## **RECEIVED**

By Alameda County Environmental Health 3:10 pm, May 04, 2015

April 27, 2015

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

Re: Perjury Statement-

2015 Sub-Slab Vapor Depressurization System Performance Report Searway Property (SLIC Case No. RO0002584) 649 Pacific Avenue Alameda, California

Dear Mr. Wickham,

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

Timber Dell Properties, LLC

Donald W. Lindsey, member



April 27, 2015

Trinity Project: 103.001.001

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

Re: 2015 Sub-Slab Vapor Depressurization System Performance Report

Searway Property 649 Pacific Avenue Alameda, California

Dear Mr. Wickham:

Trinity Source Group, Inc. (Trinity) has prepared this 2015 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Sub-slab air is withdrawn from the sub-slab material by means of an applied vacuum.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 manifolded together and connected to 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. Former depressurization point locations are shown on Figure 2. The system layout is presented on Figure 3. The Sub-Slab System Process and Instrumentation Diagram is shown on Figure 4.

Sub-slab extraction system influent and effluent analytical data are summarized in Table 1. Sub-slab

Mr. Jerry Wickham Timber Del Properties SSVD O&M Report April 27, 2015

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 5. 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 6. 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. The Permit to Operate is included in Attachment A. 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

Date of O&M Event: March 11, 2015
Sample Containers: 1-Liter Tedlar Bags

Sample Collection Point: Effluent

System Conditions: 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 VOCs and Stoddard solvent according to EPA 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.

#### **SSVD SYSTEM PERFORMANCE**

- SSVD has discharged a total of approximately 1.47 pounds of VOCs from March 11, 2014 to March 11, 2015, during approximately 365 days of operation.
- VOC removal rate for the period of March 11, 2014 to March 11, 2015 is 0.00402 pounds per day.
- The system is performing as expected with removal of VOCs and depressurization of the sub-slab area.
- VOC concentrations have generally declined since start-up.
- 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.

Mr. Jerry Wickham Timber Del Properties SSVD O&M Report April 27, 2015

• All effluent VOC concentrations from March 11, 2014 to March 11, 2015 are less than Residential and Commercial Land Use Site-Specific Screening Levels<sup>1</sup> (Table 1). It should be noted that the Site-Specific Screening Levels have been updated to utilize the December 2013 Environmental Screening Levels (ESLs) issued by the San Francisco Bay Regional Water Quality Control Board. For each VOC, the Residential and Commercial Indoor Air ESLs were selected, and divided by the appropriate Site-Specific Attenuation Factor, to derive the Site-Specific Screening Level.

#### **RECOMMENDATIONS**

All effluent VOC concentrations are less than residential and commercial Site-Specific Screening Levels. Trinity recommends continuing with SSVD system operation and annual system performance reporting.

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.

Debra J. Moser, PG, CEG, CHG

DEBRA J.
MOSER
CERTIFIED
HYDROGEOLOGIST
No. 165

Eric Choi Project Scientist

Crulloi

#### DISTRIBUTION

Senior Geologist

A copy of this report has been forwarded to:

<sup>&</sup>lt;sup>1</sup> Trinity Source Group, Inc., Sub-Slab Attenuation Factor Determination Summary Report, September 20, 2010.

Mr. Jerry Wickham Timber Del Properties SSVD O&M Report April 27, 2015

Mr. Don Lindsey Timber Del Properties, LLC 2424 Central Avenue 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 – Monitoring Well and Sub-Slab Vapor Probe Location Map

Figure 3 – Sub-Slab Depressurization System Layout

Figure 4 – Sub-Slab Depressurization System - Process and Instrumentation Diagram

Figure 5 – Sub-Slab Depressurization System - Extraction Well Detail

Figure 6 – 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**

Table 1

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

Searway Property 649 Pacific Avenue Alameda, California

		EPA Method TO-3(MOD)*				A Meth	od TO-	15			
Sample Date	Sample Location	Stoddard µg/m³	Benzene µg/m³	Chloroform µg/m <sup>3</sup>	Carbon Tetrachloride µg/m³	PCE μg/m³	TCE µg/m³	VC µg/m³	2-Butanone μg/m³	Acetone µg/m³	Notes
9/10/2008	Influent Effluent	4,900 <sup>c</sup> 610 <sup>c, d</sup>	<80 <1.8	560 <3.9	3,900 29	2,600 17	<130 <1.1	<64 <0.5	300 <0.88	<480 71	k
9/11/2008	Influent Effluent	2,400 <sup>c</sup> 710 <sup>c</sup>	<32 <1.8	480 <3.9	3,200 <1.9	2,500 <2.6	<54 <1.1	<26 <0.5	260 14	<190 180	e e
10/10/2008	Influent Effluent	960 <sup>b</sup> 740 <sup>b</sup>	65 <3.2	110 54	880 200	880 13	<5.4 <5.4	<2.6 <2.6	27 <3.0	51 25	l m
11/6/2008	Influent Effluent	1,700 <sup>a</sup> 2,800 <sup>a</sup>	<1.6 1.9	58 53	690 770	520 14	<2.7 <2.7	<1.3 <1.3	23 6.5	62 37	f g
12/4/2008	Influent Effluent	2,400 <sup>h</sup> 2,100 <sup>h</sup>	20 18	110 120	780 1,100	1,100 40	<6.7 <5.4	<3.2 <2.6	110 82	<24 <19	i j
1/2/2009	Influent Effluent	<3,500 <3,500	<16 <8.0	26 73	560 920	800 220	<27 <13	<13 <6.4	<15 <7.4	<95 <48	n o
2/9/2009	Influent Effluent	2,300 <sup>p</sup> 1,800 <sup>p</sup>	<3.2 <3.2	64 <4.9	480 10	680 <6.8	<5.4 <5.4	<2.6 <2.6	9.6 <3.0	29 20	t s
5/20/2009	Influent Effluent	1,800 <sup>q</sup>	<4.5	Carb	on Vessels Re <4.7	moved; II <6.4	nfluent no <2.6	o longer sa <1.2	mpled. <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 2/2/2010	Effluent Effluent	2,400 <sup>u</sup> 2,000 <sup>y</sup>	5.4 5.6	85 40	670 <sup>x</sup> 280	1,100 <sup>x</sup> 430	<2.7 <2.7	<1.3 <1.3	<1.5 <1.5	84 31	W Z
5/5/2010	Effluent	<400	2.24	77.4	562	857	<5.4	<2.6	<1.5	34.9	aa

Table 1

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

Searway Property 649 Pacific Avenue Alameda, California

		EPA Method TO-3(MOD)*			EP	A Meth	od TO-	15			
Sample Date	Sample Location	Stoddard µg/m³	Benzene µg/m³	Chloroform µg/m³	Carbon Tetrachloride µg/m³	PCE μg/m³	TCE µg/m³	VC µg/m³	2-Butanone μg/m³	Acetone µg/m³	Notes
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
			Caraa	ning Lavala A	iau Indaau Air	//m-3\	Danida	atial Duan	antic Haa		
		100	0.084	0.46	for Indoor Air 0.058	<u>(μg/m )</u> 0.41	0.59	0.031	N/A	31,000	
					els for Sub-Sla				tial Property U		
		242,718	204	1,117	141	995	1,432	75	N/A	75,242,718	
			Screen	ning Levels f	or Indoor Air	(µg/m³)	- Comme	rcial Prop	erty Use		
		100	0.42	2.3	0.29	2.1	3.0	0.16	N/A	31,000	
			pecific Scr	eening Leve	ls for Sub-Sla	b Vapor	$(\mu g/m^3)$ -	Commer	cial Property		
		242,718	1,019	5,583	704	5,097	7,282	388	N/A	75,242,718	

#### Notes:

Stoddard = Total petroleum hydrocarbons as gasoline.

