110 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) which exceeded the Residential ESL of 33  $\mu\text{g}/\text{m}^3$  but not the Commercial ESL of 290  $\mu\text{g}/\text{m}^3$ .

## RECOMMENDATIONS

Based on the SSVD performance from March 10, 2016 to May 26, 2017, we recommend continued operation of the SSVD in its current configuration, and continued annual performance monitoring.

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<sup>1</sup> San Francisco Bay Regional Water Quality Control Board, *Environmental Screening Levels*, February 2016 (Revision 3).

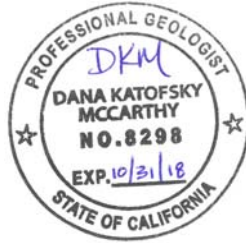
<sup>2</sup> Trinity Source Group, Inc., *Sub-Slab Attenuation Factor Determination Summary Report*, September 20, 2010.

Should you have any questions regarding this *Report*, please call Trinity at (831) 426-5600.

Sincerely,

**TRINITY SOURCE GROUP, INC.**  
**A California Corporation**

Information, conclusions, and recommendations made by Trinity in this document regarding this site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.



Dana McCarthy, PG  
Project Geologist

Brady Nagle  
Project Manager

**DISTRIBUTION**

A copy of this report has been forwarded to:

Mr. Don Lindsey  
Timber Del Properties, LLC  
1406 Webster Street  
Alameda, CA 94501

Ms. Miranda Vega  
The Mechanics Bank  
1999 Harrison St., Suite 810  
Oakland, CA 94612

Attachments:

- Table 1 – Summary of Sub-Slab Extraction System Influent and Effluent Analytical Data
- Table 2 – Summary of Sub-Slab Extraction System Influent Throughput and Mass Removal of VOCs
- Table 3 – Summary of Sub-Slab Extraction System Effluent Throughput and Mass Removal of VOCs

- Figure 1 – Site Location Map
- Figure 2 – Sub-Slab Depressurization System Layout
- Figure 3 – Sub-Slab Depressurization System - Process and Instrumentation Diagram
- Figure 4 – Sub-Slab Depressurization System - Extraction Well Detail
- Figure 5 – Sub-Slab Vapor Monitoring Point Detail

- Attachment A – BAAQMD – Permit to Operate
- Attachment B – BAAQMD – Correspondence
- Attachment C – O&M Field Data Sheets
- Attachment D – Certified Analytical Report, Chain-of-Custody and GeoTracker Upload Documentation

## TABLES

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**Table 1**  
**Summary of Sub-Slab Extraction System Influent and Effluent Analytical Data**

Searway Property  
649 Pacific Avenue  
Alameda, California

Sample Date	Sample Location	EPA Method TO-3/TO-15* Stoddard µg/m <sup>3</sup>	EPA Method TO-15								Notes
			Benzene µg/m <sup>3</sup>	Chloroform µg/m <sup>3</sup>	Carbon Tetrachloride µg/m <sup>3</sup>	PCE µg/m <sup>3</sup>	TCE µg/m <sup>3</sup>	VC µg/m <sup>3</sup>	2-Butanone µg/m <sup>3</sup>	Acetone µg/m <sup>3</sup>	
9/10/2008	Influent	4,900 <sup>c</sup>	<80	560	3,900	2,600	<130	<64	300	<480	
	Effluent	610 <sup>c, d</sup>	<1.8	<3.9	29	17	<1.1	<0.5	<0.88	71	k
9/11/2008	Influent	2,400 <sup>c</sup>	<32	480	3,200	2,500	<54	<26	260	<190	e
	Effluent	710 <sup>c</sup>	<1.8	<3.9	<1.9	<2.6	<1.1	<0.5	14	180	e
10/10/2008	Influent	960 <sup>b</sup>	65	110	880	880	<5.4	<2.6	27	51	l
	Effluent	740 <sup>b</sup>	<3.2	54	200	13	<5.4	<2.6	<3.0	25	m
11/6/2008	Influent	1,700 <sup>a</sup>	<1.6	58	690	520	<2.7	<1.3	23	62	f
	Effluent	2,800 <sup>a</sup>	1.9	53	770	14	<2.7	<1.3	6.5	37	g
12/4/2008	Influent	2,400 <sup>h</sup>	20	110	780	1,100	<6.7	<3.2	110	<24	i
	Effluent	2,100 <sup>h</sup>	18	120	1,100	40	<5.4	<2.6	82	<19	j
1/2/2009	Influent	<3,500	<16	26	560	800	<27	<13	<15	<95	n
	Effluent	<3,500	<8.0	73	920	220	<13	<6.4	<7.4	<48	o
2/9/2009	Influent	2,300 <sup>p</sup>	<3.2	64	480	680	<5.4	<2.6	9.6	29	t
	Effluent	1,800 <sup>p</sup>	<3.2	<4.9	10	<6.8	<5.4	<2.6	<3.0	20	s
5/20/2009	Influent				Carbon Vessels Removed; Influent no longer sampled.						
	Effluent	1,800 <sup>q</sup>	<4.5	<9.8	<4.7	<6.4	<2.6	<1.2	<2.2	<2.9	r
8/7/2009	Effluent	4,500 <sup>u</sup>	<1.6	<2.4	<3.2	<3.4	<2.7	<1.3	2.0	24	v
11/6/2009	Effluent	2,400 <sup>u</sup>	5.4	85	670 <sup>x</sup>	1,100 <sup>x</sup>	<2.7	<1.3	<1.5	84	w

**Table 1**  
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Searway Property  
649 Pacific Avenue  
Alameda, California

Sample Date	Sample Location	EPA Method TO-3/TO-15*	EPA Method TO-15									Notes
		Stoddard $\mu\text{g}/\text{m}^3$	Benzene $\mu\text{g}/\text{m}^3$	Chloroform $\mu\text{g}/\text{m}^3$	Carbon Tetrachloride $\mu\text{g}/\text{m}^3$	PCE $\mu\text{g}/\text{m}^3$	TCE $\mu\text{g}/\text{m}^3$	VC $\mu\text{g}/\text{m}^3$	2-Butanone $\mu\text{g}/\text{m}^3$	Acetone $\mu\text{g}/\text{m}^3$		
2/2/2010	Effluent	2,000 <sup>y</sup>	5.6	40	280	430	<2.7	<1.3	<1.5	31	z	
5/5/2010	Effluent	<400	2.24	77.4	562	857	<5.4	<2.6	<1.5	34.9	aa	
8/5/2010	Effluent	<400	6.78	75.8	<6.3	686	<11	<5.2	<3.0	48	ab, ac	
11/30/2010	Effluent	<350	<3.2	<9.8	259	290	<11	<5.2	<3.0	<19	ad	
2/22/2011	Effluent	<350	<3.2	26.8	235	261	<11	<5.2	<3.0	27.4	ae	
6/1/2011	Effluent	<350	<3.2	25.5	254	354	<11	<5.2	<3.0	62.4	af	
8/25/2011	Effluent	<350	<3.2	37.9	287	332	<11	<5.2	<3.0	<19	r, ag	
11/21/2011	Effluent	<350	<3.2	26.4	355	635	<11	<5.2	<3.0	<19		
3/6/2012	Effluent	<700	<3.2	44.3	447	626	<11	<5.2	<3.0	<19	r, ah	
3/25/2013	Effluent	<700	<3.2	38.5	567	578	<11	<5.2	<3.0	<38	r	
3/11/2014	Effluent	<700	2.21	27.3	229	366	<5.4	<2.6	<1.5	36.5	ai	
3/11/2015	Effluent	<200 <sup>ak, al</sup>	<3.4 <sup>an</sup>	<6.2 <sup>an</sup>	<4.3 <sup>an</sup>	890 <sup>an</sup>	<6.9 <sup>an</sup>	<3.3 <sup>an</sup>	<3.1 <sup>an</sup>	43.3 <sup>am, an</sup>	aj, ao	
3/10/2016	Effluent	6,900 <sup>aq</sup>	<3.2 <sup>ap</sup>	14.6 <sup>ap</sup>	56.1 <sup>ap</sup>	173 <sup>ap</sup>	<11 <sup>ap</sup>	<5.2 <sup>ap</sup>	<3.0 <sup>ap</sup>	<38 <sup>ap</sup>	ar	
5/26/2017	Effluent	4,770 <sup>as</sup>	<1.6	31	110	190	<2.7	<1.3	<1.5	350	at	



**Table 1**  
**Summary of Sub-Slab Extraction System Influent and Effluent Analytical Data**

Searway Property  
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Alameda, California

Sample Date	Sample Location	EPA Method TO-3/TO-15*	EPA Method TO-15								Notes
		Stoddard $\mu\text{g}/\text{m}^3$	Benzene $\mu\text{g}/\text{m}^3$	Chloroform $\mu\text{g}/\text{m}^3$	Carbon Tetrachloride $\mu\text{g}/\text{m}^3$	PCE $\mu\text{g}/\text{m}^3$	TCE $\mu\text{g}/\text{m}^3$	VC $\mu\text{g}/\text{m}^3$	2-Butanone $\mu\text{g}/\text{m}^3$	Acetone $\mu\text{g}/\text{m}^3$	
<b>Screening Levels for Indoor Air-Direct Exposure Human Risk Levels<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>) - Residential Property Use</b>											
		140	0.097	0.12	0.067	0.48	0.48	0.0093	5,200	32,000	
<b>Site-Specific Screening Levels for Sub-Slab Vapor (<math>\mu\text{g}/\text{m}^3</math>) - Residential Property Use**</b>											
		339,806	235	291	163	1,165	1,165	23	N/A	77,669,903	
<b>SFBRWQCB Sub-Slab Vapor ESLs<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>) - Residential Property Use</b>											
		68,000	48	61	33	240	240	4.7	2,600,000	16,000,000	
<b>Screening Levels for Indoor Air-Direct Exposure Human Risk Levels<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>) - Commercial Property Use</b>											
		570	0.42	0.53	0.29	2.1	3.0	0.16	22,000	140,000	
<b>Site-Specific Screening Levels for Sub-Slab Vapor (<math>\mu\text{g}/\text{m}^3</math>) - Commercial Property Use</b>											
		1,383,495	1,019	1,286	704	5,097	7,282	388	N/A	339,805,825	
<b>SFBRWQCB Sub-Slab Vapor ESLs<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>) - Commercial Property Use</b>											
		570,000	420	530	290	2,100	3,000	160	22,000,000	140,000,000	

**Notes:**

Stoddard = Total petroleum hydrocarbons as gasoline.

\* = Stoddard analyzed by Method TO-15 during the 2015, 2016, and 2017 O&M sampling events; see Note ak

PCE = Tetrachloroethylene or Perchloroethylene

TCE = Trichloroethylene

VC = Vinyl Chloride

VOCs = Volatile Organic Compounds

MTBE = Methyl tertiary butyl ether

TBA = Tert-Butanol

TAME = Tert amyl methyl ether

$\mu\text{g}/\text{m}^3$  = Micrograms per cubic meter

< = Less than laboratory analytical method reporting limit.

