

April 26, 2019
File No. 25213180.19

Mr. Jeff Ackerman
Wisconsin Department of Natural Resources
3911 Fish Hatchery Rd.
Fitchburg, WI 53711-5367

Subject: Summary of Soil Gas Sampling
WDNR Rimrock Road Investigation
Southdale Park, Town of Madison
BRRTS No. 02-13-248222

Dear Mr. Ackerman:

SCS Engineers (SCS) is providing the following summary of soil gas sampling work performed for the above-noted project site. The work was performed for the Wisconsin Department of Natural Resources (WDNR) to evaluate for the presence of volatile organic compounds in soil gas adjacent to a sanitary sewer line located along the west side of Southdale Park (**Figure 1**). The sewer line is a suspected source of chlorinated volatile organic compound (VOC)-contaminated soil and groundwater previously identified in the vicinity of the project site.

The soil gas sampling findings indicate VOCs are present in soil gas adjacent to the sanitary sewer line. The presence of chlorinated VOCs in the soil gas may be a risk to occupants of nearby buildings. We are therefore recommending further soil gas and building vapor intrusion assessment sampling for the adjacent property at 200 Deer Valley Road.

METHODS

SCS performed field sampling activities on April 5, 2019. Sample locations are shown on **Figure 1**. Soil gas samples were collected from locations V-1 through V-4 using a Geoprobe™ direct push drill rig and post run tubing (PRT) equipment operated by On-Site Environmental Services, Inc. of Sun Prairie, Wisconsin.

At each sample location a 1.5-inch diameter steel drive casing, equipped with a drive point holder and expendable drive point, was advanced to a depth of approximately 10 feet below ground surface (bgs) and then retracted to approximately 8 feet bgs to release the drive point and expose approximately 2 feet of borehole. Clean 1/4-inch diameter Teflon® tubing, equipped with a threaded PRT tip, was lowered into the drive casing and threaded into the PRT adapter to create a seal with the 8-10 foot interval of the soil boring.

At the ground surface, SCS connected the PRT tubing to a manifold and a summa canister for purging and sampling. Prior to sampling, the manifold and sampling lines were tested for leaks by conducting a vacuum shut-in test. The drive casing surface seal was then tested for leaks using a helium shroud. For this test, the helium shroud was placed over the drive casing and filled with helium. Approximately 1 liter of air was then purged from the PRT using a miniRAE photo-ionization detector (PID). A Gascheck™ helium meter was used to check for the presence of helium in the PID



exhaust, which would indicate a leak in the drive casing seal. No equipment or drive casing seal leaks were detected at any of the sample locations.

After leak checks and purging was completed, a soil gas sample was collected from the PRT using a laboratory-supplied vacuum summa canister equipped with a 30-minute flow controller. Following sampling, the drive casing and PRT system were retracted from each location and the borehole was sealed with bentonite granules.

All samples were transported to Pace Analytical of Minneapolis, Minnesota, under chain of custody for analysis via U.S. Environmental Protection Agency (USEPA) Method TO-15. The samples were analyzed for tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride.

FINDINGS

Photos from the soil gas sampling work are included in **Attachment A**, and field forms for each sample location are included in **Attachment B**. The laboratory report is included in **Attachment C** and summarized in **Table 1**. Sampling results are summarized below:

- TCE and/or PCE were detected in all four soil gas samples. No other VOCs were detected.
- PCE concentrations for samples V-3 and V-4 exceed the WDNR sub-slab and deep soil vapor risk screening levels (VRSLs).
- TCE sample concentrations do not exceed VRSLs.

SUMMARY AND RECOMMENDATIONS

SCS completed subsurface sampling work to evaluate for the presence of chlorinated VOCs in soil gas adjacent to a sanitary sewer line located along the west side of Southdale Park in the Town of Madison. Chlorinated VOCs were detected in the soil gas adjacent to the sewer line at concentrations exceeding VRSLs, and therefore may present a vapor intrusion health risk to occupants of nearby buildings.

Based on investigation findings, SCS recommends additional soil gas sampling be performed to evaluate the degree and extent of chlorinated VOCs in soil gas. We also recommend that a building vapor intrusion assessment be performed for the apartment building located immediately west of the elevated soil gas concentrations. Our proposed scope of work includes the following sampling activities for the property at 200 Deer Valley Road:

- Installation and sampling of two additional soil gas probes to be installed close to the apartment building sewer lateral, between the sanitary sewer line and the apartment building on the property located at 200 Deer Valley Road.
- Installation and sampling of two building sub-slab vapor ports inside the apartment building.
- Collection of one indoor air sample and one outdoor (background) air sample for the above-noted apartment building.

