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**SUPPLEMENTAL
SOIL VAPOR INVESTIGATION REPORT**

April 2010

2960 Castro Valley Blvd.
Castro Valley, CA 94546

Case No. RO0002998

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Castro Valley, CA 94546

Case No. RO0002998

Prepared by
Endpoint Consulting, Inc.
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1.0 INTRODUCTION

On behalf of the R R Retail Group, Endpoint Consulting, Inc. (Endpoint) conducted a supplemental soil vapor investigation at the former Dry Cleaning Club of America site (site) located at 2960 Castro Valley Blvd., Castro Valley, California (see Figure 1). The investigation was performed in accordance with Endpoint's *Supplemental Soil Vapor Sampling Workplan* dated January 28, 2010. The work plan was approved by the Alameda County Health Services Agency (ACHCSA) in a letter dated February 25, 2010.

The following sections summarize the results of this round of supplemental field investigation.

2.0 SITE BACKGROUND

The site is located in a mixed commercial/residential area and on the western corner of the Adobe Center Shopping Center, which covers a 3.07-acre parcel of land located on the northeast corner of the intersection of Castro Valley Blvd., and Anita Avenue. The site is entirely encompassed within a multiple-unit, single-story building approximating 45 long by 40 feet wide. The building consists of reinforced concrete block and steel frame construction, with slab-on-grade floors (Property Solutions, Inc., 2002b; AEI Consultants, 2007). Properties immediately surrounding the site include the remaining portions of the strip mall to the east, residential homes to the north and west across Anita Street, and a Chevron gasoline service station immediately to the south (see Figure 1).

Dry cleaning operations at the site date back to 1990 (Property Solutions, Inc., 2002a), continuing until 2002 (Personal Communication with Gabriel Chui). Since 2002, dry cleaning operations have ceased, with the Dry Cleaning Club of America reducing in size to the western-most portion of the site serving solely as a dry cleaning drop off location. This portion of the site has been vacant for a while. During the site visit in March 2010, this part appeared to be under remodeling in preparation of the new occupation by a food business. A restaurant with the address of 2966 Castro Valley (see Figure 2) currently occupies the eastern portion of the site.

Past dry cleaning operations involved the use of PCE in a self-contained, closed-loop dry cleaning unit. Fresh PCE was stored in 10-gallon buckets in the toilet room at the subject property. PCE wastes were temporarily stored in a 16-gallon drum located near the dry cleaning unit and historically removed from the subject property by Safety Kleen under manifest procedures (Property Solutions, 2002b).

3.0 PREVIOUS INVESTIGATIONS

Time	Corrective Actions	Report Reference
August 2002	<p>Seven soil gas samples (SG-1 through SG-7) were collected. 6 soil borings were advanced (SB-1 through SB-6). 6 groundwater samples were collected (W-1 through W-6). VOCs were analyzed for all the samples.</p> <p>PCE was not detected in any soil gas samples. PCE was detected in 3 out of 12 soil samples, with the maximum concentration of 140 µg/kg (SB-3 at 3 feet bgs), less than the environmental screening level adopted by the RWQCB (2009) (ESL) (700 µg/kg). PCE was detected in 2 of 4 grab groundwater samples collected at a depth of 12 to 13 feet bgs, with detected concentrations ranging from 5.0 ug/L (SB-1) to 6.8 ug/L (SB-3). No further investigation action is recommended.</p>	Property Solutions 2002
April 2007	<p>Six soil borings were advanced (SB-1 through SB-6). PCE was detected in 2 of 5 soil samples collected, with maximum concentration of 0.076 mg/kg at depth of 1 foot of boring SB-5. PCE was also detected in 3 of 5 groundwater samples collected, with the maximum concentration of 6.7 µg/L in a groundwater sample collected from boring SB-5.</p> <p>Based on the low PCE concentrations detected, remedial action was deemed unnecessary; however, initiation of a case with the ACHCSA was recommended.</p>	AEI 2007

<p>October 2009</p>	<p>Following initiation of a case with the ACHCSA and preparation of a site investigation workplan, one soil boring and five vapor sampling points were advanced at the site. PCE was not detected above the laboratory reporting limit in a groundwater sample collected from soil boring GW-1, located near the sewer clean out.</p> <p>Two sub-slab and 3 soil vapor samples were collected inside the former dry cleaning machine. PCE was detected in 2 soil vapor samples (SV-1 and SS-2) above the commercial/industrial land use ESL, with the maximum detected concentration approximating 3,000 micrograms per cubed meters ($\mu\text{g}/\text{m}^3$). TCE concentrations were below the ESL.</p> <p>While the commercial/industrial ESL for PCE was exceeded, the conservatively estimated maximum cumulative carcinogenic risk for indoor air exposure to PCE and TCE under commercial/industrial land use was estimated at less than 2.4×10^{-6}, which is within the risk management range adopted by the US Environmental Protection Agency.</p> <p>Based on these results, Endpoint recommended that the site is a candidate for case closure; however, the ACHCSA requested one more round of limited vapor sampling to evaluate potential seasonal effects of vapor concentrations beneath the building.</p>	<p>Endpoint 2009c</p>
---------------------	--	-----------------------

4.0 SUPPLEMENTAL SOIL VAPOR SAMPLING ACTIVITIES

Per the request of the ACHCSA and in support of site closure, a supplemental soil vapor investigation was conducted at the site. The objective of the soil vapor sampling was to evaluate potential seasonal fluctuations in subsurface contaminant vapor concentrations, as outlined in Endpoint's January 2010 workplan. The vapor sampling included collecting one (1) soil vapor sample (SV-5) and two (2) sub-slab vapor samples (SS-3 and SS-4) from the former location of the dry cleaning machine.