**Table 1**  
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Alameda, California

		EPA Method TO-3/TO-15*	EPA Method TO-15								
Sample Date	Sample Location	Stoddard $\mu\text{g}/\text{m}^3$	Benzene $\mu\text{g}/\text{m}^3$	Chloroform $\mu\text{g}/\text{m}^3$	Carbon Tetrachloride $\mu\text{g}/\text{m}^3$	PCE $\mu\text{g}/\text{m}^3$	TCE $\mu\text{g}/\text{m}^3$	VC $\mu\text{g}/\text{m}^3$	2-Butanone $\mu\text{g}/\text{m}^3$	Acetone $\mu\text{g}/\text{m}^3$	Notes
Notes Continued:											
<p>NS = No sample collected</p> <p>a = Result reported as Stoddard Solvent, but sample chromatogram does not resemble Stoddard Solvent standard pattern.</p> <p>b = Sample chromatogram does not resemble Stoddard Solvent standard pattern (possibly aged). Reported value due to presence of non-gasoline compounds within range of C5-C12 quantified as Gasoline.</p> <p>c = Not a typical Stoddard (discrete light end peaks within Stoddard range)</p> <p>d = Reporting limit increased due to low initial pressure in canister. Results reported to the MDL. Reported values between the MDL and RL should be considered as estimated.</p> <p>e = Reporting limit increased due to low initial pressure in canister. Results reported to the MDL.</p> <p>f = Other VOCs detected are: Carbon Disulfide <math>7.7 \mu\text{g}/\text{m}^3</math>, 1,2,4-trimethylbenzene <math>2.9 \mu\text{g}/\text{m}^3</math>, m,p-xylene <math>4.7 \mu\text{g}/\text{m}^3</math>, methylene chloride <math>4.5 \mu\text{g}/\text{m}^3</math>, and toluene <math>30 \mu\text{g}/\text{m}^3</math>.</p> <p>g = Other VOCs detected are: Carbon Disulfide <math>7.5 \mu\text{g}/\text{m}^3</math>, m,p-xylene <math>3.6 \mu\text{g}/\text{m}^3</math>, and toluene <math>27 \mu\text{g}/\text{m}^3</math>.</p> <p>h = Sample chromatogram does not resemble Stoddard solvent standard pattern. Reported value due to presence of non-stoddard solvent compounds within range of C7-C12.</p> <p>i = Other VOCs detected are: 1,2,4-trimethylbenzene <math>66 \mu\text{g}/\text{m}^3</math>, 1,3,5-trimethylbenzene <math>14 \mu\text{g}/\text{m}^3</math>, 4-ethyl toluene <math>48 \mu\text{g}/\text{m}^3</math>, ethyl benzene <math>49 \mu\text{g}/\text{m}^3</math>, m,p-xylene <math>270 \mu\text{g}/\text{m}^3</math>, o-xylene <math>54 \mu\text{g}/\text{m}^3</math> and toluene <math>490 \mu\text{g}/\text{m}^3</math></p> <p>j = Other VOCs detected are: 1,2,4-trimethylbenzene <math>38 \mu\text{g}/\text{m}^3</math>, 1,3,5-trimethylbenzene <math>7.6 \mu\text{g}/\text{m}^3</math>, 4-ethyl toluene <math>35 \mu\text{g}/\text{m}^3</math>, ethyl benzene <math>45 \mu\text{g}/\text{m}^3</math>, m,p-xylene <math>240 \mu\text{g}/\text{m}^3</math>, o-xylene <math>44 \mu\text{g}/\text{m}^3</math>, and toluene <math>380 \mu\text{g}/\text{m}^3</math></p> <p>k = Other VOC detected is: m,p-xylene <math>4.1 \mu\text{g}/\text{m}^3</math></p> <p>l = Other VOCs detected are: 1,2,4-trimethylbenzene <math>8.2 \mu\text{g}/\text{m}^3</math>, 4-ethyl toluene <math>8.8 \mu\text{g}/\text{m}^3</math>, m,p-xylene <math>53 \mu\text{g}/\text{m}^3</math>, MTBE <math>220 \mu\text{g}/\text{m}^3</math>, o-xylene <math>22 \mu\text{g}/\text{m}^3</math>, TBA <math>55 \mu\text{g}/\text{m}^3</math>, TAME <math>21 \mu\text{g}/\text{m}^3</math>, and toluene <math>82 \mu\text{g}/\text{m}^3</math></p> <p>m = Other VOCs detected are: MTBE <math>180 \mu\text{g}/\text{m}^3</math>, TAME <math>8.4 \mu\text{g}/\text{m}^3</math>, and toluene <math>7.3 \mu\text{g}/\text{m}^3</math></p> <p>n = Toluene detected at a concentration of <math>37 \mu\text{g}/\text{m}^3</math></p> <p>o = Toluene detected at a concentration of <math>29 \mu\text{g}/\text{m}^3</math></p> <p>p = Hydrocarbons responded within range of C5-C12 quantified as Stoddard Solvent but sample chromatogram does not match requested fuel standard pattern. TPH value due to presence of heavy end unidentified hydrocarbon peaks.</p> <p>q = Result reported as a Stoddard solvent but sample chromatogram does not match requested fuel pattern. Reported value due to individual non-target peaks (heavy end) within range of C5-C12.</p>											

**Table 1  
Summary of Sub-Slab Extraction System Influent and Effluent Analytical Data**

Searway Property  
649 Pacific Avenue  
Alameda, California

		EPA Method TO-3/TO-15*	EPA Method TO-15								
Sample Date	Sample Location	Stoddard $\mu\text{g}/\text{m}^3$	Benzene $\mu\text{g}/\text{m}^3$	Chloroform $\mu\text{g}/\text{m}^3$	Carbon Tetrachloride $\mu\text{g}/\text{m}^3$	PCE $\mu\text{g}/\text{m}^3$	TCE $\mu\text{g}/\text{m}^3$	VC $\mu\text{g}/\text{m}^3$	2-Butanone $\mu\text{g}/\text{m}^3$	Acetone $\mu\text{g}/\text{m}^3$	Notes
Notes Continued:											
<p>r = The reporting limits were raised due to limited sample received (tedlar bag). Results reported to the MDL.</p> <p>s = Toluene was detected at a concentration of <math>4.5 \mu\text{g}/\text{m}^3</math></p> <p>t = Toluene was detected at a concentration of <math>5.7 \mu\text{g}/\text{m}^3</math></p> <p>u = Result reported as a Stoddard solvent but sample chromatogram does not match requested fuel standard pattern. Result due to individual peaks of unidentified compounds within C5-C12 range quantified as Stoddard Solvent.</p> <p>v = Other VOCs detected are: 1,2,4-Trimethylbenzene <math>5.9 \mu\text{g}/\text{m}^3</math>, isopropanol <math>21 \mu\text{g}/\text{m}^3</math> and toluene <math>2.3 \mu\text{g}/\text{m}^3</math></p> <p>w = Other VOCs detected are: 1,2,4-Trimethylbenzene <math>140 \mu\text{g}/\text{m}^3</math>, 1,3,5-Trimethylbenzene <math>38 \mu\text{g}/\text{m}^3</math>, 4-Ethyl Toluene <math>130 \mu\text{g}/\text{m}^3</math>, ethylbenzene <math>83 \mu\text{g}/\text{m}^3</math>, total xylenes <math>322 \mu\text{g}/\text{m}^3</math>, methylene chloride <math>8.1 \mu\text{g}/\text{m}^3</math> t-butyl alcohol <math>29 \mu\text{g}/\text{m}^3</math>, toluene <math>35 \mu\text{g}/\text{m}^3</math>.</p> <p>x = Outside of calibration range but within working range of the instrument. Due to hold time restrictions, no diluted analysis was performed.</p> <p>y = TPH as Stoddard Solvent result due to unidentified compounds within range quantified as Stoddard Solvent.</p> <p>z = Other VOCs detected are: 1,2,4-Trimethylbenzene <math>120 \mu\text{g}/\text{m}^3</math>, 1,3,5-Trimethylbenzene <math>40 \mu\text{g}/\text{m}^3</math>, 4-Ethyl Toluene <math>120 \mu\text{g}/\text{m}^3</math>, Carbon disulfide <math>4.1 \mu\text{g}/\text{m}^3</math>, Isopropanol <math>21 \mu\text{g}/\text{m}^3</math>, total-xylene <math>171 \mu\text{g}/\text{m}^3</math>, Tert-butyl Alcohol <math>13 \mu\text{g}/\text{m}^3</math> and Toluene <math>15 \mu\text{g}/\text{m}^3</math></p> <p>aa = Other VOCs detected are: Tert-butanol <math>63.8 \mu\text{g}/\text{m}^3</math>, Toluene <math>10.3 \mu\text{g}/\text{m}^3</math>, total-Xylene <math>30.01 \mu\text{g}/\text{m}^3</math>, 4-ethyl toluene <math>19.5 \mu\text{g}/\text{m}^3</math>, 1,3,5-Trimethylbenzene <math>8.18 \mu\text{g}/\text{m}^3</math>, and 1,2,4-Trimethylbenzene <math>17.2 \mu\text{g}/\text{m}^3</math>.</p> <p>ab = Other VOCs detected are: Carbon Disulfide <math>12.4 \mu\text{g}/\text{m}^3</math>, tert-Butanol <math>109 \mu\text{g}/\text{m}^3</math>, Toluene <math>21.7 \mu\text{g}/\text{m}^3</math>, m,p-Xylene <math>24.3 \mu\text{g}/\text{m}^3</math>, o-xylene <math>10.4 \mu\text{g}/\text{m}^3</math>, 1,3,5-Trimethylbenzene <math>5.88 \mu\text{g}/\text{m}^3</math>, 1,2,4-Trimethylbenzene <math>15.5 \mu\text{g}/\text{m}^3</math>.</p> <p>ac = The results for Stoddard solvents are reported using their MDL, reporting limit was raised due to insufficient sample volume received (tedlar bag).</p> <p>ad = Other VOCs detected are: Toluene <math>116 \mu\text{g}/\text{m}^3</math>, m,p-Xylene <math>13.5 \mu\text{g}/\text{m}^3</math>, and o-Xylene <math>6.02 \mu\text{g}/\text{m}^3</math>.</p> <p>ae = Toluene only other VOC detected at a concentration of <math>16.4 \mu\text{g}/\text{m}^3</math>.</p> <p>af = Other VOCs detected are: Carbon Disulfide <math>6.63 \mu\text{g}/\text{m}^3</math>, and Toluene <math>96.9 \mu\text{g}/\text{m}^3</math>.</p> <p>** = Trinity Source Group, Inc, <i>Sub-Slab Attenuation Factor Determination Summary Report</i>, September 20, 2010. Note that calculation errors for benzene and vinyl chloride screening levels have been corrected. Calculation as follows: Site-Specific Screening Level = Indoor air ESL/radon study-determined attenuation factor</p> <p>ag = Other VOCs detected are: Carbon Disulfide <math>29.1 \mu\text{g}/\text{m}^3</math>, tert-Butanol <math>26.1 \mu\text{g}/\text{m}^3</math>, and Toluene <math>4.41 \mu\text{g}/\text{m}^3</math></p> <p>ah = Other VOCs detected are: Methylene Chloride <math>23.5 \mu\text{g}/\text{m}^3</math>, and Toluene <math>75.2 \mu\text{g}/\text{m}^3</math></p>											

**Table 1**  
**Summary of Sub-Slab Extraction System Influent and Effluent Analytical Data**

Searway Property  
649 Pacific Avenue  
Alameda, California

	EPA Method TO-3/TO-15*	EPA Method TO-15									
--	---------------------------	------------------	--	--	--	--	--	--	--	--	--

Sample Date	Sample Location	Stoddard µg/m <sup>3</sup>	Benzene µg/m <sup>3</sup>	Chloroform µg/m <sup>3</sup>	Carbon					2-Butanone µg/m <sup>3</sup>	Acetone µg/m <sup>3</sup>	Notes
					Tetrachloride µg/m <sup>3</sup>	PCE µg/m <sup>3</sup>	TCE µg/m <sup>3</sup>	VC µg/m <sup>3</sup>				