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- Submittal of samples to laboratory for analysis of PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride by Method TO-15.
- Preparation of summary report to document additional findings. Report to include summary of methods, findings, and recommendations; sample location map; laboratory report; tabulated analytical results; photos; and field forms.

We estimate total costs for the additional sampling work at \$4,950, including approximately \$2,000 in laboratory and drilling subcontractor costs and \$2,950 in consulting costs. We assume the WDNR will coordinate access to the 200 Deer Valley Road property.

Please contact Robert Langdon at 608-216-7329 if you have any questions regarding this letter.

Sincerely,



Robert Langdon
Project Manager
SCS Engineers



Sam Cooke, PE, CEM
Project Director
SCS Engineers

REL/jsn/SLC

Attachments Table 1 – Soil Gas Analytical Results Summary
Figure 1 – Site Plan
Attachment A – Photos
Attachment B – Field Forms
Attachment C – Laboratory Report

I:\25219095.00\Deliverables\Soil Gas Sampling Report\190426_Ackerman_Soil Gas Sampling Report.docx




Table 1
Soil Gas Analytical Results Summary

Table 1. Soil Gas Analytical Results Summary
WDNR Rimrock Road/Southdale Park / SCS Engineers Project #25219095.00
 (Results are in ppbV)

Sample	Date	Lab Notes	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
V-1	4/5/2019	--	9.2	<0.079	<0.092	<0.12	<0.081
V-2	4/5/2019	--	16.7	<0.082	<0.094	<0.12	<0.085
V-3	4/5/2019	--	<u>1,810</u>	0.24	<0.094	<0.12	<0.085
V-4	4/5/2019	--	<u>518</u>	0.53	<0.094	<0.12	<0.085
Sub-Slab Vapor Risk Screening Level (Residential Building)			210	13	NE	NE	22
Deep Soil Gas Vapor Risk Screening Level (Residential Building)			620	39	NE	NE	65

Abbreviations:

ppbV = parts per billion by volume

cis-1,2-DCE = cis-1,2-dichloroethylene

-- = Not Applicable

trans-1,2-DCE = trans-1,2-dichloroethylene

NE = Standard Not Established

Notes:

1. Samples were collected in 6-liter summa canisters over a 30-minute period and analyzed using the USEPA TO-15 analytical method.
2. Vapor Risk Screening Levels are from Wisconsin Department of Natural Resources' WI Vapor Quick Look-Up Table, which is based on November 2017 USEPA Regional Screening Level Tables.
3. **Bold+underlined** values meet or exceed Vapor Risk Screening Levels.

Lab Notes:

none

Created by: AJR
 Last revision by: AJR
 Checked by: REL

Date: 4/25/2019
 Date: 4/25/2019
 Date: 4/25/2019

Figure 1

Site Plan

Figure 1 - Site Plan



□ Tax Parcels

● Approximate Soil Gas Sample Location

— Sanitary Sewer, Approximate

0 50 100 200 Feet



Attachment A

Photos

Soil Gas Sampling, WDNR Rimrock Road Project
Southdale Park, April 5, 2019
SCS Engineers Project #25219095.00



Photo 1: Looking north at installation of temporary soil gas sampling probe V-4 with V-3 in background. Green flags mark sanitary sewer.



Photo 2: Looking west at soil gas sampling point V-3, located between bike path and apartment building.

Soil Gas Sampling, WDNR Rimrock Road Project
Southdale Park, April 5, 2019
SCS Engineers Project #25219095.00



Photo 3: Sample equipment including flow manifold, helium shroud, summa canister, photoionization detector, and helium meter.



Photo 4: Looking north at traffic cones marking abandoned soil gas borings VP-1 through VP-4.

Attachment B

Field Forms

Vapor Assessment Sample Collection Log

Project: <u>W DNR Rimrock</u>	Sample ID: <u>V-1</u>	Type (Circle One)*: <u>SB</u> AI AR
Project #: <u>25219095</u>	Sample Intake Height: <u>9.5-10</u>	NA for SB
Location: <u>Southdale park</u>	Approx. Purge Volume: <u>~ 1L</u>	NA for AI and AR
Sampler: <u>Robert Langdon</u>	Approx. Sampling Depth: <u>9.5-10</u>	NA for AI and AR
Sub-Slab Sample Kit #: <u>1</u>		NA for AI and AR
Sub-Slab Sample Manifold #: <u>1</u>		NA for AI and AR
PID #: <u>ppb T2a e</u>		

Instrument Readings:

Date	Time	Canister Vacuum (" of Hg)	PID Reading (ppm/ppb)
<u>4/5/19</u>	<u>9:15</u>	<u>28</u>	<u>1500</u>
<u>↓</u>	<u>9:45</u>	<u>~ 5</u>	<u>—</u>

Summa Canister Information:

Canister Size:	1L	<u>6L</u>
Canister ID#	<u>3568</u>	
Flow Controller ID#	<u>3568RL1002</u>	

Sub-Slab Tests Passed?