4.1 Soil Vapor Investigation Field Activities

4.1.1 Pre-Field Activities

As required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120), and by the California Occupational Health and Safety Administration (Cal-OSHA) "Hazardous Waste Operations and Emergency Response" guidelines (CCR Title 8, Section 5192), Endpoint prepared a site-specific Health and Safety Plan prior to the commencement of fieldwork. The Plan was reviewed by field staff and contractors before beginning field operations.

No permit is required for this investigation event.

4.1.2 Soil Vapor and Sub-slab Vapor Investigation

The locations of the soil vapor and sub-slab vapor samples are illustrated on Figure 2.

On March 22, 2010, the sampling was completed by Vironex, Inc. of Pacheco, California, a State-licensed driller. At location SV-5, inside the building, a soil vapor probe was installed at the proposed depth (5 feet bgs). At locations SS-3 and SS-4, soil vapor probes were set at 4 inches bgs.

Inside the existing restaurant at 2966 Castro Valley Boulevard, within the footprint of the former dry cleaning machine, two sub-slab soil vapor samples (SS-3 and SS-4) and one deeper soil vapor sample (SV-5) were collected. At each location, a drill was used to create a 1-1/4 inch hole in the concrete slab. Following that, rods were advanced using a slide hammer. After the target depth had been achieved, the probes were installed through the center of the rods and then the rods were withdrawn.

Three soil vapor samples (SS-3, SS-4, and SV-5) were collected using 1-liter Summa canisters attached directly to the sampling manifold. Two canisters were used for each hole, to purge the Teflon tubing and collect sub-slab or soil vapor sample. A fresh Summa canister was used for each soil vapor sample. A stepped purge vs. contaminant concentration test was

completed prior to sample collection to determine the optimum purge volume. Based on the highest PID reading from a Tedlar bag, a purge volume of seven casing volumes was used throughout the vapor sampling. At each location, prior to sampling, a shut-in test and a leak test was performed per the work plan. Throughout the sampling process, a clear plastic container (shroud) was used to cover the sample train and filled with helium to test the integrity of the soil vapor sample point seal and all fittings and connections.

After purging the sampling tube, a soil/sub-slab vapor sample was collected in the laboratory cleaned Summa canister. The initial and final canister vacuums were noted and precautions were taken to leave at least 5" Hg vacuum in the canister. A partial vacuum was left in the Summa canister as a means to determine if leakage occurred during transit to the laboratory. The final vacuum gauge reading was recorded on a tag attached to the Summa canister. All samples were labeled and shipped under chain-of-custody documentation to McCampbell Analytical, Inc. (McCampbell), a California state-certified laboratory, for analysis of volatile organic compounds (VOCs) by EPA Method TO-15. The field data sheets including purging, leak check test, and sample collection information are presented in Attachment A.

Laboratory Analysis:

The vapor samples in summa canisters were transported on the same day to McCampbell Analytical in Pittsburg, California, a State-certified laboratory. The vapor samples were analyzed for EPA Method 8010 constituents by EPA Method TO-15. The laboratory

analytical report is included as Attachment B.

Backfill:

Following completion of sampling, all of the borings were backfilled with neat cement grout to surface. Quick-setting concrete was used to seal the borings at the surface.

4.2 Soil Vapor Sampling Results

No significant breakthrough was indicated during the vapor sample collection, as the tracer compound helium was recorded at 0% or less than 5% in the vapor samples relative to the measurements in the shroud (see Table 1 and Attachment A).

As shown on Table 1, PCE was detected at all three sample locations (i.e, SS-3, SS-4, and SV-5), with the highest concentration occurring in the deeper soil vapor sample at SV-5, collected nearest to the depth of the water table; as with the previous round of investigation, the shallower PCE concentrations (i.e, in sub-slab samples) were below the deeper soil vapor sample, confirming concentration reduction with distance toward the ground surface.

Importantly, all detected PCE concentrations were below the commercial/industrial ESL of 1,400 $\mu\text{g}/\text{m}^3$, with the exception of the detected concentration of 4,000 $\mu\text{g}/\text{m}^3$ at SV-5. TCE was only detected at SV-5, with a concentration (150 $\mu\text{g}/\text{m}^3$) well below the commercial/industrial ESL (see Table below).

As with the previous round of soil vapor sampling in Fall 2009, while the highly conservative ESL for PCE was exceeded at SV-5, the maximum cumulative carcinogenic risk for the vapor intrusion pathway, conservatively back-calculated below from the detected concentrations relative to the ESL, approximates 3.04×10^{-6} for SV-5 (see table below). This conservative risk estimate is at the lower end of the target acceptable risk management range of 1×10^{-4} to 1×10^{-6} adopted by the USEPA and DTSC.

Importantly, with PCE concentrations declining with distance toward the ground surface, the conservatively estimated vapor intrusion risks associated with PCE in the two sub-slab samples remain well below the target risk management range adopted by the USEPA and DTSC (see table below).