Notes Continued:

ai = Other VOCs detected are: Hexane 3.50 µg/m<sup>3</sup>, tert-Butanol 17.1 µg/m<sup>3</sup>, Tetrahydrofuran 2.46 µg/m<sup>3</sup>, Toluene 25.5 µg/m<sup>3</sup>, 4-Methyl-2-Pentanone 4.39 µg/m<sup>3</sup>, Ethyl benzene 5.89 µg/m<sup>3</sup>, m,p-Xylene 33.5 µg/m<sup>3</sup>, o-Xylene 12.4 µg/m<sup>3</sup>, and 1,2,4-Trimethylbenzene 10.3µg/m<sup>3</sup>.

aj = The results shown below are reported using their MDL

ak = Method TO-3 (mod) no longer offered by laboratory, samples collected in 2015, 2016, and 2017 analyzed by Method TO-15.

al = Reporting limits were raised due to limited sample volume received (tedlar bag)

am = Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than quantitative

an = Reporting limits were raised due to high concentration of target analyte

ao = Other VOCs detected: 4-Methyl-2-Pentanone (MIBK): 5.13 µg/m<sup>3</sup>, tert-Butanol: 54.0 µg/m<sup>3</sup>

ap = Reporting limit elevated due to insufficient sample quantity (tedlar bag).

aq = TPHg Result due to individual peaks of non-gasoline compounds within gasoline quantitative range.

ar = The laboratory noted: Analytical comment for TO15, Note: No stoddard solvent was available at the time of analysis for quantitation. Sample was quantitated against a gasoline standard. Individual peaks do not match either gasoline or stoddard solvent pattern.

as = The laboratory noted: Does not match typical gasoline pattern. TPH value includes amount of non-target compounds within gasoline range. The chromatogram pattern does not indicate that presence of Stoddard solvent in the sample.

at = Other VOCs detected: hexane: 7.9 µg/m<sup>3</sup>, tert-butanol: 14 µg/m<sup>3</sup>, 1,2-dichloroethane: 2.2 µg/m<sup>3</sup>, toluene: 31 µg/m<sup>3</sup>, m,p-xylene: 4.1 µg/m<sup>3</sup>

1 = Environmental Screening Levels, San Francisco Regional Water Quality Control Board, February 2016 (Rev.3)

**Table 2**  
**Summary of Sub-Slab Extraction System Influent**  
**Throughput and Mass Removal of VOCs**

Searway Property  
649 Pacific Avenue  
Alameda, California

Date	Average flow rate CFM	Days Operated Since Previous Event	Cubic Meters Removed Since Previous Event	Cumulative Cubic Meters Removed	Influent Total VOCs $\mu\text{g}/\text{m}^3$	Pounds VOCs Removed Since Last Event	Pounds VOCs Removed per Day	Cumulative Total Pounds VOCs Removed	Comments
9/10/2008	45	0.04	76.53	76.53	12,260	0.00207	0.04964	0.00207	System sampled 1-hour
9/11/2008	45	1.00	1,836.73	1,913.27	8,840	0.03580	0.03580	0.03786	
10/10/2008	45	29.00	53,265.31	55,178.57	3,443	0.40430	0.01394	0.44217	
11/6/2008	45	27.00	49,591.84	104,770.41	3,103	0.33923	0.01256	0.78140	
12/4/2008	45	28.00	51,428.57	156,198.98	5,511	0.62483	0.02232	1.40623	
1/2/2009	45	29.00	53,265.31	209,464.29	1,423	0.16710	0.00576	1.57333	
2/9/2009	45	38.00	69,795.92	279,260.20	3,568	0.54906	0.01445	2.12238	
5/20/2009	45	100.00	183,673.47	462,933.67	1,800	0.72886	0.00729	2.85125	
-----*Treatment System Removed*-----									

Notes:

CFM = cubic feet per minute  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meters  
VOCs = volatile organic compounds  
\* = Treatment system removed on May 20, 2009.

**Table 3**  
**Summary of Sub-Slab Extraction System Effluent**  
**Throughput and Mass Removal of VOCs**

Searway Property  
649 Pacific Avenue  
Alameda, California

Date	Average Flow Rate CFM	Days Operated Since Previous Event	Cubic Meters Discharged Since Previous Event	Cumulative Cubic Meters Discharged	Effluent Total VOCs $\mu\text{g}/\text{m}^3$	Pounds VOCs Discharged Since Last Event	Pounds VOCs Discharged per Day	Cumulative Total Pounds VOCs Discharged	Comments
9/10/2008	45	0.04	76.53	76.53	731.1	0.00012	0.00296	0.00012	
9/11/2008	45	1.00	1,836.73	1,913.27	904	0.00366	0.00366	0.00378	
10/10/2008	45	29.00	53,265.31	55,178.57	1,227.7	0.14417	0.00497	0.14795	
11/6/2008	45	27.00	49,591.84	104,770.41	3,720.5	0.40676	0.01507	0.55471	
12/4/2008	45	28.00	51,428.57	156,198.98	4,249.6	0.48181	0.01721	1.03652	
1/2/2009	45	29.00	53,265.31	209,464.29	1,242.0	0.14585	0.00503	1.18237	
2/9/2009	45	38.00	69,795.92	279,260.20	1,834.5	0.28228	0.00743	1.46465	
5/20/2009	45	100.00	183,673.47	462,933.67	1,800.0	0.72886	0.00729	2.19351	
8/7/2009	45	79.00	145,102.04	608,035.71	4,555.2	1.45716	0.01845	3.65067	
11/6/2009	45	91.00	167,142.86	775,178.57	5,129.5	1.89012	0.02077	5.54079	
2/2/2010	45	88.00	161,632.65	936,811.22	3,290.7	1.17259	0.01332	6.71338	
5/5/2010	45	92.00	168,979.59	1,105,790.82	1,682.5	0.62679	0.00681	7.34017	
8/5/2010	45	92.00	168,979.59	1,274,770.41	1,015.8	0.37840	0.00411	7.71857	
11/30/2010	45	117.00	214,897.96	1,489,668.37	684.5	0.32430	0.00277	8.04287	
2/22/2011	45	84.00	154,285.71	1,643,954.08	566.6	0.19272	0.00229	8.23559	
6/1/2011	45	99.00	181,836.73	1,825,790.82	799.4	0.32047	0.00324	8.55606	
8/25/2011	45	85.00	156,122.45	1,981,913.27	716.5	0.24661	0.00290	8.80268	
11/21/2011	45	88.00	161,632.65	2,143,545.92	1,016.4	0.36218	0.00412	9.16485	
3/6/2012	45	106.00	194,693.88	2,338,239.80	1,216.0	0.52193	0.00492	9.68678	
3/25/2013	45	384.00	705,306.12	3,043,545.92	1,183.5	1.84023	0.00479	11.52702	
3/11/2014	45	351.00	644,693.88	3,688,239.80	776.1	1.10299	0.00314	12.63000	
3/11/2015	45	365.00	670,408.16	4,358,647.96	992.4	1.46674	0.00402	14.09674	
3/10/2016	45	365.00	670,408.16	5,029,056.12	7,143.7	10.55819	0.02893	24.65493	1
5/26/2017	45	442.00	811,836.73	5,840,892.86	5,510.2	9.86195	0.02231	34.51689	2

Notes:

CFM = cubic feet per minute

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meters

VOCs = volatile organic compounds

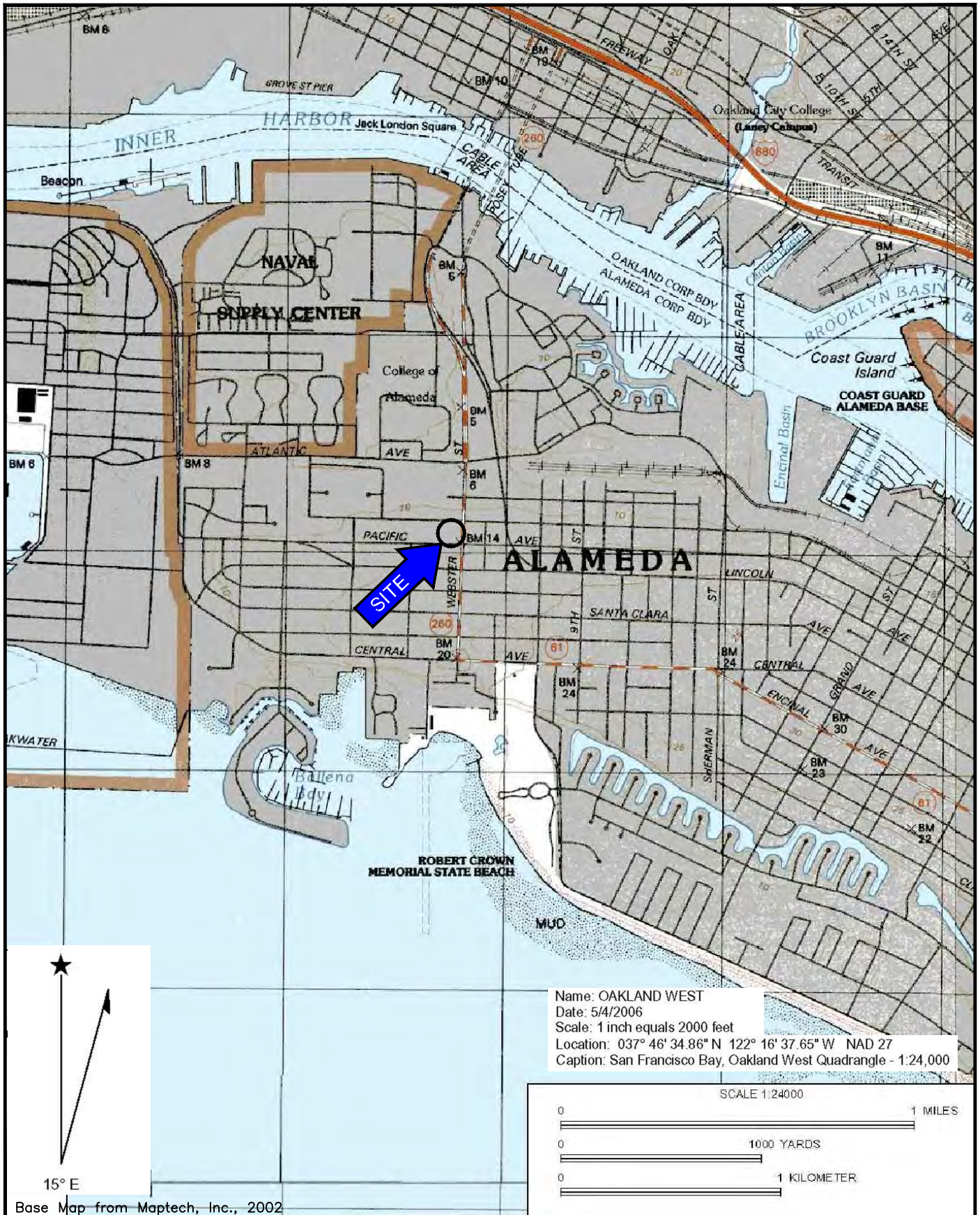
1 = The laboratory noted: Analytical comment for T)15, Note: No stoddard solvent standard was available at the time of analysis for quantitation. Sample was quantitated against a gasoline standard. Individual peaks do not match either gasoline or stoddard solvent pattern.

2 = The laboratory noted: Does not match typical gasoline pattern. TPH value includes amount of non-target compounds within gasoline range. The chromatogram pattern does not indicate that presence of Stoddard in the sample.