\* = Method TO-3 (mod) no longer offered by laboratory, Stoddard to be analyzed by Method TO-15 as of 2015 O&M event.

PCE = Tetrachloroethylene or Perchloroethylene

TCE = Trichloroethylene

VC = Vinyl Chloride

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

Searway Property 649 Pacific Avenue Alameda, California

		EPA Method TO-3(MOD)*			EP	A Meth	od TO-1	15				
			•		Carbon							
Sample	Sample	Stoddard µg/m³	Benzene µg/m³	Chloroform µg/m <sup>3</sup>	Tetrachloride µg/m <sup>3</sup>	PCE µg/m³	TCE µg/m³	VC µg/m³	2-Butanone µg/m <sup>3</sup>	Acetone µg/m³	Notes	
Date	Location	1.0		т рулп рулп рулп рулп рулп рулп рулп								
		rganic Compounds tiary butyl ether										
	= Metriyi terti = Tert-Butano											
Notes Continue												
	TAME = Tert amyl methyl ether											
μg/m³ :	= microgram	s per cubic mete	er, also equiva	lent to parts p	er billion (ppb)							
<:	= Less than la	aboratory analyti	ical method re	porting limit.								
	<ul><li>No sample</li></ul>											
	•			•	•				standard pattern.			
b:	•	romatogram doe					, ,	I). Reporte	d value due to			
	•	of non-gasoline co cal Stoddard (disc	•	•	•		line.					
		imit increased du					to the MDI					
_		alues between th										
e :	e = Reporting limit increased due to low initial pressure in canister. Results reported to the MDL.											
f:		s detected are: 0			1,2,4-trimethylbe	nzene 2.9	) μg/m³, m,μ	o-xylene 4.	7 μg/m³,			
		chloride 4.5 µg/r										
		s detected are: 0										
h:		romatogram doe ard solvent comp				attern. Re	eported valu	ue due to p	resence of			
į:	= Other VOC	s detected are: 1	1,2,4-trimethy	benzene 66 μ	g/m³, 1,3,5-trime	thylbenzer	ne 14 µg/m²	3,				
	4-ethyl tolue	ene 48 µg/m³, et	hyl benzene 4	l9 μg/m³, m,p-:	xylene 270 μg/m	3, o-xylene	e 54 μg/m³	and toluen	e 490 µg/m³			
j :	= Other VOC	s detected are: 1	1,2,4-trimethy	benzene 38 µ	g/m <sup>3</sup> , 1,3,5-trime	thylbenzer	ne 7.6 µg/m	າ <sup>3</sup> , 4-ethyl t	oluene 35 μg/m³,			
	ethyl benze	ene 45 µg/m³, m,	p-xylene 240	µg/m³, o-xylen	e 44 µg/m³, and	toluene 38	30 μg/m <sup>3</sup>					
k:	= Other VOC	detected is: m,p	-xylene 4.1 μ	g/m³								
l:		s detected are:1 2 µg/m³, TBA 55					g/m³, m,p-x	ylene 53 µ	g/m³, MTBE 220	μg/m³,		
m:		s detected are: I					ı/m³					
		tected at a conc		_	, , , , , , ,		•					
	$ρ = Toluene$ detected at a concentration of 29 $μg/m^3$											
p :	= Hydrocarbo	ons responded w	ithin range of	C5-C12 quan	tified as Stoddar	d Solvent	but sample	chromato	gram does not m	atch		
	•	fuel standard pat		•	•		•					
q:		orted as a Stodda						fuel patter	n.			
_	Reported value due to individual non-target peaks (heavy end) within ranage of C5-C12.  r = The reporting limts were raised due to limited sample received (tedlar bag). Results reported to the MDL.											
	•	ng limts were rai as detected at a		•	eceivea (tealar b	ag). Kesul	ns reported	to the MD	'L.			
ı S:	= Toluelle Wa	as detected at a	concentration	0ι 4.5 μg/iII								

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

Searway Property 649 Pacific Avenue Alameda, California

		EPA Method TO-3(MOD)*			EP	A Meth	od TO-1	15			
<u> </u>					Carbon						
Sample Date	Sample Location	Stoddard µg/m³	Benzene µg/m³	Chloroform µg/m <sup>3</sup>	Tetrachloride µg/m³	PCE µg/m³	TCE µg/m³	VC µg/m³	2-Butanone µg/m³	Acetone µg/m³	Notes
		as detected at a									
		orted as a Stodda			matogram does	not match	requested	fuel stand:	ard nattern		
		to individual pea									
Notes Conti		to marriada, pod				- rango qu		010000.0	00.10		
	v = Other VOC	s detected are:	1.2.4-Trimethy	lbenzene 5.9	ug/m³ . isopropa	nol 21 µg/ı	m <sup>3</sup> and tolu	ene 2.3 u	ıg/m³		
		s detected are:							9		
		uene 130 µg/m³,							/m <sup>3</sup>		
		ohol 29 µg/m³, to			п хуюноо осс р	9/111 , 111011	iyiono omo	100 о.т ру	,,,,		
	•				the instrument	Due to he	old time res	trictions n	o diluted analysis	s was performe	ed.
		oddard Solvent re								wao pononin	, u.
									yl Toluene 120 μο	a/m³.	
									nd Toluene 15µg		
										,	
	aa = Other VOCs detected are: Tert-butanol 63.8 μg/m³, Toluene 10.3 μg/m³, total-Xylene 30.01 μg/m³, 4-ethyl toluene 19.5 μg/m³, 1,3,5-Trimethylbenzene 8.18 μg/m³, and 1,2,4-Trimethylbenzene 17.2 μg/m³.										
									, ,p-Xylene 24.3 μ	n/m <sup>3</sup>	
		0.4 µg/m³, 1,3,5-							,p-λylerie 24.5 μ	9/111 ,	
	-	for stoddard sol	-						cient sample volu	me received	
		s detected are: <sup>-</sup>	Toluene 116 เ	ıa/m³. m.p-Xvle	ene 13.5 µa/m³.	and o-Xvle	ene 6.02 uc	ı/m³.			
		ly other VOC de						,			
		s detected are: (				3 9 ua/m <sup>3</sup>					
		rce Group, Inc, S					Report. Sep	tember 20	. 2010.	Note that calcu	lation
	•	enzene and viny					7 - 7 - 1		,		
		s detected are: (					and Toluen	e 4.41 ua/r	$m^3$		
		s detected are: I						1 3			
								ua/m³. To	luene 25.5 µg/m³		
										,	
	4-Methyl-2-Pentanone 4.39 μg/m³, Ethyl benzene 5.89 μg/m³, m,p-Xylene 33.5 μg/m³, o-Xylene 12.4 μg/m³, and 1,2,4-Trimethylbenzene 10.3μg/m³·										
		shown below ar		ing their MDI							
		-3 (mod) no long			mple analyzed h	v Method	TO-15.				
		imits were raised	,	•		•					
a				•	•	٠,	entration sh	ould be co	nsidered as estin	nated rather th	an quantitativ
		imits were raised	•								
	ao = other VOCs	s detected: 4-Me	ethyl-2-Pentan	one (MIBK): 5	.13 μg/m³, tert-B	utanol: 54	.0 μg/m3				