Sample	Chemical	Detected Concentration (ug/m3)	Commercial/Industrial ESL (ug/m3)	Estimated Carcinogenic Risk
SV-5	PCE	4000	1,400	2.86E-06
	TCE	150	4,100	1.88E-07
			Cumulative Risk	3.04E-06
SS-3	PCE	610	1,400	4.36E-07
			Cumulative Risk	4.34E-07
SS-4	PCE	270	1,400	1.93E-07
			Cumulative Risk	1.93E-07
Target risk level for ESLs = 1×10^{-6}				

6.0 CONCLUSIONS AND RECOMMENDATIONS

Through the various rounds of investigations performed to date at the site, PCE detections in soil and groundwater beneath the site have been sporadic and have occurred at low concentrations. Specifically, soil concentrations have been below ESLs (Property Solutions, 2002 and AEI, 2007), while groundwater detections have been sporadic with concentrations ranging from non-detect to slightly above the MCL (Property Solutions, 2002, AEI, 2007). Endpoint's previous investigation (Endpoint, 2009) further confirmed the absence of preferential migration along sewer lines and the absence of viable groundwater receptors downgradient of the site.

Building on the Fall 2009 investigation (Endpoint, 2009c), which targeted soil vapor and sub-slab vapor samples beneath the former dry cleaning machine, this March 2010 supplemental investigation further confirms the residual presence of PCE in soil vapor underlying the site. The maximum concentration of PCE during the Fall 2009 event occurred at $3,000 \mu\text{g}/\text{m}^3$, closely approximated by the maximum detected concentration of $4,000 \mu\text{g}/\text{m}^3$ in the Spring 2010 investigation. Combined, the two rounds of soil vapor sampling, reflecting both fall and spring events, have yielded similar results; namely, the maximum PCE concentrations slightly exceeding the commercial/industrial ESL occur in deeper soil vapor samples (5 feet bgs), but decline significantly in concentration at shallower depths in sub-slab samples.

Similar to the Fall 2009 investigation, while a single detection of PCE exceeding the commercial/industrial ESL was encountered in soil vapor during this round of investigation, the maximum detected PCE concentration corresponds to a conservative risk estimate which is at the lower end of the acceptable risk management range (i.e., 3.04×10^{-6}). Also similar to the Fall 2009 investigation, PCE concentrations and related risk estimates for shallower sub-slab samples reduce significantly, yielding risks well below the risk management range. Hence, seasonal affects appear to have an insignificant impact on soil vapor concentrations and related risks to indoor air quality.

Based on the available information, the site appears to qualify for low-risk closure and no further action is accordingly recommended.

7.0 REFERENCES

AEI, 2007. Phase II Subsurface Investigation, by AEI Consultants, May 8, 2007

Endpoint, 2009a. Supplemental Site Investigation Workplan, by Endpoint Consulting, Inc., June 30, 2009

Endpoint, 2009b. Supplemental Site Investigation Workplan Addendum, by Endpoint Consulting, Inc., August 17, 2009

Endpoint, 2009c. Supplemental Site Investigation Report, by Endpoint Consulting, Inc., October 2009

Endpoint, 2010. Supplemental Soil Vapor Sampling Workplan, by Endpoint Consulting, Inc., January 28, 2010

Property Solutions, 2002. Limited Phase II Subsurface Investigation, by Property Solutions, Inc. September 27, 2002

TABLE

Table 1
Vapor Analytical Results (March 2010)

2960 Castro Valley Boulevard
 Castro Valley, California

Location ID	Sample ID	Sample Location	Sample Depth (feet)	Sample Date	Concentration (ug/m ³) (2)			Leak Check Compound Helium Concentration (ppm) (3)		Helium Concentration %
					PCE	TCE	cis-1,2-DCE	in vapor sample	in shroud	Vapor/Shroud
SS-3	SS-3	inside Bldg.	0.3	3/22/2010	610	<11	<8.1	0	16,000	0.0%
SS-4	SS-4	inside Bldg.	0.3	3/22/2010	270	<11	<8.1	3,000	160,000	1.9%
SV-5	SV-5	inside Bldg.	5	3/22/2010	4,000	150	<8.1	0	48,000	0.0%
<i>ESL - Commercial</i>					<i>1,400</i>	<i>41,000</i>	<i>20,000</i>	<i>na</i>	<i>na</i>	<i>na</i>

Abbreviations:

Bldg. = building (restaurant)

ESL = Environmental Screening Level- Soil Gas (Vapor Intrusion Concerns) (Table E, RWQCB, 2008).

"<" = less than the laboratory reporting limit

na = not available or not applicable

Notes:

"--" Not sampled due to no vapor flow.