## FIGURES

---





Name: OAKLAND WEST  
 Date: 5/4/2006  
 Scale: 1 inch equals 2000 feet  
 Location: 037° 46' 34.86" N 122° 16' 37.65" W NAD 27  
 Caption: San Francisco Bay, Oakland West Quadrangle - 1:24,000

Base Map from Maptech, Inc., 2002

PREPARED BY

**TRINITY**  
*source group, inc.*  
 Environmental Consultants

119 Encinal Street  
 Santa Cruz, California 95060  
 v: 831.426.5600  
 f: 831.426.5602

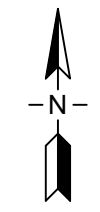
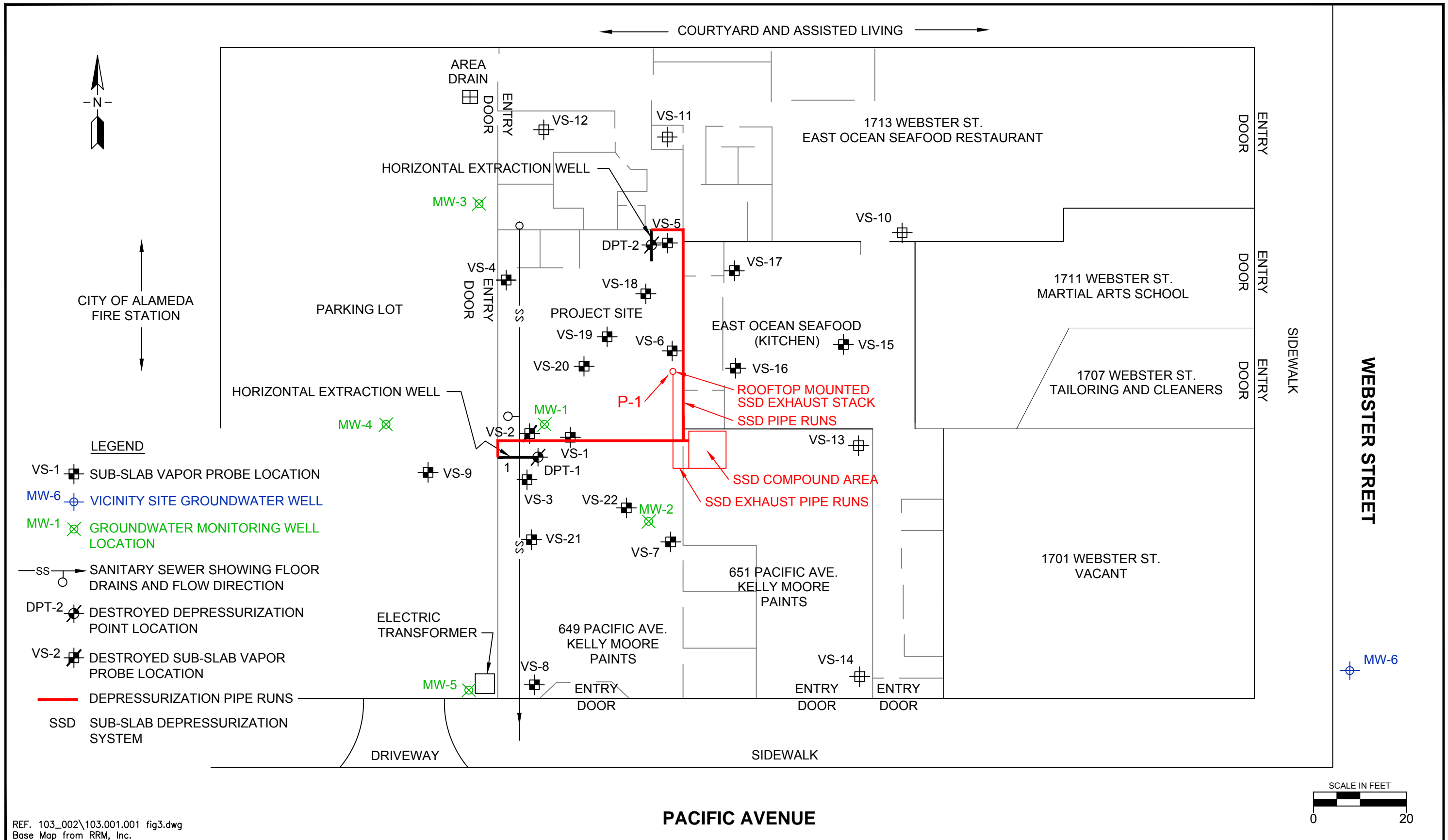
**SITE LOCATION MAP**

Searway Property  
 649 Pacific Avenue  
 Alameda, California

PROJECT:  
 103.001.001

FIGURE:  
 1

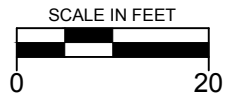




CITY OF ALAMEDA  
FIRE STATION

**LEGEND**

- VS-1 [Symbol] SUB-SLAB VAPOR PROBE LOCATION
- MW-6 [Symbol] VICINITY SITE GROUNDWATER WELL
- MW-1 [Symbol] GROUNDWATER MONITORING WELL LOCATION
- ss— [Symbol] SANITARY SEWER SHOWING FLOOR DRAINS AND FLOW DIRECTION
- DPT-2 [Symbol] DESTROYED DEPRESSURIZATION POINT LOCATION
- VS-2 [Symbol] DESTROYED SUB-SLAB VAPOR PROBE LOCATION
- [Symbol] DEPRESSURIZATION PIPE RUNS
- SSD [Symbol] SUB-SLAB DEPRESSURIZATION SYSTEM



REF. 103\_002\103.001.001 fig3.dwg  
Base Map from RRM, Inc.

PREPARED BY



**TRINITY**  
source group, inc.  
Environmental Consultants

119 Encinal Street  
Santa Cruz, California 95060  
v: 831.426.5600  
f: 831.426.5602

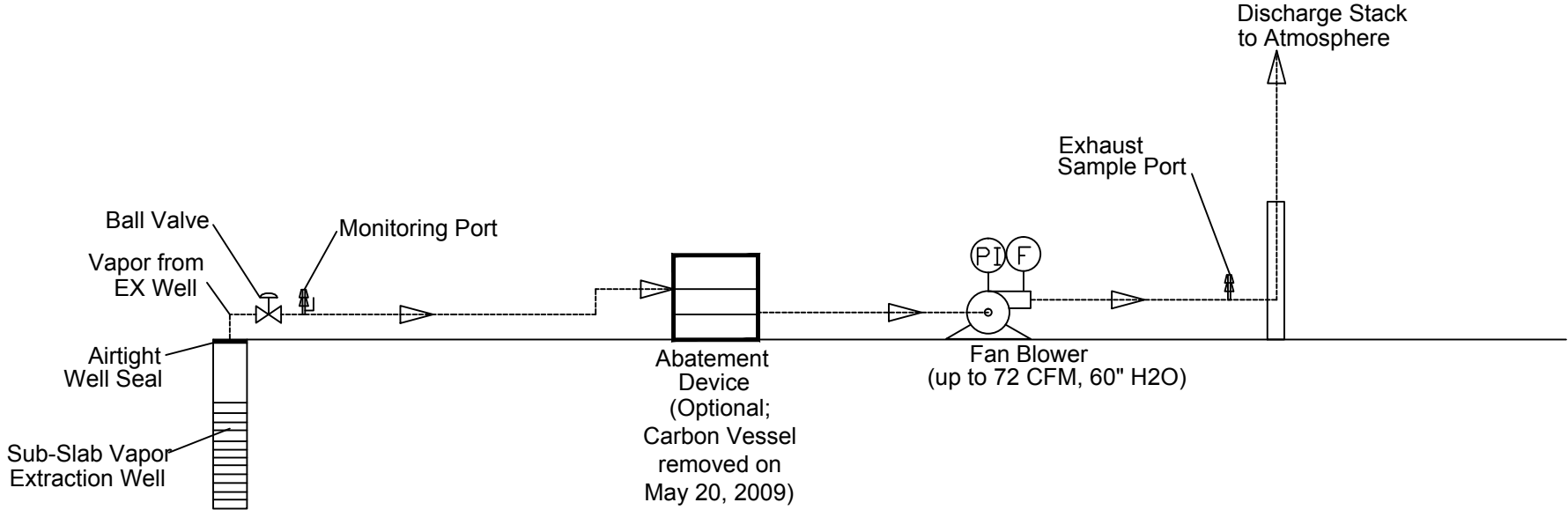
**SUB-SLAB DEPRESSURIZATION SYSTEM LAYOUT**

Searway Property  
649 Pacific Avenue  
Alameda, California

PROJECT:  
103.001.001

FIGURE:  
2

# SUB-SLAB DEPRESSURIZATION SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM



**LEGEND**

- Process Flow Direction
- Pressure Indicator
- Flow Indicator

REF. 103\_002\SS DEPRESS PID.dwg

PREPARED BY  

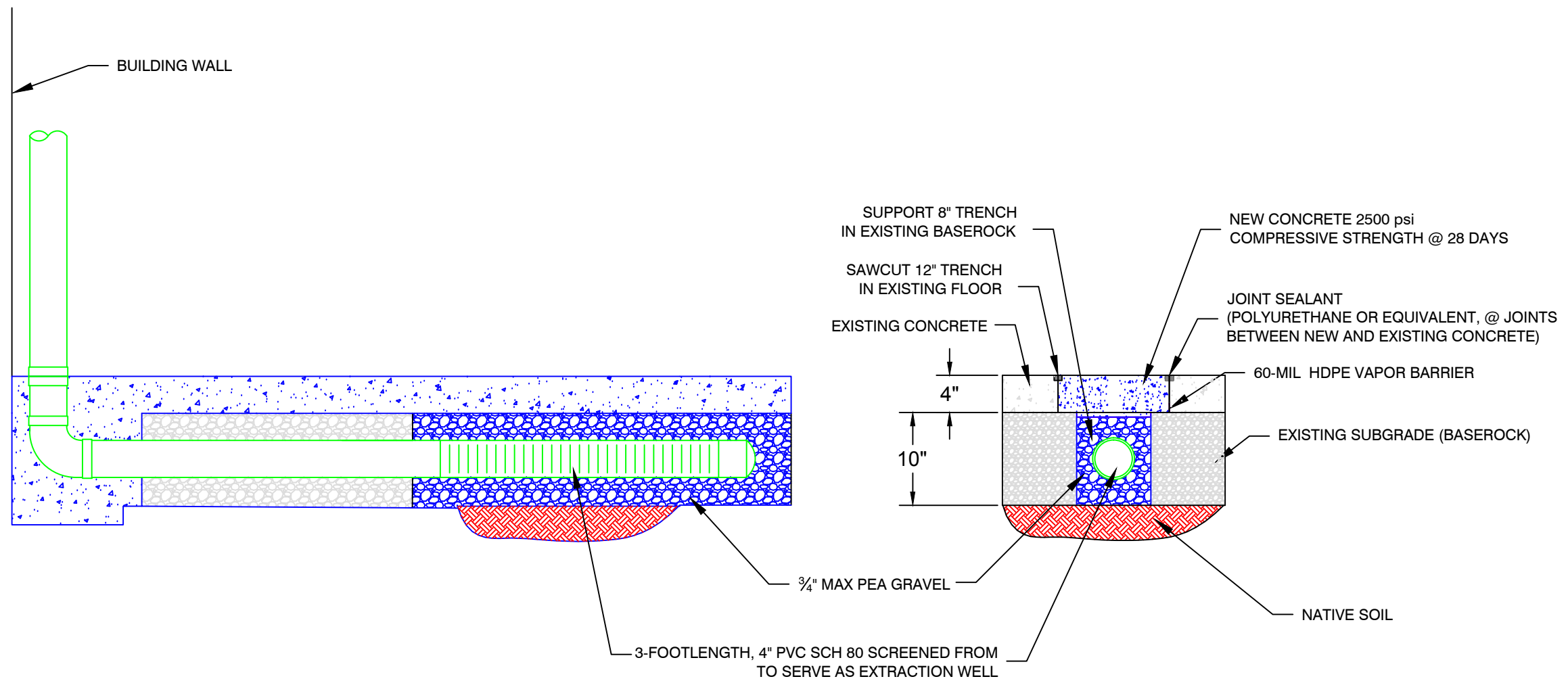
**TRINITY**  
*source group, inc.*  
 Environmental Consultants  
 119 Encinal Street  
 Santa Cruz, California 95060  
 v: 831.426.5600  
 f: 831.426.5602