Water Dam:	Yes	No
Shut-In:	<u>Yes</u>	No

General Notes/Observations:

Helium shroud test - passed
soil gas probe 1" becprobe w/
port run tubing

Abbreviations:

NA = Not Applicable SB = Sub-Slab
 AI = Indoor Air AR = Outdoor Air

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water Watershed/Wastewater Remediation/Redevelopment

Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane	WI Unique Well # of Removed Well	Hicap #	Facility Name BRRTS # 02-13-248222 Rimrock Road/Southdale Park
Latitude / Longitude (see instructions) N _____ W _____	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001	Facility ID (FID or PWS)
1/4 NE or Gov't Lot #	1/4 SE	Section 35	License/Permit/Monitoring #
Township 7N	Range 9	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Original Well Owner Wisconsin Department of Natural Resources
Well Street Address 146 Deer Valley Road (Southdale Park)	Well ZIP Code 53713		Present Well Owner Same
Subdivision Name	Lot #		Mailing Address of Present Owner 3911 Fish Hatchery Road
			City of Present Owner Fitchburg
			State WI
			ZIP Code 53711

3. Filled & Sealed Well / Drillhole / Borehole Information **4. Pump, Liner, Screen, Casing & Sealing Material**

Reason for Removal from Service Temporary soil gas boring	WI Unique Well # of Replacement Well	Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Monitoring Well <input type="checkbox"/>	Original Construction Date (mm/dd/yyyy) 4/5/2019	Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Water Well <input type="checkbox"/>	If a Well Construction Report is available, please attach.	Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input checked="" type="checkbox"/> Borehole / Drillhole		Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (specify): <u>Direct push</u>		Casing left in place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Total Well Depth From Ground Surface (ft.) 10	Casing Diameter (in.) 1.5	Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Lower Drillhole Diameter (in.) 1.5	Casing Depth (ft.) 8	Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If yes, to what depth (feet)?	Depth to Water (feet) Unknown	If bentonite chips were used, were they hydrated with water from a known safe source? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain): <u>gravity</u>
		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips
		For Monitoring Wells and Monitoring Well Boreholes Only: <input checked="" type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	10	10#	

6. Comments

V-4

7. Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing Tony Kapugi, On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 4/5/2019	Date Received	Noted By
Street or Route P.O. Box 280	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Anthony R. Kapugi</i>	Date Signed 04/24/2019

Vapor Assessment Sample Collection Log

Project: <i>WPNR Zimbrick Rd</i>	Sample ID: <i>V-2</i>	Type (Circle One)*: <input type="radio"/> SB <input type="radio"/> AI <input type="radio"/> AR
Project #: <i>25219095</i>	Sample Intake Height: <i>9.5-10'</i>	NA for SB
Location: <i>Southdale park</i>	Approx. Purge Volume: <i>~ 1L</i>	NA for AI and AR
Sampler: <i>Robert Langdon</i>	Approx. Sampling Depth: <i>9.5-10</i>	NA for AI and AR
Sub-Slab Sample Kit #: <i>2</i>		NA for AI and AR
Sub-Slab Sample Manifold #: <i>2</i>		NA for AI and AR
PID #: <i>ppb Rae</i>		

Instrument Readings:

Date	Time	Canister Vacuum (" of Hg)	PID Reading (ppm, <u>ppb</u>)
<i>4/5/19</i>	<i>9:36</i>	<i>29</i>	<i>250</i>
<i>↓</i>	<i>10:06</i>	<i>7</i>	<i>—</i>

Summa Canister Information:

Canister Size:	1L	<u>6L</u>
Canister ID#	<i>2753</i>	
Flow Controller ID#	<i>0941</i>	

Sub-Slab Tests Passed?