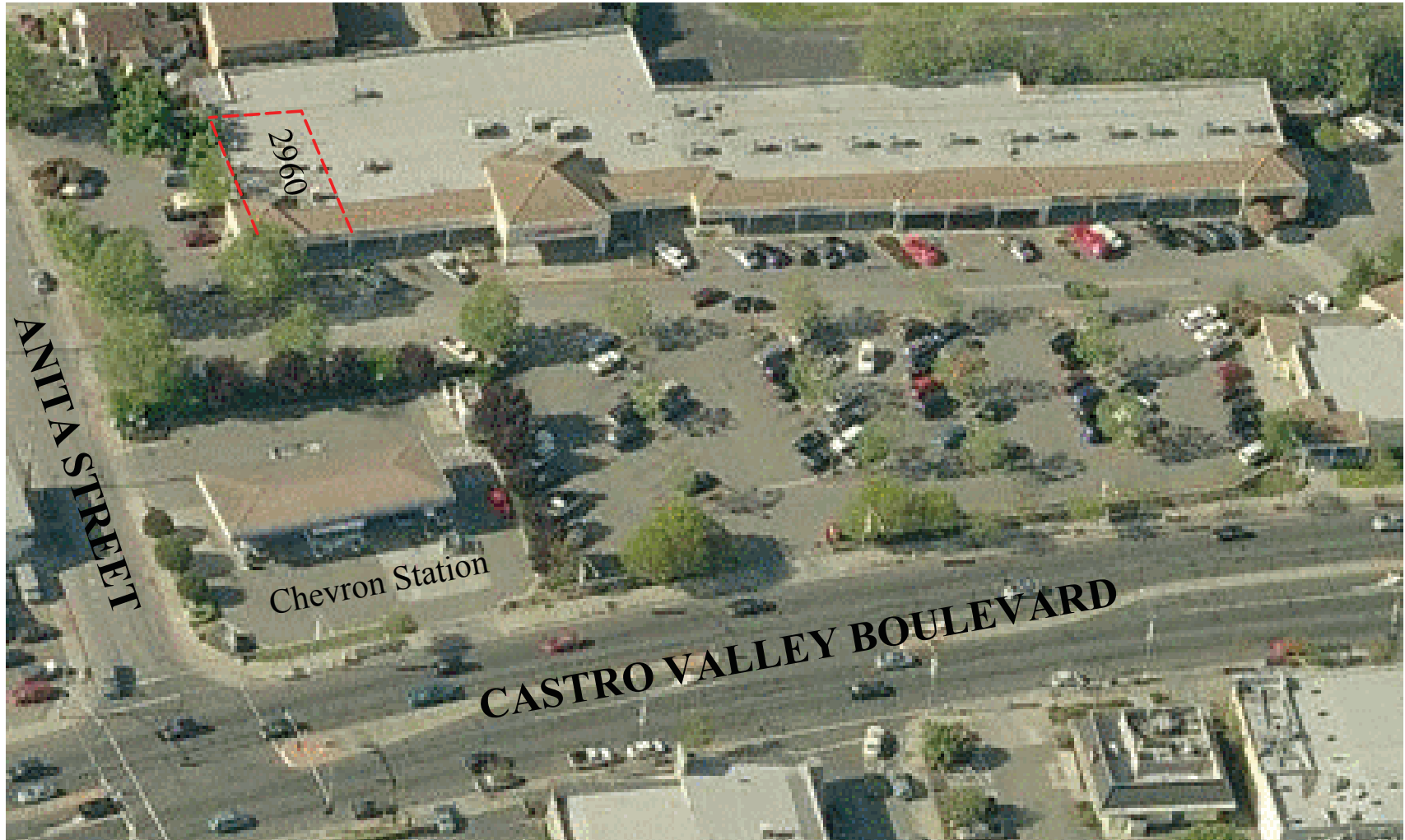
(1) Sample was collected 3 to 4 inches below the slab.

(2) Only detected compounds are shown. Samples were analyzed by McCampbell Analytical Inc., Pittsburg, California, using EPA TO-15 method.

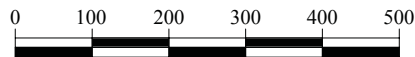
(3) Samples were analyzed by Helium meter in the field.

Bold number exceeds ESL-commercial sites.