SUB-SLAB DEPRESSURIZATION SYSTEM - PROCESS AND INSTRUMENTATION DIAGRAM

Searway Property  
 649 Pacific Avenue  
 Alameda, California

PROJECT:  
 103.001.001

FIGURE:  
 3



PIPE - WELL LATERAL DETAIL (TYPICAL)

TRENCH DETAIL (TYPICAL)

TYPICAL EXTRACTION WELL DETAIL  
BELOW GROUND COMPLETION

REF. 103\_002\EXWELL DTL.dwg

PREPARED BY  

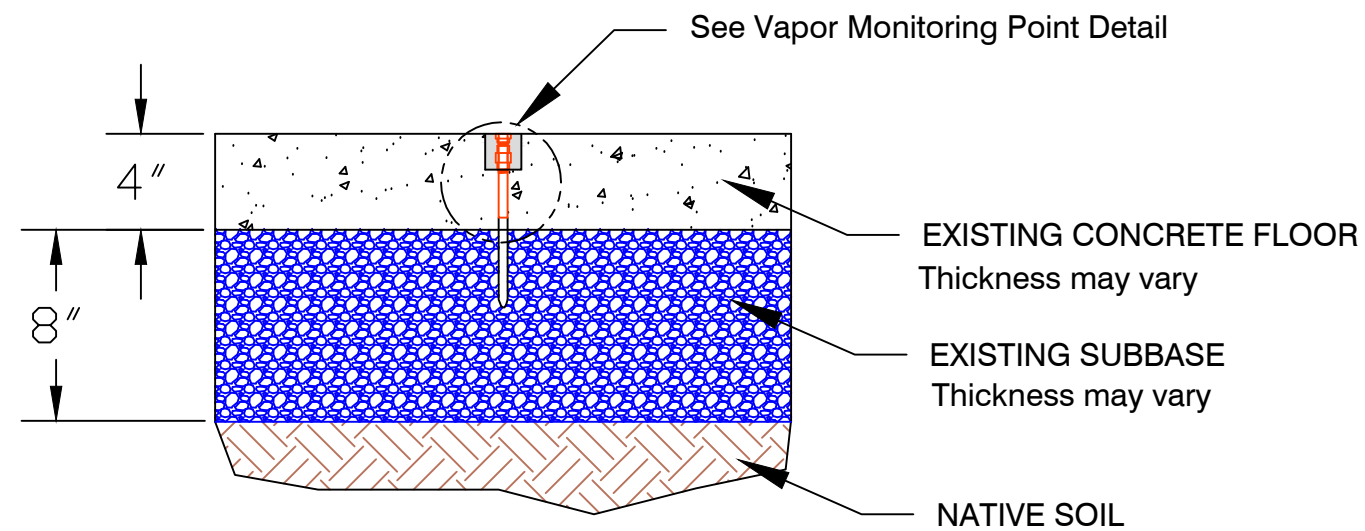
**TRINITY**  
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 Environmental Consultants  
 119 Encinal Street  
 Santa Cruz, California 95060  
 v: 831.426.5600  
 f: 831.426.5602

**SUB-SLAB DEPRESSURIZATION SYSTEM - EXTRACTION WELL DETAIL**

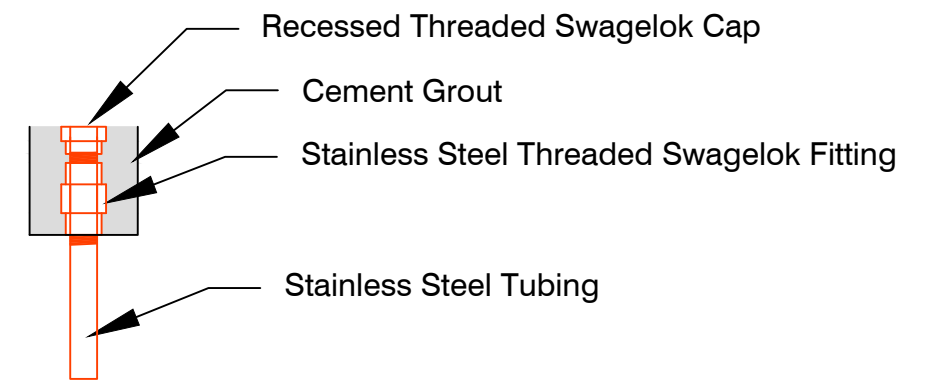
Searway Property  
 649 Pacific Avenue  
 Alameda, California

PROJECT:  
103.001.001

FIGURE:  
4



EXISTING FLOOR AND SUB-SLAB  
CONSTRUCTION (TYPICAL)



VAPOR MONITORING POINT DETAIL  
Scale 1" = 2"

REF. 103\_002\VPR MON PT.dwg

PREPARED BY  

**TRINITY**  
*source group, inc.*  
 Environmental Consultants  
 119 Encinal Street  
 Santa Cruz, California 95060  
 v: 831.426.5600  
 f: 831.426.5602

**SUB-SLAB VAPOR MONITORING POINT DETAIL**

Searway Property  
 649 Pacific Avenue  
 Alameda, California

PROJECT:  
103.001.001

FIGURE:  
5

**ATTACHMENT A**

**BAAQMD – PERMIT TO OPERATE**

---



06/17/16

B8970



# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 ELLIS STREET  
SAN FRANCISCO, CALIFORNIA 94109  
(415) 771-6000

# PERMIT TO OPERATE

Plant# 18970

Page: 1

Expires: APR 1, 2017

This document does not permit the holder to violate any District regulation or other law.

Searway Property  
1406 Webster Street  
Alameda, CA 94501

Location: 649 Pacific Avenue  
Alameda, CA 94501

S#	DESCRIPTION	[Schedule]	PAID
1	CHEM> Contaminated soil remediation, Contaminated soil vapor Sub-Slab Venting System	[G1]	1673

1 Permitted Source

\*\*\* See attached Permit Conditions \*\*\*

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.





**BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT**

939 ELLIS STREET  
SAN FRANCISCO, CALIFORNIA 94109  
(415) 771-6000

**PERMIT  
TO OPERATE**

Plant# 18970

Page: 2

Expires: APR 1, 2017

This document does not permit the holder to violate any District regulation or other law.

\*\*\* PERMIT CONDITIONS \*\*\*

=====

COND# 23992 applies to S# 1

- 1. In no event shall emissions to the atmosphere of the following compounds exceed the corresponding emission limits in pounds per day:

Toxic Compound Emissions in #/day

Benzene	1.8E-2
Chloroform	9.3E-2
Carbon Tetrachloride	1.2E-2
Methylene Chloride	4.9E-1
Perchloroethylene	8.2E-2
Trichloroethylene	2.5E-1
Vinyl Chloride	6.6E-3

In addition, emissions of total volatile organic compounds shall not exceed 10 pounds per day. Soil vapor flow rate shall not exceed 72 scfm. [basis: Reg. 2-1-316, 2-2-301, 8-47-113]

- 2. To determine compliance with Condition 1, the operator of this source shall:
  - a. Analyze exhaust gas to determine the concentration of the compounds listed in Condition 1 and the total volatile organic compounds present for each of the first two days of operation. Thereafter, the exhaust gas shall be analyzed to determine the concentration of the compounds listed in condition 1 and total volatile organic compounds present once every 92 days on a quarterly basis.

Written authorization must be received from the District before any change in sampling frequency.

- b. Emissions in pounds per day shall be calculated for those compounds listed in condition 1 as well as the total volatile organic compounds.
- c. Submit to the District's Engineering Division the test results and emission calculations for the first two days of operation within one month of the testing date. Samples shall be analyzed according to modified EPA test methods TO-15 or equivalent to determine the concentrations those compounds listed





**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

939 ELLIS STREET  
SAN FRANCISCO, CALIFORNIA 94109  
(415) 771-6000

**PERMIT TO OPERATE**

Plant# 18970

Page: 3

Expires: APR 1, 2017

This document does not permit the holder to violate any District regulation or other law.

\*\*\* PERMIT CONDITIONS \*\*\*

=====

in condition 1 as well as the total volatile organic compounds.

- 3. The operator of this source shall maintain the following information in a District-approved log for each month of operation of the source:
  - a. dates of operation;
  - b. exhaust flow rate;
  - c. exhaust sampling date;
  - d. analysis results;
  - e. calculated emissions of POC and listed compounds in pounds per day.

Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg. 1-523]