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

Searway Property 649 Pacific Avenue Alameda, California

		Days Operated	Cubic Meters		Influent			Cumulative	
	Average	Since	Removed Since	Cumulative	Total	Pounds VOCs	Pounds	<b>Total Pounds</b>	3
	flow rate	Previous	Previous	Cubic Meters	VOCs	Removed Since	VOCs Removed	VOCs	Comments
Date	CFM	Event	Event	Removed	μg/m <sup>3</sup>	Last Event	per Day	Removed	
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	

#### Notes:

CFM = cubic feet per minute

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

		Days Operated	Cubic Meters	<u> </u>	Effluent			Cumulative	
	Average	Since	Discharged Since	Cumulative	Total	Pounds VOCs	Pounds	Total Pounds	
	Flow Rate	Previous	Previous	Cubic Meters	VOCs	Discharged Since	<b>VOCs Discharged</b>	VOCs	Comments
Date	CFM	Event	Event	Discharged	μg/m³	Last Event	per Day	Discharged	
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	

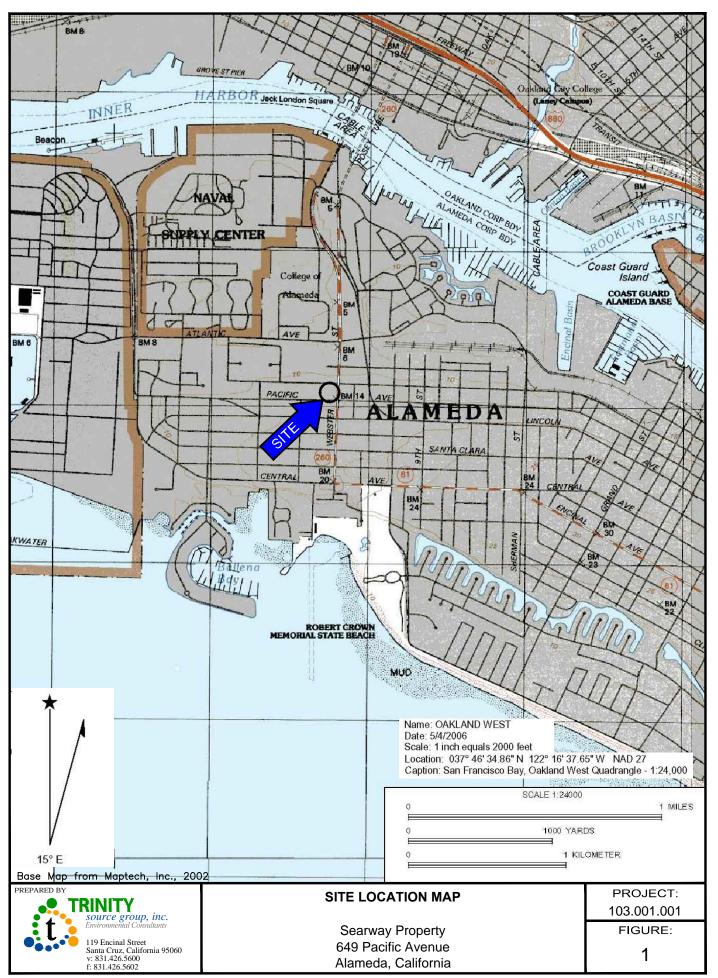
#### Notes:

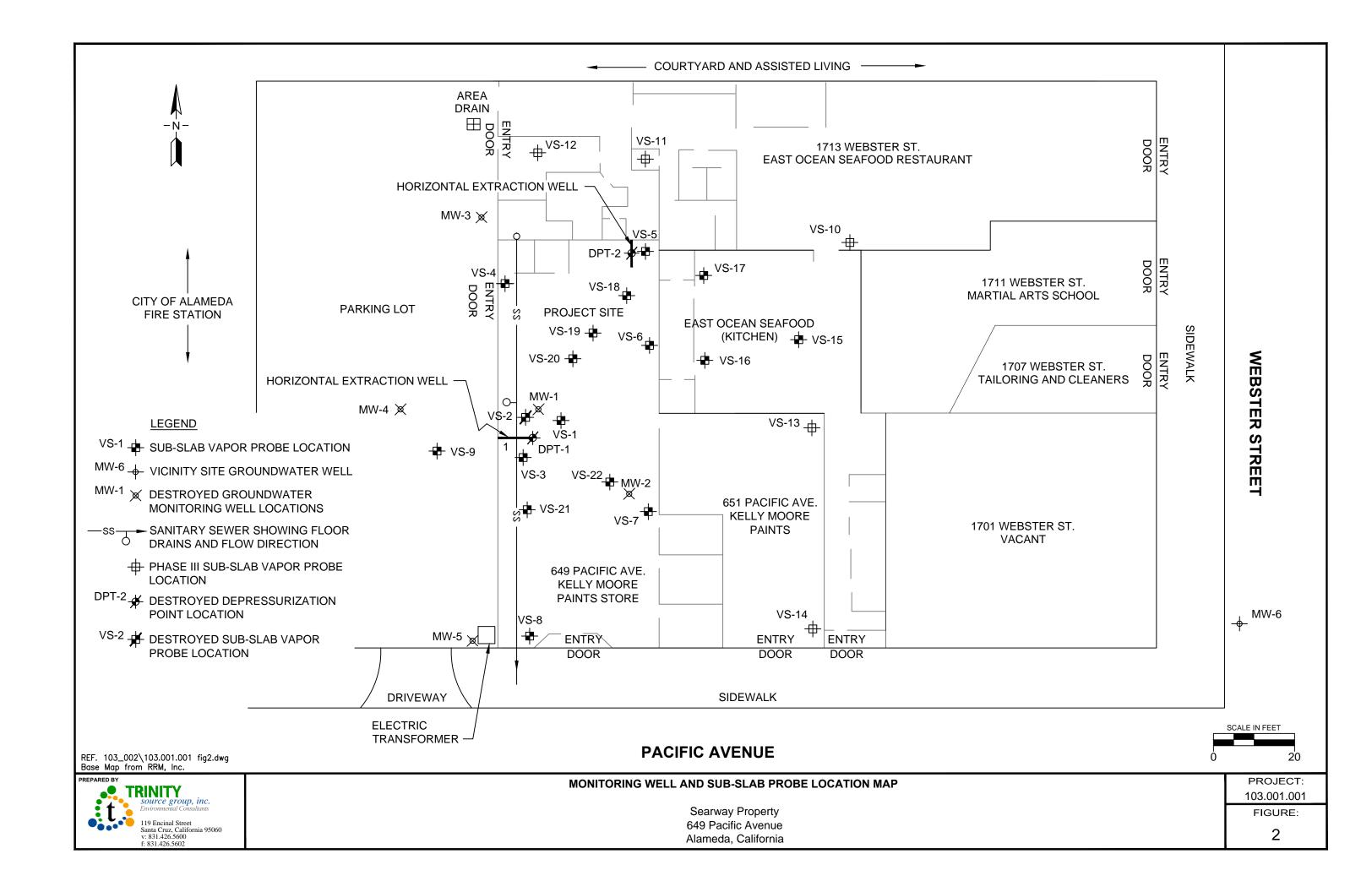
CFM = cubic feet per minute

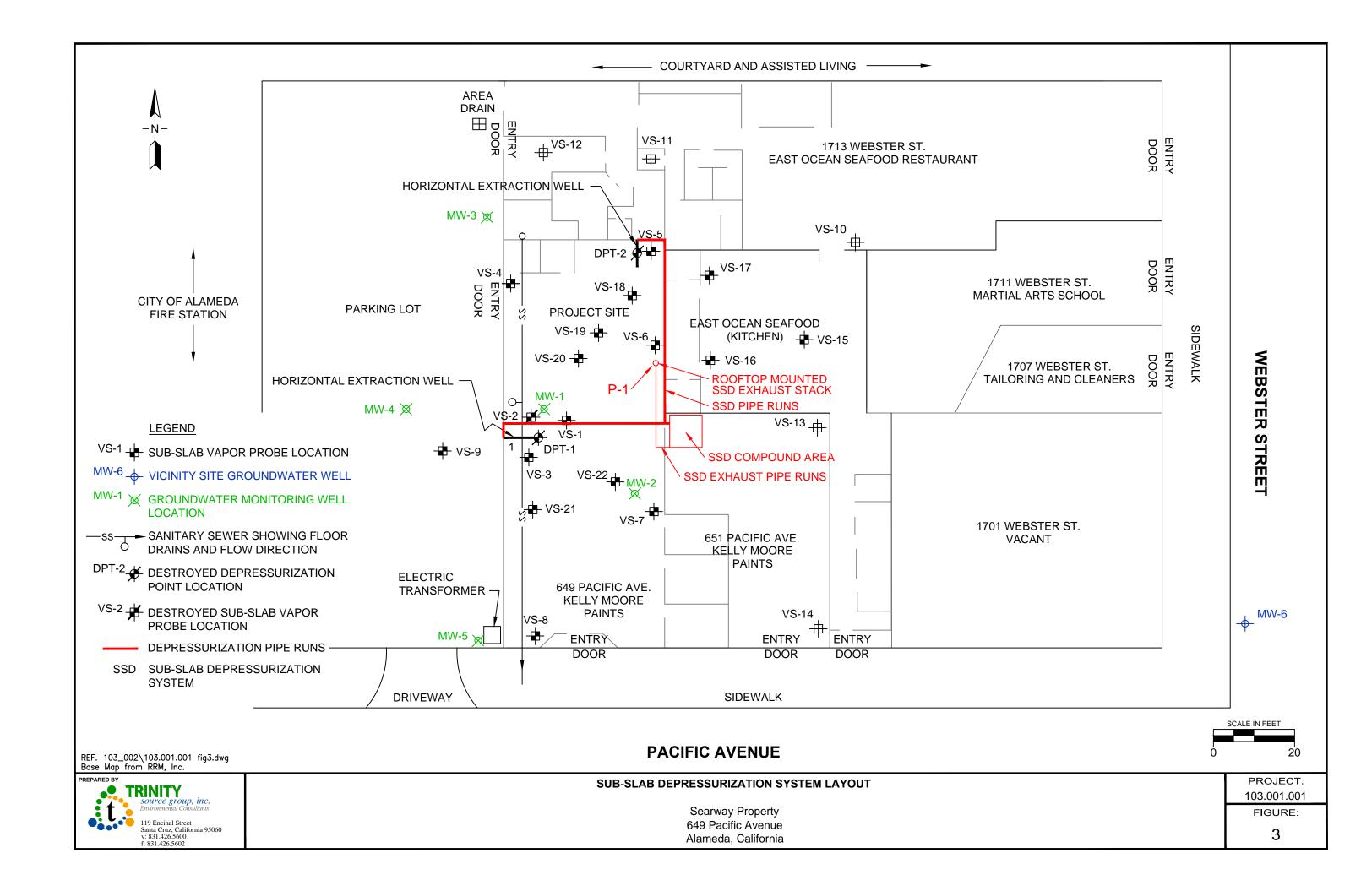
μg/m³ = micrograms per cubic meters

VOCs = volatile organic compounds

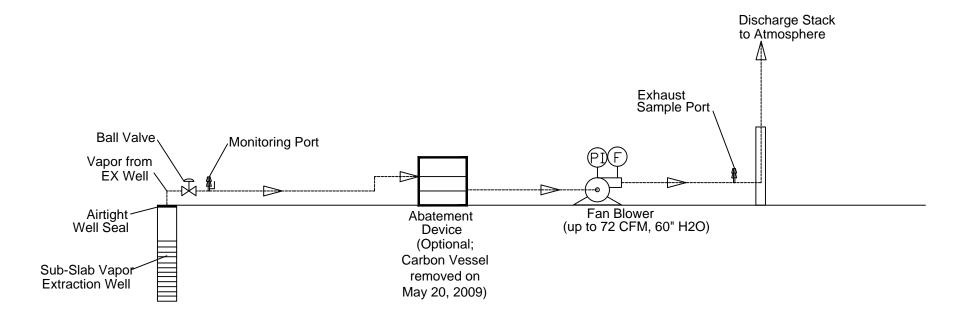
## **FIGURES**



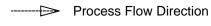




# SUB-SLAB DEPRESSURIZATION SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM



## LEGEND



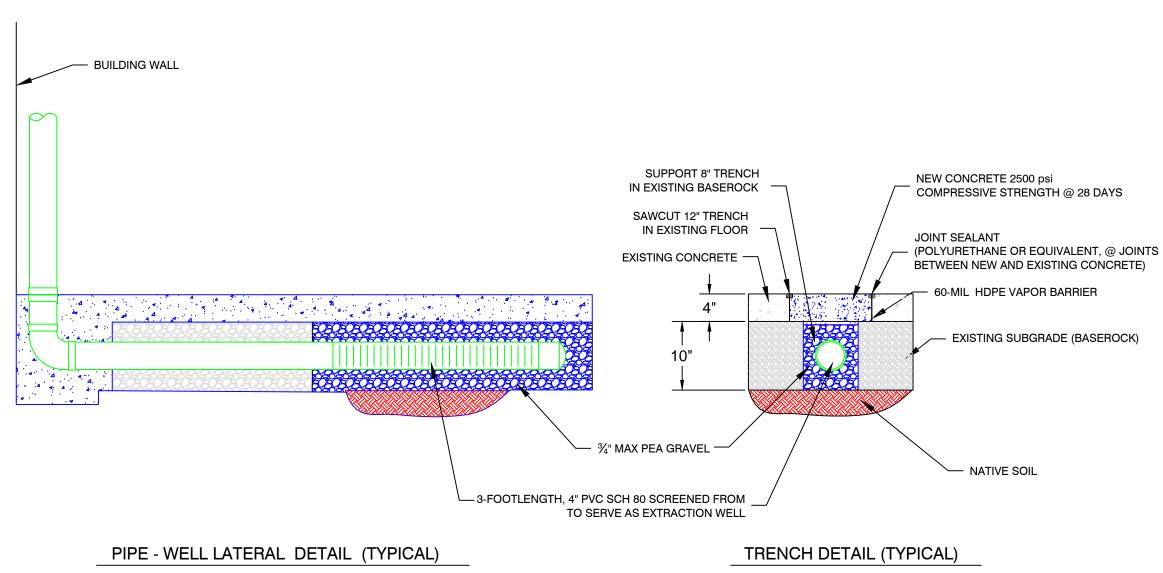
PI Pressure Indicator

Flow Indicator

REF. 103\_002\SS DEPRESS PID.dwg



4

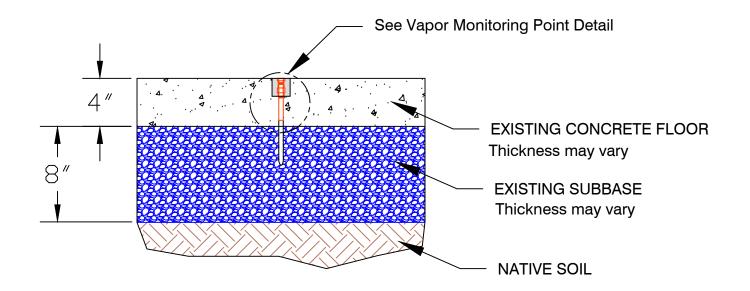


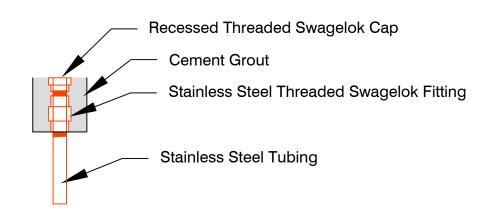
TYPICAL EXTRACTION WELL DETAIL
BELOW GROUND COMPLETION

REF. 103\_002\EXWELL DTL.dwg



## SUB-SLAB DEPRESSURIZATION SYSTEM - EXTRACTION WELL DETAIL





EXISTING FLOOR AND SUB-SLAB

CONSTRUCTION (TYPICAL)

VAPOR MONITORING POINT DETAIL

Scale 1" = 2"

REF. 103\_002\VPR MON PT.dwg



## **ATTACHMENT A**

## **BAAQMD – PERMIT TO OPERATE**





Plant# 18970

Page: 1

E

Expires: APR 1, 2016

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

Searway Property 2424 Central Avenue 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]	1535

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.





Plant# 18970

Page:

Expires: APR 1, 2016

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

2

\*\*\* 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. vapor flow rate shall not exceed 72 scfm. [basis: Reg. 2-1-316, 2-2-301, 8-47-113]

- To determine compliance with Condition 1, the operator of this source shall:
  - 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.

- Emissions in pounds per day shall be calculated for those compounds listed in condition 1 as well as the total volatile organic compounds.
- 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





Plant# 18970 Page: 3 Expires: APR 1, 2016

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

Bay Area Air Quality Management District	** SOURCE	EMISSIONS	**			PLANT # Feb 19,	
			Aı	nnual A	Average	lbs/d	lay
S# Source Description			PART	ORG	NOx	SO2	CO
Sub-Slab Venting System	l.		<u>~</u> )	1	-	277	=
					7/2/2/7-2		
TOTALS				1			





Plant# 18970 Page: 2 Expires: APR 1, 2015

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





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

	rea Air Quality ement District	**	SOURCE	EMISSIONS	* *			LANT #1 ar 29,	
S# 	Source Description				Anr PART	nual Av ORG	verage NOx	lbs/da SO2	CO 
1	Sub-Slab Venting System				_	.1	_	_	_
	TOTALS					.1			

## **ATTACHMENT B**

## **BAAQMD - CORRESPONDENCE**



BAY AREA
AIR QUALITY

MANAGEMENT

DISTRICT

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

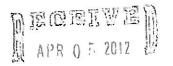
SAN MATEO COUNTY Carole Groom Carol Klatt

SANTA CLARA COUNTY Susan Garner Ash Kaira (Vice-Chair) Liz Kniss Ken Yeager