FIGURES



Source: Microsoft Virtual Earth



Scale Approximate

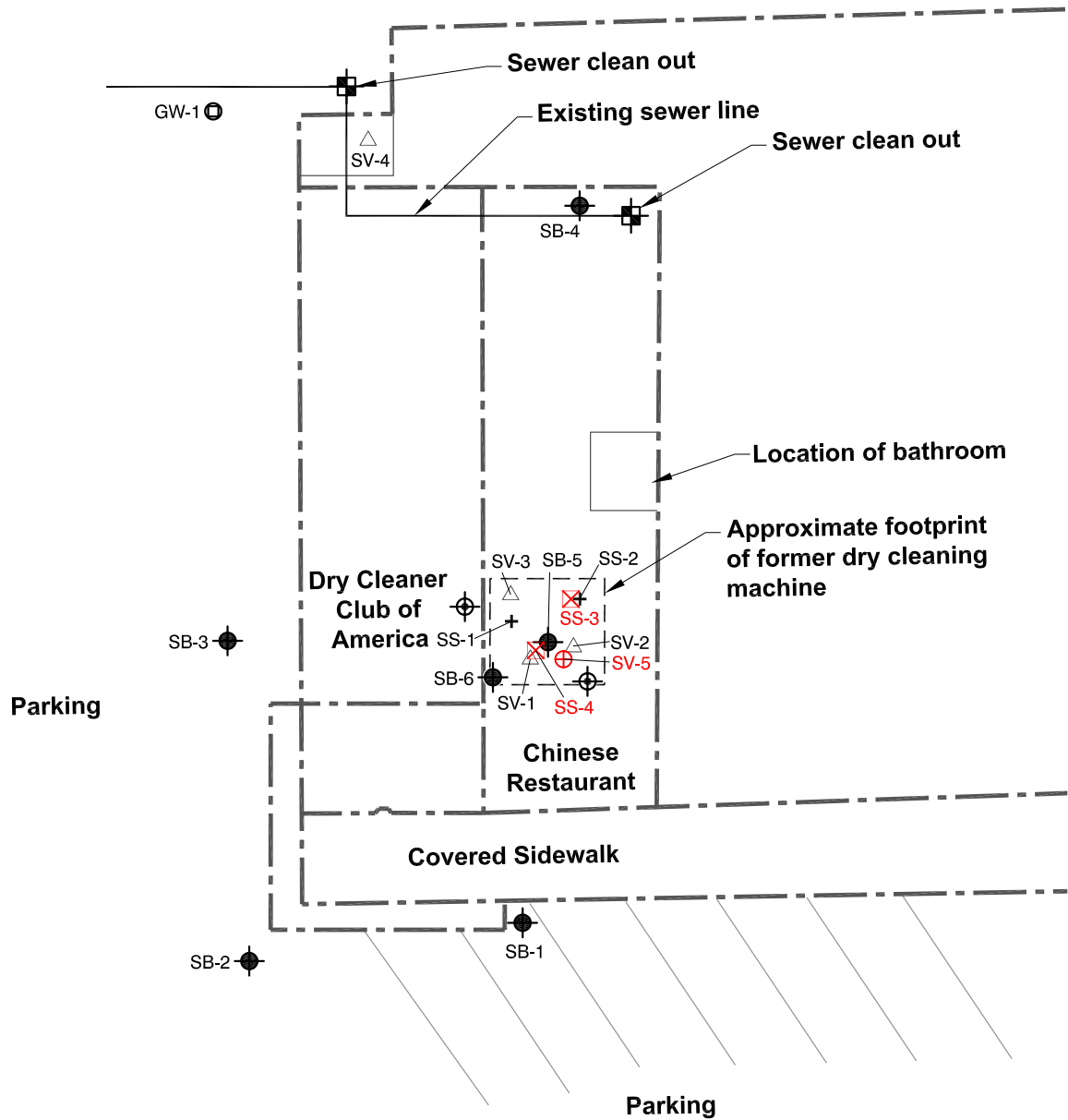
SITE MAP

2960 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

Endpoint.
Strategy. Science. Sustainability.

Date:
3/31/2010

Figure:
1

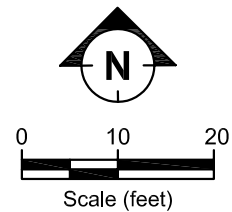


LEGEND:

- ⊠ Sub-slab vapor sample location (March 2010)
- ⊕ Soil vapor sample location (March 2010)
- △ Soil Vapor sample location (October 2009)
- + Sub-slab vapor sample location (October 2009)
- ⊙ AEI soil borings (2007)
- ⊙ Grab Groundwater sample location (October 2009)
- ⊠ Sewer clean out
- ⊙ Floor cuts assumed to be Property Solutions borings

Boring locations are approximate

Base Map: Google Earth, 2009.



VAPOR SAMPLING LOCATIONS		
2960 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA		
Endpoint. <small>Strategy. Science. Sustainability.</small>	Date: 3/31/2010	Figure: 2

Attachment A

Field Data Sheets

FIELD FORM FOR SOIL VAPOR/SUB SLAB SAMPLING

Project Name: 2960 Castro Valley Blvd

Date: March 22, 2010

Project Number: _____

Site Location: 2966 Castro Valley Blvd

Weather: clear, sunny

Soil Vapor Probe No: SS-3

Field Personnel: Vironex Tim M., Sayphos K

Sub Slab Probe No: SS-3

Recorded by: JH

Probe Installation: 9:45am Depth: 4"

Surface Type: Asphalt _____ Concrete Grass _____ Other _____

Surface Thickness (i.e., asphalt or concrete) 4"

Vacuum Test

Initial Vacuum Prior to Pumping 230 inches of Mercury (Hg)

Shut-in/Vacuum Test 27 inches of Mercury (Hg) held for 5 min seconds

Field Tubing: Blank PID Reading 0 ppmv

Shut in/Vacuum Test Completed Prior to Purging: Yes _____ No

Leak Test

Tracer Gas	Tracer Gas Concentration		In a Vapor Sample by Helium Detector (ppmv, %)
	In the Shroud (%)		
	Min	Max	
Helium		3500	0
		16,000	

Helium Concentration in Field Screen Vapor Samples is Less than 5% of Minimum Concentration in the Shroud?