Water Dam:	Yes	No
Shut-In:	<u>Yes</u>	No

General Notes/Observations:

Helium flow test - passed
*Soil gas probe 1" Geoprobe w/
 post-run tubing*

Abbreviations:

NA = Not Applicable SB = Sub-Slab
 AI = Indoor Air AR = Outdoor Air

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Route to DNR Bureau:

Verification Only of Fill and Seal

Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane		
Latitude / Longitude (see instructions)	Format Code	Method Code
_____ N	<input type="checkbox"/> DD	<input type="checkbox"/> GPS008
_____ W	<input type="checkbox"/> DDM	<input type="checkbox"/> SCR002
		<input type="checkbox"/> OTH001
1/4 1/4 NE	Section	Township
or Gov't Lot #	35	7 N
		Range
		9 <input checked="" type="checkbox"/> E
		<input type="checkbox"/> W
Well Street Address		
146 Deer Valley Road (Southdale Park)		
Well City, Village or Town		Well ZIP Code
Town of Madison		53713
Subdivision Name		Lot #

2. Facility / Owner Information

Facility Name		
BRRTS # 02-13-248222 Rimrock Road/Southdale Park		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner		
Wisconsin Department of Natural Resources		
Present Well Owner		
Same		
Mailing Address of Present Owner		
3911 Fish Hatchery Road		
City of Present Owner	State	ZIP Code
Fitchburg	WI	53711

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary soil gas boring	

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy)
<input type="checkbox"/> Water Well	4/5/2019
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:		
<input type="checkbox"/> Drilled	<input type="checkbox"/> Driven (Sandpoint)	<input type="checkbox"/> Dug
<input checked="" type="checkbox"/> Other (specify): <u>Direct push</u>		

Formation Type:	
<input checked="" type="checkbox"/> Unconsolidated Formation	<input type="checkbox"/> Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
10	1.5

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
1.5	8

Was well annular space grouted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
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If yes, to what depth (feet)?	Depth to Water (feet)
	Unknown

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

Required Method of Placing Sealing Material	
<input type="checkbox"/> Conductor Pipe-Gravity	<input type="checkbox"/> Conductor Pipe-Pumped
<input type="checkbox"/> Screened & Poured (Bentonite Chips)	<input checked="" type="checkbox"/> Other (Explain): <u>gravity</u>

Sealing Materials	
<input type="checkbox"/> Neat Cement Grout	<input type="checkbox"/> Concrete
<input type="checkbox"/> Sand-Cement (Concrete) Grout	<input type="checkbox"/> Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:	
<input checked="" type="checkbox"/> Bentonite Chips	<input type="checkbox"/> Bentonite - Cement Grout
<input type="checkbox"/> Granular Bentonite	<input type="checkbox"/> Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	10	10#	

6. Comments

V-3

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing			License #		Date of Filling & Sealing or Verification		DNR Use Only	
Tony Kapugi, On-site Environmental Services, Inc.					(mm/dd/yyyy) 4/5/2019		Date Received	
Street or Route			Telephone Number			Comments		
P.O. Box 280			(608) 837-8992					
City		State	ZIP Code	Signature of Person Doing Work			Date Signed	
Sun Prairie		WI	53590	Anthony R. Kapugi			04/24/2019	

Vapor Assessment Sample Collection Log

Project: <i>WONTZ Rimrock P.</i>	Sample ID: <i>V-3</i>	Type (Circle One)*: <input type="radio"/> SB <input type="radio"/> AI <input type="radio"/> AR
Project #: <i>252191095</i>	Sample Intake Height: <i>9.5-10</i>	NA for SB
Location: <i>Southdale Park</i>	Approx. Purge Volume: <i>~1L</i>	NA for AI and AR
Sampler: <i>Robert</i>	Approx. Sampling Depth: <i>9.5-10</i>	NA for AI and AR
Sub-Slab Sample Kit #: <i>1</i>		NA for AI and AR
Sub-Slab Sample Manifold #: <i>1</i>		NA for AI and AR
PID #: <i>ppb Rac</i>		

Instrument Readings:

Date	Time	Canister Vacuum (inches of Hg)	PID Reading (ppm/ppb)
<i>4/5/19</i>	<i>10:00</i>	<i>29</i>	<i>2275</i>
<i>↓</i>	<i>10:40</i>	<i>8</i>	<i>—</i>

Summa Canister Information:

Canister Size:	1L	<input checked="" type="radio"/> 6L
Canister ID#	<i>3474</i>	
Flow Controller ID#	<i>1184</i>	

Sub-Slab Tests Passed?