> SOLANO COUNTY James Spering

SONOMA COUNTY Susan Gorin Shirlee Zane

Jack P. Broadbent EXECUTIVE OF FICER/APCO



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
649Pacific 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's regulations may be viewed online at <a href="www.baaqmd.gov">www.baaqmd.gov</a> If you have any questions on this matter, please call me at (415) 749-4630.

Very truly yours,

Air Quality Engineer II

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

#### COND# 23992 ------

 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]

- non-compliance with these conditions shall be 4. Any 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.**

119 Encinal St.

Santa Cruz, CA 95060

P: 831.426.5600 F: 831.426.5602

# Page \_\_\_\_ of \_\_\_

Signature

## **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: 3/11/1	(6)
		Personnel:	D
Arrival System Status: On Off	If Off Explain Why?		
Departure System Status: On ) Off	If Off Explain Why?		
Tedlar Bag Collected? Yes / No	Summa Vessel (	Collected?	Yes / No
Influent initial Summa Vacuum NA	Influent Final Summa Vacuum	-	Time —
Effluent initial Summa Vacuum 🖊 🗛	Effluent Final Summa Vacuum		Time —
Vapor Concentration Readings in Parts Pe	er Million Vapor (PPMV) using Ph	oto Ionization I	
Collected? Yes / No Efflue	ent (After Vacuum Unit)		PPMV Emer *
Collected? Yes / No   Influe	nt (Before Vacuum Unit)		PPMV 4
	4 0		
Effluent Flow Rate (read from digital reado	out on vacuum control)	FP	VI
Efflluent Flow Rate and Temperature (mea	asured with hand held Anemomet	er in discharge	e nine slot)
268.0 FPM	addred with hand held / themomet		grees F
Vacuum (measured at influent sample por	t) ().\9 -inche	s of mercury (	-in Hg)
Smoke Pen Leak Test Pass	) Fail		
All 6 peoples (VS-18	196113) Passed	Took V	5-4 not accessible
M. & proces Chis is	11976/11 / asse	C 163/ . V	5 1 1101 99CM
Notes: * Efficient PID rec	dinai 190+ PPMV	. Likely 9	Due to moisture
in line. ~2 Gallons	of Considersate disp	se of	from drip pay
Speed setting: 6 replace	e filter notifical	tion	
Collected Effluent's	ample at 10 11:	30	
	V		



18:15

## FIELD DATA SHEET

Signature

v: 831.426.5600 f; 831.426.5602 Project #: 103.001.00 H Properties Timber Del Client: Date: 3 Job Address: 649 Paci Weather Conditions: SUM Personnel! Equipment at Site: Anemonater, Manometer, PID, Arrival Time: 10:45 Departure Time: 17:5 **FIELD NOTES** 10:45 12:05 RAVIPMEN 17:15 5 can Felton 17:30 石豆包 antimmed Main comity 19100 700

## **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: SSDPS Annual Sampling

Work Order No.: 1503082

#### Dear David Reinsma:

Torrent Laboratory, Inc. received 1 sample(s) on March 11, 2015 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.