Yes No _____

Purging

1 Casing Volume: _____

Sub Slab Volume 27 mL

Soil Vapor Probe Volume _____ mL

Purge Volume	Start Time	End Time	Elapsed Time (min.)	VOCs by PID During Purge Test (ppm)
1	12:15		105	0
3	12:20		325	0
7	12:30		1m 325	0.8

Helium ppmv
0
0
0

Sample Collection

Sample ID	Time Start	Time Finish	Summa Canister ID	Initial Vacuum (inch of Hg)	Final Vacuum (inch of Hg)	Notes
SS-3	12:32	12:36	5802	-27.5	-6	

FIELD FORM FOR SOIL VAPOR/SUB SLAB SAMPLING

Project Name: 2960 Castro Valley Blvd
 Date: March 22, 2010
 Site Location: 2966 Castro Valley Blvd
 Soil Vapor Probe No: _____
 Sub Slab Probe No: SS4
 Probe Installation: 9:45 am
 Surface Type: Asphalt _____ Concrete Grass _____ Other _____
 Surface Thickness (i.e., asphalt or concrete) 4"

Project Number: _____
 Weather: clear, sunny
 Field Personnel: Vivonex Tim M., Sayphone K.
 Recorded by: JH

Vacuum Test 1:10 pm
 Initial Vacuum Prior to Pumping _____ inches of Mercury (Hg)
 Shut-in/Vacuum Test 24.5 inches of Mercury (Hg) held for 5 min. seconds
 Field Tubing: Blank PID Reading 0 ppmv
 Shut in/Vacuum Test Completed Prior to Purging: Yes _____ No

Leak Test

Tracer Gas	Tracer Gas Concentration		In a Vapor Sample by Helium Detector (ppmv,%)
	In the Shroud (%)		
	Min	Max	
Helium		<u>160,000</u>	<u>3,000</u>

Helium Concentration in Field Screen Vapor Samples is Less than 5% of Minimum Concentration in the Shroud?
 Yes < 2% No _____

Purging

1 Casing Volume:
 Sub Slab Volume 27 m L
 Soil Vapor Probe Volume _____ L

Purge Volume	Start Time	End Time	Elapsed Time (min.)	VOCs by PID During Purge Test (ppm)
<u>7</u>	<u>13:27</u>	<u>13:28</u>	<u>1 min 15s</u>	<u>0.4</u>

Sample Collection

Sample ID	Time Start	Time Finish	Summa Canister ID	Initial Vacuum (inch of Hg)	Final Vacuum (inch of Hg)	Notes
<u>SS-4</u>	<u>13:33</u>	<u>13:37</u>	<u>6409</u>	<u>-29</u>	<u>-5</u>	

FIELD FORM FOR SOIL VAPOR/SUB SLAB SAMPLING

Project Name: 2960 Castro Valley Blvd

Date: March 22, 2010

Project Number: _____

Site Location: 2966 Castro Valley Blvd

Weather: Clear, Sunny

Soil Vapor Probe No: SV-5

Field Personnel: Vironex Tim M., Scyphone K.

Sub Slab Probe No: _____
 Probe Installation Time: 10:00am, 5' depth

Recorded by: JH

Surface Type: Asphalt _____ Concrete Grass _____ Other _____

Surface Thickness (i.e., asphalt or concrete) 4"

Vacuum Test

Initial Vacuum Prior to Pumping _____ inches of Mercury (Hg)

Shut-in/Vacuum Test 25 inches of Mercury (Hg) held for 5 min seconds.

Field Tubing: Blank PID Reading 0 ppmv

Shut in/Vacuum Test Completed Prior to Purging: Yes _____ No

Leak Test

Tracer Gas	Tracer Gas Concentration		In a Vapor Sample by Helium Detector (ppmv, %)
	ppmv		
	In the Shroud (%)	Min	
Helium	48,000	0	0

Helium Concentration in Field Screen Vapor Samples is Less than 5% of Minimum Concentration in the Shroud?

Yes No _____

Purging

1 Casing Volume:

Sub Slab Volume _____ L

Soil Vapor Probe Volume 107 mL

Purge Volume	Start Time	End Time	Elapsed Time (min.)	VOCs by PID During Purge Test (ppm)
7	14:05	14:08	3 min 45 s	0.7

Sample Collection

Sample ID	Time Start	Time Finish	Summa Canister ID	Initial Vacuum (inch of Hg)	Final Vacuum (inch of Hg)	Notes
SV-5	14:13	14:19		-27	-5	

Attachment B

Laboratory Analytical Report



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Endpoint 98 Battery Street, Suite 200 San Francisco, CA 94111	Client Project ID: 2960 Castro Valley Blvd, Castro Valley	Date Sampled: 03/22/10
	Client Contact: Jing Heisler	Date Received: 03/22/10
	Client P.O.:	Date Reported: 03/29/10
		Date Completed: 03/26/10

WorkOrder: 1003622

March 29, 2010

Dear Jing:

Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: **2960 Castro Valley Blvd, Castro Vall**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

1003622

McCAMPBELL ANALYTICAL INC.
 1534 Willow Pass Road
 Pittsburg, CA 94565-1701
 www.main@mccampbell.com
 Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD
 TURN AROUND TIME
 RUSH 24 HR 48 HR 72 HR 5 DAY
 EDF Required? Coelt (Normal) No Write On (DW) No

Report To: *Jing Heisler and Mehrdad Javaher* Bill To: *Mehrdad Javaher*
 Company: *Endpoint*
 E-Mail: *jing@endpoint-iac.com*
 Tele: (415) 342-3713 Fax: ()
 Project #: Project Name:
 Project Location: *2960 Castro Valley Blvd, Castro Valley.*