- 4. Any non-compliance with these conditions shall be reported to the Compliance and Enforcement Division at the time that it is first discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.
- 5. The operator shall maintain a file containing all measurements, records and other data that are required to be collected pursuant to the various provisions of this conditional Authority to Construct/Permit to Operate. All measurements, records and data required to be maintained by the applicant shall be retained for at least two years following the date the data is recorded. [basis: Reg. 1-523]
- 6. Upon final completion of the remediation project, the operator of Source S-1 shall notify the district within two weeks of decommissioning the operation.

~~~~~ END OF CONDITIONS ~~~~~



---

| S#          | Source Description      | Annual Average lbs/day |     |     |     |    |
|-------------|-------------------------|------------------------|-----|-----|-----|----|
|             |                         | PART                   | ORG | NOx | SO2 | CO |
| 1           | Sub-Slab Venting System | -                      | .1  | -   | -   | -  |
| T O T A L S |                         |                        | .1  |     |     |    |

---

**ATTACHMENT B**

**BAAQMD - CORRESPONDENCE**

---



**BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT**

RECEIVED  
APR 07 2012

BY: .....

March 28, 2012

Trinity Source Group, Inc.  
500 Chestnut Street, Suite 225  
Santa Cruz, CA 95060

Attention: Cora E. Olson

Application No.: 17506  
Plant No. 18970  
Equipment Location:  
*Searway Property*  
*649 Pacific Avenue*  
*Alameda, CA*

Dear Applicant:

The District has reviewed your request, dated March 19, 2012 to change the monitoring frequency from quarterly to annually. Based on the information provided, an annual monitoring schedule is both reasonable from the District's perspective and will also grant your firm the flexibility requested. Be aware that you can monitor your systems more frequently if desired.

Please keep a copy of this letter and the attached revised operating conditions (COND#23992) as verification that a monitoring schedule of annually has been approved by the District for the site subject to P/O (Plant #18970).

Please include your application number with any correspondence with the District. The District's regulations may be viewed online at [www.baaqmd.gov](http://www.baaqmd.gov) If you have any questions on this matter, please call me at (415) 749-4630.

Very truly yours,

Flora W Chan  
Air Quality Engineer II

**ALAMEDA COUNTY**

Tom Bates  
Scott Haggerty  
Jennifer Hosterman  
Nate Miley  
(Secretary)

**CONTRA COSTA COUNTY**

John Gioia  
(Chairperson)  
David Hudson  
Mary Piepho  
Mark Ross

**MARIN COUNTY**

Katie Rice

**NAPA COUNTY**

Brad Wagenknecht

**SAN FRANCISCO COUNTY**

John Avalos  
Edwin M. Lee  
Eric Mar

**SAN MATEO COUNTY**

Carole Groom  
Carol Klatt

**SANTA CLARA COUNTY**

Susan Garner  
Ash Kalra  
(Vice-Chair)  
Liz Kniss  
Ken Yeager

**SOLANO COUNTY**

James Spering

**SONOMA COUNTY**

Susan Gorin  
Shirlee Zane

Jack P. Broadbent

EXECUTIVE OFFICER/APCO

Application No. 17506  
Permit Condition No. 23992  
649 Pacifica Avenue in Alameda

COND# 23992 -----

1. In no event shall emissions to the atmosphere of the following compounds exceed the corresponding emission limits in pounds per day:

Toxic Compound Emissions in #/day

|                      |        |
|----------------------|--------|
| Benzene              | 1.8E-2 |
| Chloroform           | 9.3E-2 |
| Carbon Tetrachloride | 1.2E-2 |
| Methylene Chloride   | 4.9E-1 |
| Perchloroethylene    | 8.2E-2 |
| Trichloroethylene    | 2.5E-1 |
| Vinyl Chloride       | 6.6E-3 |

In addition, emissions of total volatile organic compounds shall not exceed 10 pounds per day. Soil vapor flow rate shall not exceed 72 scfm. [basis: Reg. 2-1-316, 2-2-301, 8-47-113]

2. To determine compliance with Condition 1, the operator of this source shall:
  - a. Analyze exhaust gas to determine the concentration of the compounds listed in Condition 1 and the total volatile organic compounds present for each of the first two days of operation. Thereafter, the exhaust gas shall be analyzed to determine the concentration of the compounds listed in condition 1 and total volatile organic compounds present once every 365 days on an annual basis. Written authorization must be received from the District before any change in sampling frequency.
  - b. Emissions in pounds per day shall be calculated for those compounds listed in condition 1 as well as the total volatile organic compounds.
  - c. Submit to the District's Engineering Division the test results and emission calculations for the first two days of operation within one month of the testing date. Samples shall be analyzed according to modified EPA test methods TO-15 or equivalent to determine the concentrations those compounds listed in condition 1 as well as the total volatile organic compounds.

Application No. 17506  
Permit Condition No. 23992  
649 Pacifica Avenue in Alameda

3. The operator of this source shall maintain the following information in a District-approved log for each year of operation of the source:
  - a. dates of operation;
  - b. exhaust flow rate;
  - c. exhaust sampling date;
  - d. analysis results;
  - e. calculated emissions of POC and listed compounds in pounds per day.

Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg. 1-523]

4. Any non-compliance with these conditions shall be reported to the Compliance and Enforcement Division at the time that it is first discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.
5. The operator shall maintain a file containing all measurements, records and other data that are required to be collected pursuant to the various provisions of this conditional Authority to Construct/Permit to Operate. All measurements, records and data required to be maintained by the applicant shall be retained for at least two years following the date the data is recorded. [basis: Reg. 1-523]
6. Upon final completion of the remediation project, the operator of Source S-1 shall notify the district within two weeks of decommissioning the operation.

**ATTACHMENT C**

**O&M FIELD DATA SHEETS**

---



**TRINITY**  
*source group, inc.*  
 Environmental Consultants

119 Encinal Street  
 Santa Cruz, California 95060  
 v: 831.426.5600  
 f: 831.426.5602

**FIELD DATA SHEET**

Client: Timber Del

Job Address: 649 Pacific Ave, Alameda

Weather Conditions: overcast

Equipment at Site: Truck

Arrival Time: 10:30

Departure Time: \_\_\_\_\_

Project #: 103

Date: 5/26/17

Personnel: Bill Rice

**FIELD NOTES**

8:00 load equipment at office, prep field documents

7:00 Depart office

10:30 Arrive on site

10:45 Collected System readings and air samples

Drawn d. RO water

11:00 ROI measurements

12:00 Departed site to deliver samples under

13:00 Arrived at Torreat Labs

14:45 Arrived @ Trinity

Signature



**Trinity Source Group, Inc.**

119 Encinal St.  
Santa Cruz, CA 95060

P: 831.426.5600  
F: 831.426.5602

**Sub-Slab Depressurization System-**  
**----- O&M Data**

Client: **Timber Del Properties, L.L.C.**

Project #: **103.001.001**

Address: **649 Pacific Ave. Alameda CA**

Date: *Bill Rice*

Personnel: *5/26/17*

|                                                                    |                                                                   |
|--------------------------------------------------------------------|-------------------------------------------------------------------|
| Arrival System Status: <input checked="" type="radio"/> On / Off   | If Off Explain Why?                                               |
| Departure System Status: <input checked="" type="radio"/> On / Off | If Off Explain Why?                                               |
| Tedlar Bag Collected? <input checked="" type="radio"/> Yes / No    | Summa Vessel Collected? Yes / <input checked="" type="radio"/> No |

|                                                                                                      |                                       |                            |
|------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------|
| Influent initial Summa Vacuum <i>NA</i>                                                              | Influent Final Summa Vacuum <i>NA</i> | Time <i>NA</i>             |
| Effluent initial Summa Vacuum <i>NA</i>                                                              | Effluent Final Summa Vacuum <i>NA</i> | Time <i>NA</i>             |
| Vapor Concentration Readings in Parts Per Million Vapor (PPMV) using Photo Ionization Detector (PID) |                                       |                            |
| Collected? Yes / No                                                                                  | Effluent (After Vacuum Unit)          | PPMV <input type="radio"/> |
| Collected? Yes / No                                                                                  | Influent (Before Vacuum Unit)         | PPMV <input type="radio"/> |

Effluent Flow Rate (read from digital readout on vacuum control) *300* FPM *CFM*

Effluent Flow Rate and Temperature (measured with hand held Anemometer in discharge pipe slot)

*295* FPM *72.4* Degrees F

Vacuum (measured at influent sample port) *-0.15* -inches of mercury (-in Hg)

Smoke Pen Leak Test  Pass Fail

Notes: *Influent observed in accessible VS points except VS-7 and VS-14*

*[Signature]*

Signature



**ATTACHMENT D**

**CERTIFIED ANALYTICAL REPORT, CHAIN-OF-CUSTODY AND  
GEOTRACKER UPLOAD DOCUMENTATION**

---



David Reinsma  
Trinity Source Group  
119 Encinal Street  
Santa Cruz, California 95060  
Tel: 831-426-5600; Cell 831-227 4724  
Fax: 831-426-5602  
Email: dar@tsgcorp.net  
RE: 649 Pacific Ave, Alameda

Work Order No.: 1705208

Dear David Reinsma:

Torrent Laboratory, Inc. received 1 sample(s) on May 26, 2017 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

---

Patti L Sandrock  
QA Officer

June 01, 2017

---

Date



**Date:** 6/1/2017

---

**Client:** Trinity Source Group

**Project:** 649 Pacific Ave, Alameda

**Work Order:** 1705208

### **CASE NARRATIVE**

---

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.



### Sample Result Summary

Report prepared for: David Reinsma  
Trinity Source Group

Date Received: 05/26/17  
Date Reported: 06/01/17  
1705208-001

**Effluent**

| <u>Parameters:</u>       | <u>Analysis Method</u> | <u>DF</u> | <u>MDL</u> | <u>PQL</u> | <u>Results ug/m3</u> |
|--------------------------|------------------------|-----------|------------|------------|----------------------|
| Hexane                   | ETO15                  | 1         | 0.46       | 1.8        | 7.9                  |
| tert-Butanol             | ETO15                  | 1         | 0.62       | 1.5        | 14                   |
| Chloroform               | ETO15                  | 1         | 0.97       | 2.4        | 31                   |
| Carbon Tetrachloride     | ETO15                  | 1         | 1.1        | 3.1        | 110                  |
| 1,2-Dichloroethane (EDC) | ETO15                  | 1         | 0.42       | 2.0        | 2.2                  |
| Toluene                  | ETO15                  | 1         | 0.75       | 1.9        | 31                   |
| Tetrachloroethylene      | ETO15                  | 1         | 1.5        | 3.4        | 190                  |
| m,p-Xylene               | ETO15                  | 1         | 0.98       | 2.2        | 4.1                  |
| Acetone                  | ETO15                  | 5         | 2.0        | 60         | 350                  |
| TPH-Gasoline             | TO-15                  | 1         | 40         | 180        | 4770                 |



## SAMPLE RESULTS

**Report prepared for:** David Reinsma  
Trinity Source Group

**Date/Time Received:** 05/26/17, 1:00 pm  
**Date Reported:** 06/01/17

|                               |                          |                               |              |
|-------------------------------|--------------------------|-------------------------------|--------------|
| <b>Client Sample ID:</b>      | Effluent                 | <b>Lab Sample ID:</b>         | 1705208-001A |
| <b>Project Name/Location:</b> | 649 Pacific Ave, Alameda | <b>Sample Matrix:</b>         | Air          |
| <b>Project Number:</b>        | 103.001.001              | <b>Certified Clean WO # :</b> |              |
| <b>Date/Time Sampled:</b>     | 05/26/17 / 10:43         | <b>Received PSI :</b>         |              |
| <b>Canister/Tube ID:</b>      |                          | <b>Corrected PSI :</b>        |              |
| <b>Collection Volume (L):</b> |                          |                               |              |
| <b>SDG:</b>                   |                          |                               |              |

|                            |                                                |
|----------------------------|------------------------------------------------|
| <b>Prep Method:</b> TO15-P | <b>Prep Batch Date/Time:</b> 5/30/17 6:43:00PM |
| <b>Prep Batch ID:</b> 7107 | <b>Prep Analyst:</b> BALI                      |

| Parameters:                    | Analysis Method | DF   | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Q | Analyzed | Time  | By | Analytical Batch |
|--------------------------------|-----------------|------|-----------|-----------|---------------|--------------|---|----------|-------|----|------------------|
| Dichlorodifluoromethane        | ETO15           | 1.00 | 1.6       | 2.5       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1-Difluoroethane             | ETO15           | 1.00 | 0.35      | 14        | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,2-Dichlorotetrafluoroethane  | ETO15           | 1.00 | 28        | 56        | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Chloromethane                  | ETO15           | 1.00 | 2.0       | 4.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Vinyl Chloride                 | ETO15           | 1.00 | 0.23      | 1.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,3-Butadiene                  | ETO15           | 1.00 | 0.34      | 1.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Bromomethane                   | ETO15           | 1.00 | 0.66      | 1.9       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Chloroethane                   | ETO15           | 1.00 | 0.81      | 1.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Trichlorofluoromethane         | ETO15           | 1.00 | 0.56      | 2.8       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1-Dichloroethene             | ETO15           | 1.00 | 0.83      | 2.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Freon 113                      | ETO15           | 1.00 | 1.0       | 3.8       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Carbon Disulfide               | ETO15           | 1.00 | 0.37      | 1.6       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 2-Propanol (Isopropyl Alcohol) | ETO15           | 1.00 | 1.3       | 12        | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Methylene Chloride             | ETO15           | 1.00 | 0.70      | 10        | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| trans-1,2-Dichloroethene       | ETO15           | 1.00 | 0.48      | 2.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Hexane                         | ETO15           | 1.00 | 0.46      | 1.8       | 7.9           | 2.24         |   | 05/31/17 | 13:52 | BA | 424445           |