(glt)	
	March 16, 2015
Patti Sandrock	Date
QA Officer	

483 Sinclair Frontage Rd., Milpitas, CA 95035 | tel: 408.263.5258 | fax: 408.263.8293 | www.torrentlab.com



**Date:** 3/16/2015

Client: Trinity Source Group

Project: SSDPS Annual Sampling

Work Order: 1503082

## **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.

Total Page Count: 12 Page 2 of 12



## **Sample Result Summary**

Report prepared for: David Reinsma Date Received: 03/11/15

Trinity Source Group Date Reported: 03/16/15

**Effluent** 1503082-001A

Parameters:	Analysis Method	<u>DF</u>	MDL	<u>PQL</u>	Results ug/m3
Acetone	ETO15	5	4.4	96	43.3
tert-Butanol	ETO15	5	4.6	42	54.0
4-Methyl-2-Pentanone (MIBK)	ETO15	5	4.2	10	5.13
Tetrachloroethylene	ETO15	5	4.5	17	890

483 Sinclair Frontage Rd., Milpitas, CA 95035 | tel: 408.263.5258 | fax: 408.263.8293 | www.torrentlab.com

Total Page Count: 12 Page 3 of 12



## **SAMPLE RESULTS**

Report prepared for: David Reinsma Date Received: 03/11/15

Trinity Source Group Date Reported: 03/16/15

Client Sample ID: Effluent Lab Sample ID: 1503082-001A

Project Name/Location: SSDPS Annual Sampling Sample Matrix: Air

 Project Number:
 103.001.001

 Date/Time Sampled:
 03/11/15 / 11:30

Date/Time Sampled: 03/11/15 / 11:30 Certified Clean WO # :

Canister/Tube ID: Received PSI :

 Canister/Tube ID:
 Received PSI :
 0.0

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: SSDPS

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
The results shown below are	•										
Dichlorodifluoromethane	ETO15	NA	03/13/15	5	7.6	25	ND	ND		424635	NA
1,1-Difluoroethane	ETO15	NA	03/13/15	5	2.5	6.8	ND	ND		424635	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	03/13/15	5	25	70	ND	ND		424635	NA
Chloromethane	ETO15	NA	03/13/15	5	1.6	5.3	ND	ND		424635	NA
Vinyl Chloride	ETO15	NA	03/13/15	5	3.3	13	ND	ND		424635	NA
1,3-Butadiene	ETO15	NA	03/13/15	5	2.2	5.5	ND	ND		424635	NA
Bromomethane	ETO15	NA	03/13/15	5	3.6	9.8	ND	ND		424635	NA
Chloroethane	ETO15	NA	03/13/15	5	2.5	6.5	ND	ND		424635	NA
Trichlorofluoromethane	ETO15	NA	03/13/15	5	9.0	28	ND	ND		424635	NA
1,1-Dichloroethene	ETO15	NA	03/13/15	5	3.1	10	ND	ND		424635	NA
Freon 113	ETO15	NA	03/13/15	5	4.2	19	ND	ND		424635	NA
Carbon Disulfide	ETO15	NA	03/13/15	5	4.1	16	ND	ND		424635	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	03/13/15	5	4.9	100	ND	ND		424635	NA
Methylene Chloride	ETO15	NA	03/13/15	5	2.9	140	ND	ND		424635	NA
Acetone	ETO15	NA	03/13/15	5	4.4	96	43.3	18.04	J	424635	NA
trans-1,2-Dichloroethene	ETO15	NA	03/13/15	5	3.2	10	ND	ND		424635	NA
Hexane	ETO15	NA	03/13/15	5	2.6	8.8	ND	ND		424635	NA
MTBE	ETO15	NA	03/13/15	5	4.3	9.0	ND	ND		424635	NA
tert-Butanol	ETO15	NA	03/13/15	5	4.6	42	54.0	12.86		424635	NA
Diisopropyl ether (DIPE)	ETO15	NA	03/13/15	5	4.4	11	ND	ND		424635	NA
1,1-Dichloroethane	ETO15	NA	03/13/15	5	3.8	10	ND	ND		424635	NA
ETBE	ETO15	NA	03/13/15	5	3.4	11	ND	ND		424635	NA
cis-1,2-Dichloroethene	ETO15	NA	03/13/15	5	2.7	10	ND	ND		424635	NA
Chloroform	ETO15	NA	03/13/15	5	6.2	25	ND	ND		424635	NA
Vinyl Acetate	ETO15	NA	03/13/15	5	2.8	8.8	ND	ND		424635	NA
Carbon Tetrachloride	ETO15	NA	03/13/15	5	4.3	16	ND	ND		424635	NA
1,1,1-Trichloroethane	ETO15	NA	03/13/15	5	4.2	14	ND	ND		424635	NA
2-Butanone (MEK)	ETO15	NA	03/13/15	5	3.1	7.5	ND	ND		424635	NA
Ethyl Acetate	ETO15	NA	03/13/15	5	3.7	9.0	ND	ND		424635	NA
Tetrahydrofuran	ETO15	NA	03/13/15	5	1.5	7.5	ND	ND		424635	NA
Benzene	ETO15	NA	03/13/15	5	3.4	8.0	ND	ND		424635	NA
TAME	ETO15	NA	03/13/15	5	1.8	11	ND	ND		424635	NA
1,2-Dichloroethane (EDC)	ETO15	NA	03/13/15	5	4.9	10	ND	ND		424635	NA
Trichloroethylene	ETO15	NA	03/13/15	5	6.9	27	ND	ND		424635	NA

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Total Page Count: 12 Page 4 of 12



## **SAMPLE RESULTS**

Report prepared for: David Reinsma Date Received: 03/11/15

Trinity Source Group Date Reported: 03/16/15

Lab Sample ID:

Sample Matrix:

Received PSI:

Corrected PSI:

Certified Clean WO #:

1503082-001A

Air

0.0

0.0

ND

ND

ND

97.6 %

ND

ND

ND

424635

424635

424635

424635

NA

NA

NA

NA

Client Sample ID: Effluent

Project Name/Location: SSDPS Annual Sampling

 Project Number:
 103.001.001

 Date/Time Sampled:
 03/11/15 / 11:30

Date/Time Sampled: 03/11/15 / 11:3/
Canister/Tube ID:

Collection Volume (L): 0.00

Tag Number: SSDPS

Hexachlorobutadiene

Naphthalene

1,2,4-Trichlorobenzene

(S) 4-Bromofluorobenzene

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1,2-Dichloropropane	ETO15	NA	03/13/15	5	6.6	23	ND	ND		424635	NA
Bromodichloromethane	ETO15	NA	03/13/15	5	4.4	17	ND	ND		424635	NA
1,4-Dioxane	ETO15	NA	03/13/15	5	6.2	18	ND	ND		424635	NA
trans-1,3-Dichloropropene	ETO15	NA	03/13/15	5	4.3	11	ND	ND		424635	NA
Toluene	ETO15	NA	03/13/15	5	4.8	9.5	ND	ND		424635	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	03/13/15	5	4.2	10	5.13	1.25	J	424635	NA
cis-1,3-Dichloropropene	ETO15	NA	03/13/15	5	5.6	11	ND	ND		424635	NA
Tetrachloroethylene	ETO15	NA	03/13/15	5	4.5	17	890	130.88		424635	NA
1,1,2-Trichloroethane	ETO15	NA	03/13/15	5	4.6	14	ND	ND		424635	NA
Dibromochloromethane	ETO15	NA	03/13/15	5	8.7	21	ND	ND		424635	NA
1,2-Dibromoethane (EDB)	ETO15	NA	03/13/15	5	10	39	ND	ND		424635	NA
NOTE: Reporting limits were rai	sed due to high co	oncentratio	n of target a	ınalyte.							
The results shown below are	reported using	their ME	DL.								
2-Hexanone	ETO15	NA	03/13/15	5	5.6	21	ND	ND		424635	NA
Ethyl Benzene	ETO15	NA	03/13/15	5	5.0	11	ND	ND		424635	NA
Chlorobenzene	ETO15	NA	03/13/15	5	3.6	12	ND	ND		424635	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	03/13/15	5	5.2	17	ND	ND		424635	NA
m,p-Xylene	ETO15	NA	03/13/15	5	8.1	22	ND	ND		424635	NA
o-Xylene	ETO15	NA	03/13/15	5	4.0	11	ND	ND		424635	NA
Styrene	ETO15	NA	03/13/15	5	3.4	11	ND	ND		424635	NA
Bromoform	ETO15	NA	03/13/15	5	5.5	25	ND	ND		424635	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	03/13/15	5	3.5	17	ND	ND		424635	NA
4-Ethyl Toluene	ETO15	NA	03/13/15	5	4.1	12	ND	ND		424635	NA
1,3,5-Trimethylbenzene	ETO15	NA	03/13/15	5	3.8	12	ND	ND		424635	NA
1,2,4-Trimethylbenzene	ETO15	NA	03/13/15	5	3.4	12	ND	ND		424635	NA
1,4-Dichlorobenzene	ETO15	NA	03/13/15	5	3.2	15	ND	ND		424635	NA
1,3-Dichlorobenzene	ETO15	NA	03/13/15	5	4.2	15	ND	ND		424635	NA
1,2-Dichlorobenzene	ETO15	NA	03/13/15	5	4.5	15	ND	ND		424635	NA

5

5

5

12

17

7.3

65

28

37

26

135

03/13/15

03/13/15

03/13/15

03/13/15

ETO15

ETO15

ETO15

ETO15

NA

NA

 $\mathsf{N}\mathsf{A}$ 

NA

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#### SAMPLE RESULTS

Report prepared for: David Reinsma Date Received: 03/11/15

Trinity Source Group Date Reported: 03/16/15

Client Sample ID: Effluent Lab Sample ID: 1503082-001A

Project Name/Location: SSDPS Annual Sampling Sample Matrix: Air

 Project Number:
 103.001.001

 Date/Time Sampled:
 03/11/15 / 11:30

 Certified Clean WO # :

Canister/Tube ID: Received PSI: 0.0

Collection Volume (L): 0.00 Corrected PSI: 0.0

Tag Number: SSDPS

Prep Date DF MDL PQL Analytical Prep **Analysis** Results Results Lab Batch Parameters: Method Date Analyzed ug/m3 ug/m3 ug/m3 ppbv Qualifier **Batch** 

The results shown below are reported using their MDL.

TPH-Stoddard Solvent ETO15 NA 03/13/15 5 200 880 ND ND 424639 NA

NOTE: Reporting limits were raised due to limited sample volume received (tedlar bag).

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# **MB Summary Report**

Work Order: 1503082 Prep Method: NA Prep Date: NA Prep Batch: NA Matrix: Air Analytical ETO15 Analyzed Date: 03/13/15 Analytical 424635 Method: Batch: Units: ppbv

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.30	1.00	ND	•
1,1-Difluoroethane	0.18	10.0	ND	
1,2-Dichlorotetrafluoroethane	0.70	2.00	ND	
Chloromethane	0.15	0.500	ND	
Vinyl Chloride	0.26	1.00	ND	
1,3-Butadiene	0.20	0.500	ND	
Bromomethane	0.18	0.500	ND	
Chloroethane	0.19	0.500	ND	
Trichlorofluoromethane	0.32	1.00	ND	
1,1-Dichloroethene	0.15	0.500	ND	
Freon 113	0.11	0.500	ND	
Carbon Disulfide	0.26	1.00	ND	
2-Propanol (Isopropyl Alcohol)	0.39	10.0	ND	
Methylene Chloride	0.17	8.00	ND	
Acetone	0.37	8.00	ND	
trans-1,2-Dichloroethene	0.16	0.500	ND	
Hexane	0.15	0.500	ND	
MTBE	0.24	0.500	ND	
tert-Butanol	0.22	2.00	ND	
Diisopropyl ether (DIPE)	0.21	0.500	ND	
1,1-Dichloroethane	0.18	0.500	ND	
ETBE	0.16	0.500	ND	
cis-1,2-Dichloroethene	0.13	0.500	ND	
Chloroform	0.25	1.00	ND	
Vinyl Acetate	0.16	0.500	ND	
Carbon Tetrachloride	0.14	0.500	ND	
1,1,1-Trichloroethane	0.15	0.500	ND	
2-Butanone (MEK)	0.21	0.500	ND	
Ethyl Acetate	0.21	0.500	ND	
Tetrahydrofuran	0.10	0.500	ND	
Benzene	0.21	0.500	ND	
TAME	0.086	0.500	ND	
1,2-Dichloroethane (EDC)	0.24	0.500	ND	
Trichloroethylene	0.26	1.00	ND	
1,2-Dichloropropane	0.29	1.00	ND	
Bromodichloromethane	0.13	0.500	ND	
1,4-Dioxane	0.35	1.00	ND	
trans-1,3-Dichloropropene	0.19	0.500	ND	
Toluene	0.25	0.500	ND	
4-Methyl-2-Pentanone (MIBK)	0.21	0.500	ND	
cis-1,3-Dichloropropene	0.25	0.500	ND	