Lab Use Only

Pressurized By	Date	Pressurization Gas	
		N2	He

Sampler Signature: *[Signature]*

Notes: *Report 8010 List*

Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#
	Date	Time		
SS-3	3/22/10	12:36	5802	
SS-4	3/22/10	13:37	6409	
SV-5	3/22/10	14:19	5804	

Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
			Initial	Final	Receipt	Final (psi)
TO-15 8010 List		X	-27.5	-6		
TO-15 8010 List		X	-29	-5		
TO-15 8010 List		X	-27	-5		

Relinquished By: *[Signature]* Date: *3/22/10* Time: *14:42* Received By: *Denk Cart*
 Relinquished By: *Denk Cart* Date: *3/22/10* Time: *17:35* Received By: *Me Vall*
 Relinquished By: Date: Time: Received By:

Temp (°C): *n/a* Work Order #: *1003622*
 Condition: *good*
 Custody Seals Intact?: Yes ___ No ___ None
 Shipped Via: *D.C. MAI carrier*

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1003622

ClientCode: EPB

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:		Bill to:	Requested TAT: 5 days
Jing Heisler	Email: jing@endpoint-inc.com	Accounts Payable	
Endpoint	cc: mehrdad@endpoint-inc.com	Endpoint	<i>Date Received: 03/22/2010</i>
98 Battery Street, Suite 200	PO:	98 Battery Street, Suite 200	<i>Date Printed: 03/22/2010</i>
San Francisco, CA 94111	ProjectNo: 2960 Castro Valley Blvd, Castro Valley	San Francisco, CA 94111	
415-706-8935 FAX			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1003622-001	SS-3	Soil Vapor	3/22/2010 12:36	<input type="checkbox"/>	A												
1003622-002	SS-4	Soil Vapor	3/22/2010 13:37	<input type="checkbox"/>	A												
1003622-003	SV-5	Soil Vapor	3/22/2010 14:19	<input type="checkbox"/>	A												

Test Legend:

1	TO15-8010 SOIL(UG/M3)	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampleIDs: 001A, 002A, 003A contain testgroup.

Prepared by: Melissa Valles

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Endpoint** Date and Time Received: **3/22/2010 7:48:02 PM**
 Project Name: **2960 Castro Valley Blvd, Castro Valley** Checklist completed and reviewed by: **Melissa Valles**
 WorkOrder N°: **1003622** Matrix Soil Vapor Carrier: Derik Cartan (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

* NOTE: If the "No" box is checked, see comments below.

Client contacted: Date contacted: Contacted by:

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Endpoint 98 Battery Street, Suite 200 San Francisco, CA 94111	Client Project ID: 2960 Castro Valley Blvd, Castro Valley	Date Sampled: 03/22/10
	Client Contact: Jing Heisler	Date Received: 03/22/10
	Client P.O.:	Date Extracted: 03/24/10-03/25/10
		Date Analyzed: 03/24/10-03/25/10

Halogenated Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1003622

Lab ID	1003622-001A	1003622-002A	1003622-003A	Reporting Limit for DF =1	
Client ID	SS-3	SS-4	SV-5	Soil Vapor	W
Matrix	Soil Vapor	Soil Vapor	Soil Vapor		
DF	1	1	1		
Initial Pressure (psia)	11.9	12.52	12.24		
Final Pressure (psia)	23.72	24.96	24.42		
Compound	Concentration			µg/m ³	ug/L
Bromodichloromethane	ND	ND	ND	14	NA
Bromoform	ND	ND	ND	21	NA
Bromomethane	ND	ND	ND	7.9	NA
Carbon Tetrachloride	ND	ND	ND	13	NA
Chlorobenzene	ND	ND	ND	9.4	NA
Chloroethane	ND	ND	ND	5.4	NA
Chloroform	ND	ND	ND	9.9	NA
Chloromethane	ND	ND	ND	4.2	NA
Dibromochloromethane	ND	ND	ND	17	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	16	NA
1,2-Dichlorobenzene	ND	ND	ND	12	NA
1,3-Dichlorobenzene	ND	ND	ND	12	NA
1,4-Dichlorobenzene	ND	ND	ND	12	NA
Dichlorodifluoromethane	ND	ND	ND	10	NA
1,1-Dichloroethane	ND	ND	ND	8.2	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	8.2	NA
1,1-Dichloroethene	ND	ND	ND	8.1	NA
cis-1,2-Dichloroethene	ND	ND	ND	8.1	NA
trans-1,2-Dichloroethene	ND	ND	ND	8.1	NA
1,2-Dichloropropane	ND	ND	ND	9.4	NA
cis-1,3-Dichloropropene	ND	ND	ND	9.2	NA
trans-1,3-Dichloropropene	ND	ND	ND	9.2	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	14	NA
Freon 113	ND	ND	ND	16	NA
Methylene chloride	ND	ND	ND	7.1	NA
1,1,1,2-Tetrachloroethane	ND	ND	ND	14	NA
1,1,2,2-Tetrachloroethane	ND	ND	ND	14	NA
Tetrachloroethene	610	270	4000	14	NA
1,2,4-Trichlorobenzene	ND	ND	ND	15	NA
1,1,1-Trichloroethane	ND	ND	ND	11	NA
1,1,2-Trichloroethane	ND	ND	ND	11	NA
Trichloroethene	ND	ND	150	11	NA
Trichlorofluoromethane	ND	ND	ND	11	NA
Vinyl Chloride	ND	ND	ND	5.2	NA
Surrogate Recoveries (%)					
%SS1:	92	106	103		
%SS2:	91	108	106		
%SS3:	107	107	105		

Comments

*vapor samples are reported in µg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.