| MTBE                           | ETO15           | 1.00 | 0.44      | 1.8       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| tert-Butanol                   | ETO15           | 1.00 | 0.62      | 1.5       | 14            | 4.62         |   | 05/31/17 | 13:52 | BA | 424445           |
| Diisopropyl ether (DIPE)       | ETO15           | 1.00 | 0.74      | 2.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1-Dichloroethane             | ETO15           | 1.00 | 0.54      | 2.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| ETBE                           | ETO15           | 1.00 | 0.33      | 2.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| cis-1,2-Dichloroethene         | ETO15           | 1.00 | 0.83      | 2.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Chloroform                     | ETO15           | 1.00 | 0.97      | 2.4       | 31            | 6.35         |   | 05/31/17 | 13:52 | BA | 424445           |
| Vinyl Acetate                  | ETO15           | 1.00 | 0.76      | 1.8       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Carbon Tetrachloride           | ETO15           | 1.00 | 1.1       | 3.1       | 110           | 17.49        |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1,1-Trichloroethane          | ETO15           | 1.00 | 0.79      | 2.7       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 2-Butanone (MEK)               | ETO15           | 1.00 | 0.39      | 1.5       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Ethyl Acetate                  | ETO15           | 1.00 | 0.48      | 1.8       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Tetrahydrofuran                | ETO15           | 1.00 | 0.45      | 1.5       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Benzene                        | ETO15           | 1.00 | 0.44      | 1.6       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| TAME                           | ETO15           | 1.00 | 0.67      | 2.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,2-Dichloroethane (EDC)       | ETO15           | 1.00 | 0.42      | 2.0       | 2.2           | 0.54         |   | 05/31/17 | 13:52 | BA | 424445           |
| Trichloroethylene              | ETO15           | 1.00 | 0.81      | 2.7       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |



## SAMPLE RESULTS

**Report prepared for:** David Reinsma  
Trinity Source Group

**Date/Time Received:** 05/26/17, 1:00 pm  
**Date Reported:** 06/01/17

|                               |                          |                               |              |
|-------------------------------|--------------------------|-------------------------------|--------------|
| <b>Client Sample ID:</b>      | Effluent                 | <b>Lab Sample ID:</b>         | 1705208-001A |
| <b>Project Name/Location:</b> | 649 Pacific Ave, Alameda | <b>Sample Matrix:</b>         | Air          |
| <b>Project Number:</b>        | 103.001.001              | <b>Certified Clean WO # :</b> |              |
| <b>Date/Time Sampled:</b>     | 05/26/17 / 10:43         | <b>Received PSI :</b>         |              |
| <b>Canister/Tube ID:</b>      |                          | <b>Corrected PSI :</b>        |              |
| <b>Collection Volume (L):</b> |                          |                               |              |
| <b>SDG:</b>                   |                          |                               |              |

|                            |                                                |
|----------------------------|------------------------------------------------|
| <b>Prep Method:</b> TO15-P | <b>Prep Batch Date/Time:</b> 5/30/17 6:43:00PM |
| <b>Prep Batch ID:</b> 7107 | <b>Prep Analyst:</b> BALI                      |

| Parameters:                 | Analysis Method | DF   | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Q | Analyzed | Time  | By | Analytical Batch |
|-----------------------------|-----------------|------|-----------|-----------|---------------|--------------|---|----------|-------|----|------------------|
| 1,2-Dichloropropane         | ETO15           | 1.00 | 0.76      | 2.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Bromodichloromethane        | ETO15           | 1.00 | 0.74      | 3.4       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,4-Dioxane                 | ETO15           | 1.00 | 1.8       | 3.6       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| trans-1,3-Dichloropropene   | ETO15           | 1.00 | 1.1       | 2.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Toluene                     | ETO15           | 1.00 | 0.75      | 1.9       | 31            | 8.22         |   | 05/31/17 | 13:52 | BA | 424445           |
| 4-Methyl-2-Pentanone (MIBK) | ETO15           | 1.00 | 0.75      | 2.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| cis-1,3-Dichloropropene     | ETO15           | 1.00 | 0.42      | 2.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Tetrachloroethylene         | ETO15           | 1.00 | 1.5       | 3.4       | 190           | 28.02        |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1,2-Trichloroethane       | ETO15           | 1.00 | 0.58      | 2.7       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Dibromochloromethane        | ETO15           | 1.00 | 1.1       | 4.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,2-Dibromoethane (EDB)     | ETO15           | 1.00 | 0.74      | 3.8       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 2-Hexanone                  | ETO15           | 1.00 | 0.65      | 2.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Ethyl Benzene               | ETO15           | 1.00 | 0.63      | 2.2       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Chlorobenzene               | ETO15           | 1.00 | 0.60      | 2.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1,1,2-Tetrachloroethane   | ETO15           | 1.00 | 0.84      | 3.4       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| m,p-Xylene                  | ETO15           | 1.00 | 0.98      | 2.2       | 4.1           | 0.94         |   | 05/31/17 | 13:52 | BA | 424445           |
| o-Xylene                    | ETO15           | 1.00 | 0.30      | 2.2       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Styrene                     | ETO15           | 1.00 | 0.46      | 2.1       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Bromoform                   | ETO15           | 1.00 | 1.3       | 5.2       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,1,2,2-Tetrachloroethane   | ETO15           | 1.00 | 0.82      | 3.4       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 4-Ethyl Toluene             | ETO15           | 1.00 | 0.55      | 2.5       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,3,5-Trimethylbenzene      | ETO15           | 1.00 | 0.30      | 2.5       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,2,4-Trimethylbenzene      | ETO15           | 1.00 | 0.60      | 2.5       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,4-Dichlorobenzene         | ETO15           | 1.00 | 0.75      | 3.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,3-Dichlorobenzene         | ETO15           | 1.00 | 1.3       | 3.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,2-Dichlorobenzene         | ETO15           | 1.00 | 1.1       | 3.0       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Hexachlorobutadiene         | ETO15           | 1.00 | 1.9       | 5.3       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| 1,2,4-Trichlorobenzene      | ETO15           | 1.00 | 2.2       | 3.7       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| Naphthalene                 | ETO15           | 1.00 | 1.3       | 2.6       | ND            | ND           |   | 05/31/17 | 13:52 | BA | 424445           |
| (S) 4-Bromofluorobenzene    | ETO15           | 1.00 | 50        | 150       | 100 %         |              |   | 05/31/17 | 13:52 | BA | 424445           |



## SAMPLE RESULTS

**Report prepared for:** David Reinsma  
Trinity Source Group

**Date/Time Received:** 05/26/17, 1:00 pm  
**Date Reported:** 06/01/17

|                               |                          |                               |              |
|-------------------------------|--------------------------|-------------------------------|--------------|
| <b>Client Sample ID:</b>      | Effluent                 | <b>Lab Sample ID:</b>         | 1705208-001A |
| <b>Project Name/Location:</b> | 649 Pacific Ave, Alameda | <b>Sample Matrix:</b>         | Air          |
| <b>Project Number:</b>        | 103.001.001              | <b>Certified Clean WO # :</b> |              |
| <b>Date/Time Sampled:</b>     | 05/26/17 / 10:43         | <b>Received PSI :</b>         |              |
| <b>Canister/Tube ID:</b>      |                          | <b>Corrected PSI :</b>        |              |
| <b>Collection Volume (L):</b> |                          |                               |              |
| <b>SDG:</b>                   |                          |                               |              |

|                            |                                      |           |
|----------------------------|--------------------------------------|-----------|
| <b>Prep Method:</b> TO15-P | <b>Prep Batch Date/Time:</b> 5/30/17 | 6:43:00PM |
| <b>Prep Batch ID:</b> 7107 | <b>Prep Analyst:</b> BALI            |           |

| Parameters:              | Analysis Method | DF   | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Q | Analyzed | Time  | By | Analytical Batch |
|--------------------------|-----------------|------|-----------|-----------|---------------|--------------|---|----------|-------|----|------------------|
| Acetone                  | ETO15           | 5.00 | 2.0       | 60        | 350           | 147.06       |   | 05/31/17 | 14:41 | BA | 424445           |
| (S) 4-Bromofluorobenzene | ETO15           | 5.00 | 50        | 150       | 110 %         |              |   | 05/31/17 | 14:41 | BA | 424445           |

|                              |                                      |           |
|------------------------------|--------------------------------------|-----------|
| <b>Prep Method:</b> TO15-GRO | <b>Prep Batch Date/Time:</b> 5/30/17 | 6:28:00PM |
| <b>Prep Batch ID:</b> 7110   | <b>Prep Analyst:</b> BALI            |           |

| Parameters:  | Analysis Method | DF   | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Q | Analyzed | Time  | By | Analytical Batch |
|--------------|-----------------|------|-----------|-----------|---------------|--------------|---|----------|-------|----|------------------|
| TPH-Gasoline | TO-15           | 1.00 | 40        | 180       | 4770          | 1,355.11     | x | 05/31/17 | 13:52 | BA | 424445           |

**NOTE:** x - Does not match typical gasoline pattern. TPH value includes amount of non-target compounds within gasoline quantitative range. The chromatogram pattern does not indicate the presence of Stoddard solvent in the sample.



## MB Summary Report

|                            |                                 |                                 |                                 |
|----------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Work Order:</b> 1705208 | <b>Prep Method:</b> TO15-P      | <b>Prep Date:</b> 05/30/17      | <b>Prep Batch:</b> 7107         |
| <b>Matrix:</b> Air         | <b>Analytical Method:</b> ETO15 | <b>Analyzed Date:</b> 5/31/2017 | <b>Analytical Batch:</b> 424445 |
| <b>Units:</b> ppbv         |                                 |                                 |                                 |

| Parameters                     | MDL   | PQL  | Method Blank Conc. | Lab Qualifier |
|--------------------------------|-------|------|--------------------|---------------|
| Dichlorodifluoromethane        | 0.32  | 0.50 | ND                 |               |
| 1,1-Difluoroethane             | 0.13  | 5.0  | ND                 |               |
| 1,2-Dichlorotetrafluoroethane  | 4.0   | 8.0  | ND                 |               |
| Chloromethane                  | 0.99  | 2.0  | ND                 |               |
| Vinyl Chloride                 | 0.088 | 0.50 | ND                 |               |
| 1,3-Butadiene                  | 0.15  | 0.50 | ND                 |               |
| Bromomethane                   | 0.17  | 0.50 | ND                 |               |
| Chloroethane                   | 0.31  | 0.50 | ND                 |               |
| Trichlorofluoromethane         | 0.099 | 0.50 | ND                 |               |
| 1,1-Dichloroethene             | 0.21  | 0.50 | ND                 |               |
| Freon 113                      | 0.13  | 0.50 | ND                 |               |
| Carbon Disulfide               | 0.12  | 0.50 | ND                 |               |
| 2-Propanol (Isopropyl Alcohol) | 0.52  | 5.0  | ND                 |               |
| Methylene Chloride             | 0.20  | 3.0  | 2.4                |               |
| Acetone                        | 0.17  | 5.0  | 0.28               |               |
| trans-1,2-Dichloroethene       | 0.12  | 0.50 | ND                 |               |
| Hexane                         | 0.13  | 0.50 | ND                 |               |
| MTBE                           | 0.12  | 0.50 | ND                 |               |
| tert-Butanol                   | 0.20  | 0.50 | ND                 |               |