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**TPH-Stoddard Solvent** 

# **MB Summary Report**

	450000					·	NIA .		NIA.
Work Order:	1503082	· ·	Method:	NA	•	Date:	NA	Prep Batch:	NA
Matrix:	Air	Analy Metho		ETO15	Anal	yzed Date:	03/13/15	Analytical Batch:	424635
Units:	ppbv	Weth	Ju.					Batch.	
Parameters		MDL	PQL	Method Blank Conc.	Lab Qualifier				
Tetrachloroethyle	ene	0.13	0.500	ND					
1,1,2-Trichloroeth	hane	0.17	0.500	ND					
Dibromochlorome	ethane	0.20	0.500	ND					
1,2-Dibromoetha	ne (EDB)	0.27	1.00	ND					
2-Hexanone		0.27	1.00	ND					
Ethyl Benzene		0.23	0.500	ND					
Chlorobenzene		0.15	0.500	ND					
1,1,1,2-Tetrachlo	roethane	0.15	0.500	ND					
m,p-Xylene		0.38	1.00	ND					
o-Xylene		0.19	0.500	ND					
Styrene		0.16	0.500	ND					
Bromoform		0.11	0.500	ND					
1,1,2,2-Tetrachlo	roethane	0.10	0.500	ND					
4-Ethyl Toluene		0.17	0.500	ND					
1,3,5-Trimethylbe	enzene	0.15	0.500	ND					
1,2,4-Trimethylbe	enzene	0.14	0.500	ND					
1,4-Dichlorobenz	ene	0.11	0.500	ND					
1,3-Dichlorobenz	ene	0.14	0.500	ND					
1,2-Dichlorobenz	ene	0.15	0.500	ND					
Hexachlorobutad		0.22	0.500	ND					
1,2,4-Trichlorobe	enzene	0.46	1.00	ND					
Naphthalene		0.28	1.00	ND					
(S) 4-Bromofluor	obenzene			93.3					
Work Order:	1503082	Prep	Method:	NA	Prep	Date:	NA	Prep Batch:	NA
Matrix:	Air	Analy		ETO15	Anal	yzed Date:	03/13/15	Analytical	424639
Units:	ppbv	Metho	od:					Batch:	
Parameters		MDL	PQL	Method Blank Conc.	Lab Qualifier				
TPH-Gasoline		11	50.0	ND	!				

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50.0

ND

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# LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1503082	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA	_
Matrix:	Air	Analytical	ETO15	Analyzed Date:	03/13/15	Analytical	424635	
Units:	ppbv	Method:				Batch:		

Parameters		MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethen	е	0.15	0.500	ND	8	82.0	81.8	0.305	65 - 135	30	
Benzene		0.21	0.500	ND	8	84.8	84.4	0.443	65 - 135	30	
Trichloroethylene		0.26	1.00	ND	8	84.0	101	18.0	65 - 135	30	
Toluene		0.25	0.500	ND	8	87.0	90.6	4.08	65 - 135	30	
Chlorobenzene		0.15	0.500	ND	8	91.3	97.6	6.75	65 - 135	30	
(S) 4-Bromofluoro	benzene			ND	8	82.5	87.5		65 - 135		
Work Order:	1503082		Prep Metho	d: NA		Prep Da	te:	NA	Prep Bat	ch: NA	
Matrix:	Air		Analytical	ETO1	5	Analyze	d Date:	03/13/15	Analytic	al 4246	639

work Order:	1503082	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Air	Analytical	ETO15	Analyzed Date:	03/13/15	Analytical	424639
Units:	ppbv	Method:				Batch:	

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH-Gasoline	11	50.0	ND	243	88.5	85.2	3.84	50 - 150	30	

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## Laboratory Qualifiers and Definitions

#### **DEFINITIONS:**

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.

**Blank (Method/Preparation Blank)** -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.

**Duplicate** - 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)

Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.

Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)

Matrix Spike (MS/MSD) - 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.

Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero

Practical Quantitation Limit (PQL) - 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 reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.

Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates

Surrogate (S) or (Surr) - 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

**Tentatively Identified Compound (TIC) -** 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.

**Units:** the unit of measure used to express the reported result - **mg/L** and **mg/Kg** (equivalent to PPM - parts per million in **liquid** and **solid**), **ug/L** and **ug/Kg** (equivalent to PPB - parts per billion in **liquid** and **solid**), **ug/m3**, **mg.m3**, **ppbv** and **ppmv** (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

#### LABORATORY QUALIFIERS:

- B Indicates when the anlayte is found in the associated method or preparation blank
- **D** Surrogate is not recoverable due to the necessary dilution of the sample
- E 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.
- H- Indicates that the recommended holding time for the analyte or compound has been exceeded
- J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
- NA Not Analyzed
- N/A Not Applicable

Total Page Count: 12

- NR 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
- R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
- S- 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 parrative
- **X** -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.

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## Sample Receipt Checklist

Client Name: Trinity Source Group Date and Time Received: 3/11/2015 17:20

Project Name: <u>SSDPS Annual Sampling</u> Received By: <u>Idi</u>

Work Order No.: 1503082 Physically Logged By: Idi

Checklist Completed By: Idi

Carrier Name: Client Drop Off

**Chain of Custody (COC) Information** 

Chain of custody present? <u>Yes</u>

Chain of custody signed when relinquished and received? Yes

Chain of custody agrees with sample labels? Yes

Custody seals intact on sample bottles? <u>Not Present</u>

**Sample Receipt Information** 

Custody seals intact on shipping container/cooler?

Not Present

Shipping Container/Cooler In Good Condition? <u>Yes</u>

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? Yes Temperature: °C

Water-VOA vials have zero headspace? No VOA vials submitted

Water-pH acceptable upon receipt? N/A

pH Checked by: n/a pH Adjusted by: n/a

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Total Page Count: 12 Page 12 of 12

4/21/2015 GeoTracker ESI

## STATE WATER RESOURCES CONTROL BOARD

# **GEOTRACKER ESI**

**UPLOADING A EDF FILE** 

# **SUCCESS**

Processing is complete. No errors were found! Your file has been successfully submitted!

Submittal Type: EDF

Report Title: 2015 SUBSLAB VAPOR DEPRESSURIZATION SYSTEM PERFORMANCE

REPORT

Report Type: Operation and Maintenance Plan/Monitoring Report

Facility Global ID: SL0600150413

Facility Name: SEARWAY PROPERTY
File Name: TSG 1503082 EDF.zip
Organization Name: Trinity Source Group, Inc.
Username: TRINITY SOURCE GROUP

IP Address: 63.249.96.11

Submittal 4/21/2015 11:24:45 AM

<u>Date/Time:</u>

Confirmation 5050516486 Number:

**VIEW QC REPORT** 

**VIEW DETECTIONS REPORT** 

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4/30/2015 GeoTracker ESI

## STATE WATER RESOURCES CONTROL BOARD

# **GEOTRACKER ESI**

UPLOADING A GEO\_REPORT FILE

# **SUCCESS**

Your GEO\_REPORT file has been successfully submitted!

Submittal Type: GEO\_REPORT

Report Title: 2015 Sub-Slab vapor Depressurization System Performance Report

Report Type: Monitoring Report - Annually

**Report Date:** 4/27/2015

Facility Global ID: SL0600150413

Facility Name: SEARWAY PROPERTY

File Name: RO#2584\_O&MReport\_2015-04-30.pdf

Organization Name: Trinity Source Group, Inc.
Username: TRINITY SOURCE GROUP

<u>IP Address:</u> 63.249.96.11

**Submittal Date/Time:** 4/30/2015 11:03:40 AM

**Confirmation Number:** 4975531041

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