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Endpoint 98 Battery Street, Suite 200 San Francisco, CA 94111	Client Project ID: 2960 Castro Valley Blvd, Castro Valley	Date Sampled: 03/22/10
	Client Contact: Jing Heisler	Date Received: 03/22/10
	Client P.O.:	Date Extracted: 03/24/10-03/25/10
		Date Analyzed: 03/24/10-03/25/10

Halogenated Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1003622

Lab ID	1003622-001A	1003622-002A	1003622-003A	Reporting Limit for DF =1	
Client ID	SS-3	SS-4	SV-5	Soil Vapor	W
Matrix	Soil Vapor	Soil Vapor	Soil Vapor		
DF	1	1	1		
Initial Pressure (psia)	11.9	12.52	12.24		
Final Pressure (psia)	23.72	24.96	24.42		

Compound	Concentration			nL/L	ug/L
Bromodichloromethane	ND	ND	ND	2.0	NA
Bromoform	ND	ND	ND	2.0	NA
Bromomethane	ND	ND	ND	2.0	NA
Carbon Tetrachloride	ND	ND	ND	2.0	NA
Chlorobenzene	ND	ND	ND	2.0	NA
Chloroethane	ND	ND	ND	2.0	NA
Chloroform	ND	ND	ND	2.0	NA
Chloromethane	ND	ND	ND	2.0	NA
Dibromochloromethane	ND	ND	ND	2.0	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	2.0	NA
1,2-Dichlorobenzene	ND	ND	ND	2.0	NA
1,3-Dichlorobenzene	ND	ND	ND	2.0	NA
1,4-Dichlorobenzene	ND	ND	ND	2.0	NA
Dichlorodifluoromethane	ND	ND	ND	2.0	NA
1,1-Dichloroethane	ND	ND	ND	2.0	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	2.0	NA
1,1-Dichloroethene	ND	ND	ND	2.0	NA
cis-1,2-Dichloroethene	ND	ND	ND	2.0	NA
trans-1,2-Dichloroethene	ND	ND	ND	2.0	NA
1,2-Dichloropropane	ND	ND	ND	2.0	NA
cis-1,3-Dichloropropene	ND	ND	ND	2.0	NA
trans-1,3-Dichloropropene	ND	ND	ND	2.0	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	2.0	NA
Freon 113	ND	ND	ND	2.0	NA
Methylene chloride	ND	ND	ND	2.0	NA
1,1,1,2-Tetrachloroethane	ND	ND	ND	2.0	NA
1,1,2,2-Tetrachloroethane	ND	ND	ND	2.0	NA
Tetrachloroethene	89	40	580	2.0	NA
1,2,4-Trichlorobenzene	ND	ND	ND	2.0	NA
1,1,1-Trichloroethane	ND	ND	ND	2.0	NA
1,1,2-Trichloroethane	ND	ND	ND	2.0	NA
Trichloroethene	ND	ND	27	2.0	NA
Trichlorofluoromethane	ND	ND	ND	2.0	NA
Vinyl Chloride	ND	ND	ND	2.0	NA

Surrogate Recoveries (%)

%SS1:	92	106	103		
%SS2:	91	108	106		
%SS3:	107	107	105		

Comments

*vapor samples are reported in nL/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor

QC Matrix: Soil Vapor

BatchID: 49426

WorkOrder 1003622

EPA Method TO15	Extraction TO15								Spiked Sample ID: N/A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Chlorobenzene	N/A	25	N/A	N/A	N/A	107	107	0	N/A	N/A	70 - 130	30
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	117	117	0	N/A	N/A	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	109	108	0.490	N/A	N/A	70 - 130	30
1,2-Dichloro-1,1,2,2-tetrafluoroetha	N/A	25	N/A	N/A	N/A	92.1	96.9	5.07	N/A	N/A	70 - 130	30
Freon 113	N/A	25	N/A	N/A	N/A	102	103	0.399	N/A	N/A	70 - 130	30
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	112	112	0	N/A	N/A	70 - 130	30
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	111	110	0.963	N/A	N/A	70 - 130	30
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	89.3	91.1	2.08	N/A	N/A	70 - 130	30
Trichloroethene	N/A	25	N/A	N/A	N/A	105	103	1.87	N/A	N/A	70 - 130	30
Xylenes	N/A	75	N/A	N/A	N/A	108	108	0	N/A	N/A	70 - 130	30
%SS1:	N/A	500	N/A	N/A	N/A	107	106	0.641	N/A	N/A	70 - 130	30
%SS2:	N/A	500	N/A	N/A	N/A	109	109	0	N/A	N/A	70 - 130	30
%SS3:	N/A	500	N/A	N/A	N/A	104	104	0	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 49426 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1003622-001A	03/22/10 12:36 PM	03/24/10	03/24/10 8:21 PM	1003622-002A	03/22/10 1:37 PM	03/24/10	03/24/10 9:04 PM
1003622-003A	03/22/10 2:19 PM	03/24/10	03/24/10 9:48 PM	1003622-003A	03/22/10 2:19 PM	03/25/10	03/25/10 2:22 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.