| Diisopropyl ether (DIPE)       | 0.18  | 0.50 | ND                 |               |
| 1,1-Dichloroethane             | 0.13  | 0.50 | ND                 |               |
| ETBE                           | 0.078 | 0.50 | ND                 |               |
| cis-1,2-Dichloroethene         | 0.21  | 0.50 | ND                 |               |
| Chloroform                     | 0.20  | 0.50 | ND                 |               |
| Vinyl Acetate                  | 0.22  | 0.50 | ND                 |               |
| Carbon Tetrachloride           | 0.18  | 0.50 | ND                 |               |
| 1,1,1-Trichloroethane          | 0.15  | 0.50 | ND                 |               |
| 2-Butanone (MEK)               | 0.13  | 0.50 | ND                 |               |
| Ethyl Acetate                  | 0.13  | 0.50 | ND                 |               |
| Tetrahydrofuran                | 0.15  | 0.50 | ND                 |               |
| Benzene                        | 0.14  | 0.50 | ND                 |               |
| TAME                           | 0.16  | 0.50 | ND                 |               |
| 1,2-Dichloroethane (EDC)       | 0.10  | 0.50 | ND                 |               |
| Trichloroethylene              | 0.15  | 0.50 | ND                 |               |
| 1,2-Dichloropropane            | 0.17  | 0.50 | ND                 |               |
| Bromodichloromethane           | 0.11  | 0.50 | ND                 |               |
| 1,4-Dioxane                    | 0.50  | 1.0  | ND                 |               |
| trans-1,3-Dichloropropene      | 0.23  | 0.50 | ND                 |               |
| Toluene                        | 0.20  | 0.50 | 0.37               |               |
| 4-Methyl-2-Pentanone (MIBK)    | 0.18  | 0.50 | ND                 |               |
| cis-1,3-Dichloropropene        | 0.093 | 0.50 | ND                 |               |
| Tetrachloroethylene            | 0.22  | 0.50 | ND                 |               |





## MB Summary Report

|                            |                                 |                                 |                                 |
|----------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Work Order:</b> 1705208 | <b>Prep Method:</b> TO15-P      | <b>Prep Date:</b> 05/30/17      | <b>Prep Batch:</b> 7107         |
| <b>Matrix:</b> Air         | <b>Analytical Method:</b> ETO15 | <b>Analyzed Date:</b> 5/31/2017 | <b>Analytical Batch:</b> 424445 |
| <b>Units:</b> ppbv         |                                 |                                 |                                 |

| Parameters                | MDL   | PQL  | Method Blank Conc. | Lab Qualifier |
|---------------------------|-------|------|--------------------|---------------|
| 1,1,2-Trichloroethane     | 0.11  | 0.50 | ND                 |               |
| Dibromochloromethane      | 0.13  | 0.50 | ND                 |               |
| 1,2-Dibromoethane (EDB)   | 0.096 | 0.50 | ND                 |               |
| 2-Hexanone                | 0.16  | 0.50 | ND                 |               |
| Ethyl Benzene             | 0.15  | 0.50 | ND                 |               |
| Chlorobenzene             | 0.13  | 0.50 | ND                 |               |
| 1,1,1,2-Tetrachloroethane | 0.12  | 0.50 | ND                 |               |
| m,p-Xylene                | 0.23  | 0.50 | ND                 |               |
| o-Xylene                  | 0.070 | 0.50 | ND                 |               |
| Styrene                   | 0.11  | 0.50 | ND                 |               |
| Bromoform                 | 0.13  | 0.50 | ND                 |               |
| 1,1,2,2-Tetrachloroethane | 0.12  | 0.50 | ND                 |               |
| 4-Ethyl Toluene           | 0.11  | 0.50 | ND                 |               |
| 1,3,5-Trimethylbenzene    | 0.061 | 0.50 | ND                 |               |
| 1,2,4-Trimethylbenzene    | 0.12  | 0.50 | ND                 |               |
| 1,4-Dichlorobenzene       | 0.12  | 0.50 | ND                 |               |
| 1,3-Dichlorobenzene       | 0.22  | 0.50 | ND                 |               |
| 1,2-Dichlorobenzene       | 0.18  | 0.50 | ND                 |               |
| Hexachlorobutadiene       | 0.17  | 0.50 | ND                 |               |
| 1,2,4-Trichlorobenzene    | 0.29  | 0.50 | ND                 |               |
| Naphthalene               | 0.24  | 0.50 | ND                 |               |
| (S) 4-Bromofluorobenzene  |       |      | 100                |               |

|                            |                                 |                                 |                                 |
|----------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Work Order:</b> 1705208 | <b>Prep Method:</b> TO15-GRO    | <b>Prep Date:</b> 05/30/17      | <b>Prep Batch:</b> 7110         |
| <b>Matrix:</b> Air         | <b>Analytical Method:</b> ETO15 | <b>Analyzed Date:</b> 5/31/2017 | <b>Analytical Batch:</b> 424445 |
| <b>Units:</b> ppbv         |                                 |                                 |                                 |

| Parameters   | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|--------------|-----|-----|--------------------|---------------|
| TPH-Gasoline | 11  | 50  | 12                 |               |



## LCS/LCSD Summary Report

*Raw values are used in quality control assessment.*

|                    |         |                           |        |                       |           |                          |        |
|--------------------|---------|---------------------------|--------|-----------------------|-----------|--------------------------|--------|
| <b>Work Order:</b> | 1705208 | <b>Prep Method:</b>       | TO15-P | <b>Prep Date:</b>     | 05/30/17  | <b>Prep Batch:</b>       | 7107   |
| <b>Matrix:</b>     | Air     | <b>Analytical Method:</b> | ETO15  | <b>Analyzed Date:</b> | 5/31/2017 | <b>Analytical Batch:</b> | 424445 |
| <b>Units:</b>      | ppbv    |                           |        |                       |           |                          |        |

| Parameters               | MDL  | PQL  | Method Blank Conc. | Spike Conc. | LCS % Recovery | LCSD % Recovery | LCS/LCSD % RPD | % Recovery Limits | % RPD Limits | Lab Qualifier |
|--------------------------|------|------|--------------------|-------------|----------------|-----------------|----------------|-------------------|--------------|---------------|
| 1,1-Dichloroethene       | 0.21 | 0.50 | ND                 | 8.00        | 115            | 119             | 3.32           | 65 - 135          | 30           |               |
| Benzene                  | 0.14 | 0.50 | ND                 | 8.00        | 123            | 116             | 6.17           | 65 - 135          | 30           |               |
| Trichloroethylene        | 0.15 | 0.50 | ND                 | 8.00        | 121            | 115             | 5.09           | 65 - 135          | 30           |               |
| Toluene                  | 0.20 | 0.50 | ND                 | 8.00        | 122            | 125             | 2.12           | 65 - 135          | 30           |               |
| Chlorobenzene            | 0.13 | 0.50 | ND                 | 8.00        | 123            | 121             | 2.26           | 65 - 135          | 30           |               |
| (S) 4-Bromofluorobenzene |      |      |                    | 20.0        | 97.0           | 103             |                | 50 - 150          |              |               |

|                    |         |                           |          |                       |           |                          |        |
|--------------------|---------|---------------------------|----------|-----------------------|-----------|--------------------------|--------|
| <b>Work Order:</b> | 1705208 | <b>Prep Method:</b>       | TO15-GRO | <b>Prep Date:</b>     | 05/30/17  | <b>Prep Batch:</b>       | 7110   |
| <b>Matrix:</b>     | Air     | <b>Analytical Method:</b> | ETO15    | <b>Analyzed Date:</b> | 5/31/2017 | <b>Analytical Batch:</b> | 424445 |
| <b>Units:</b>      | ppbv    |                           |          |                       |           |                          |        |

| Parameters   | MDL | PQL | Method Blank Conc. | Spike Conc. | LCS % Recovery | LCSD % Recovery | LCS/LCSD % RPD | % Recovery Limits | % RPD Limits | Lab Qualifier |
|--------------|-----|-----|--------------------|-------------|----------------|-----------------|----------------|-------------------|--------------|---------------|
| TPH-Gasoline | 11  | 50  | 12                 | 500         | 97.9           | 85.4            | 13.5           | 65 - 135          | 30           |               |



## Laboratory Qualifiers and Definitions

### DEFINITIONS:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accuracy/Bias (% Recovery)</b> - The closeness of agreement between an observed value and an accepted reference value.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Blank (Method/Preparation Blank)</b> -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.                                                                                                                                                                                                                                                                                                                    |
| <b>Duplicate</b> - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Laboratory Control Sample (LCS ad LCSD)</b> - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Matrix</b> - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Matrix Spike (MS/MSD)</b> - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.                                                                                                                                                                                                                                                                                                                   |
| <b>Method Detection Limit (MDL)</b> - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ)</b> - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.                                                                                                                                        |
| <b>Precision (%RPD)</b> - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Surrogate (S) or (Surr)</b> - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis                                                                                                                                                                                                                                       |
| <b>Tentatively Identified Compound (TIC)</b> - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.                                                                                                                                        |
| <b>Units:</b> the unit of measure used to express the reported result - <b>mg/L</b> and <b>mg/Kg</b> (equivalent to PPM - parts per million in <b>liquid</b> and <b>solid</b> ), <b>ug/L</b> and <b>ug/Kg</b> (equivalent to PPB - parts per billion in <b>liquid</b> and <b>solid</b> ), <b>ug/m3</b> , <b>mg/m3</b> , <b>ppbv</b> and <b>ppmv</b> (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), <b>ug/Wipe</b> (concentration found on the surface of a single Wipe usually taken over a 100cm <sup>2</sup> surface) |

### LABORATORY QUALIFIERS:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>B</b> - Indicates when the analyte is found in the associated method or preparation blank</p> <p><b>D</b> - Surrogate is not recoverable due to the necessary dilution of the sample</p> <p><b>E</b> - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.</p> <p><b>H</b>- Indicates that the recommended holding time for the analyte or compound has been exceeded</p> <p><b>J</b>- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative</p> <p><b>NA</b> - Not Analyzed</p> <p><b>N/A</b> - Not Applicable</p> <p><b>ND</b> - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.</p> <p><b>NR</b> - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added</p> <p><b>R</b>- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts</p> <p><b>S</b>- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative</p> <p><b>X</b> -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## Sample Receipt Checklist

Client Name: Trinity Source Group

Date and Time Received: 5/26/2017 1:00:00PM

Project Name: 649 Pacific Ave., Alameda

Received By: NG

Work Order No.: 1705208

Physically Logged By: Katherene Evans

Checklist Completed By:

Carrier Name: Client Drop Off

### Chain of Custody (COC) Information

Chain of custody present? Yes  
Chain of custody signed when relinquished and received? Yes  
Chain of custody agrees with sample labels? Yes  
Custody seals intact on sample bottles? Not Present

### Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present  
Shipping Container/Cooler In Good Condition? Yes  
Samples in proper container/bottle? Yes  
Samples containers intact? Yes  
Sufficient sample volume for indicated test? Yes

### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  
Container/Temp Blank temperature in compliance? Temperature: °C  
Water-VOA vials have zero headspace? No VOA vials submitted  
Water-pH acceptable upon receipt? N/A  
pH Checked by: na pH Adjusted by: na

### Comments:

Tedlar bags rec'd at ambient temperature



### Login Summary Report

**Client ID:** TL5109 Trinity Source Group  
**Project Name:** 649 Pacific Ave, Alameda  
**Project # :** 103.001.001  
**Report Due Date:** 6/1/2017

**QC Level:** II  
**TAT Requested:** 3 Day Std:3  
**Date Received:** 5/26/2017  
**Time Received:** 1:00 pm

**Comments:**

**Work Order # :** 1705208

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| <u>WO Sample ID</u> | <u>Client Sample ID</u> | <u>Collection Date/Time</u> | <u>Matrix</u> | <u>Scheduled Disposal</u> | <u>Sample On Hold</u> | <u>Test On Hold</u> | <u>Requested Tests</u>      | <u>Subbed</u> |
|---------------------|-------------------------|-----------------------------|---------------|---------------------------|-----------------------|---------------------|-----------------------------|---------------|
| 1705208-001A        | Effluent                | 05/26/17 10:43              | Air           |                           |                       |                     | VOC_A_TO15<br>VOC_A_TO15GRO |               |

**Sample Note:** TO15, Stoddard Solvent