Water Dam:	<input type="radio"/> Yes	<input type="radio"/> No
Shut-In:	<input checked="" type="radio"/> Yes	<input type="radio"/> No

General Notes/Observations:

Helium snout test - passed
*Soil gas probe 1" Geoprobe w/
 post-run tubing*

Abbreviations:

NA = Not Applicable SB = Sub-Slab
 AI = Indoor Air AR = Outdoor Air

**Vapor Assessment
Sample Collection Log**

Project: <u>WATNIZ Rimrock Rd</u>	Sample ID: <u>V-4</u>	Type (Circle One)*: <u>SB</u> AI AR
Project #: <u>25219095</u>	Sample Intake Height: <u>9.5-10'</u>	NA for SB
Location: <u>Southlake park</u>	Approx. Purge Volume: <u>~1L</u>	NA for AI and AR
Sampler: <u>Robert Longdon</u>	Approx. Sampling Depth: <u>9.5-10'</u>	NA for AI and AR
Sub-Slab Sample Kit #: <u>2</u>		NA for AI and AR
Sub-Slab Sample Manifold #: <u>2</u>		NA for AI and AR
PID #: <u>ppb Rae</u>		

Instrument Readings:

Date	Time	Canister Vacuum (" of Hg)	PID Reading (ppm/ppb)
<u>4/5/19</u>	<u>1032</u>	<u>29</u>	<u>1200</u>
<u>↓</u>	<u>1102</u>	<u>~5</u>	<u>—</u>

Summa Canister Information:

Canister Size:	<u>1L</u>	<u>(6L)</u>
Canister ID#	<u>(22) 3474 933</u>	
Flow Controller ID#	<u>(22) 1184 0650</u>	

Sub-Slab Tests Passed?

Water Dam:	<u>Yes</u>	No
Shut-In:	<u>Yes</u>	No

General Notes/Observations:

Helium shroud test - passed
Soil gas probe, 1" beprobe w/
post-run tubing

Abbreviations:

NA = Not Applicable SB = Sub-Slab
 AI = Indoor Air AR = Outdoor Air

V-4

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Route to DNR Bureau:

Verification Only of Fill and Seal

Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County	WI Unique Well # of Removed Well	Hicap #
Dane		
Latitude / Longitude (see instructions)	Format Code	Method Code
_____ N	<input type="checkbox"/> DD	<input type="checkbox"/> GPS008
_____ W	<input type="checkbox"/> DDM	<input type="checkbox"/> SCR002
		<input type="checkbox"/> OTH001
1/4 1/4 NE 1/4 SE	Section	Township
or Gov't Lot #	35	7 N
		Range 9 <input checked="" type="checkbox"/> E
		<input type="checkbox"/> W
Well Street Address		
146 Deer Valley Road (Southdale Park)		
Well City, Village or Town		Well ZIP Code
Town of Madison		53713
Subdivision Name		Lot #

Facility Name		
BRRTS # 02-13-248222 Rimrock Road/Southdale Park		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner		
Wisconsin Department of Natural Resources		
Present Well Owner		
Same		
Mailing Address of Present Owner		
3911 Fish Hatchery Road		
City of Present Owner	State	ZIP Code
Fitchburg	WI	53711

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary soil gas boring	

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy)
<input type="checkbox"/> Water Well	4/5/2019
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug

Other (specify): Direct push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
10	1.5

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
1.5	8

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	Unknown

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	10	10#	

6. Comments

V-1

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)	Date Received	Noted By
Tony Kapugi, On-site Environmental Services, Inc.		4/5/2019		
Street or Route	Telephone Number	Comments		
P.O. Box 280	(608) 837-8992			
City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Sun Prairie	WI	53590	Anthony R. Kapugi	04/24/2019

Attachment C
Laboratory Report

April 22, 2019

Rob Langdon
SCS Engineers
2830 Dairy Dr.
Madison, WI 53718

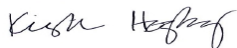
RE: Project: 25219095 WDNR Rimrock Rd
Pace Project No.: 10469953

Dear Rob Langdon:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kirsten Hogberg
kirsten.hogberg@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: Tony Kollasch, SCS Engineers



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25219095 WDNR Rimrock Rd

Pace Project No.: 10469953

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25219095 WDNR Rimrock Rd

Pace Project No.: 10469953

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10469953001	V-1	Air	04/05/19 09:45	04/08/19 10:05
10469953002	V-2	Air	04/05/19 10:06	04/08/19 10:05
10469953003	V-3	Air	04/05/19 10:40	04/08/19 10:05
10469953004	V-4	Air	04/05/19 11:02	04/08/19 10:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 25219095 WDNR Rimrock Rd

Pace Project No.: 10469953

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10469953001	V-1	TO-15	AFV	5	PASI-M
10469953002	V-2	TO-15	AFV	5	PASI-M
10469953003	V-3	TO-15	AFV, MJL	5	PASI-M
10469953004	V-4	TO-15	AFV, MJL	5	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25219095 WDNR Rimrock Rd

Pace Project No.: 10469953

Sample: V-1									
Lab ID: 10469953001									
Collected: 04/05/19 09:45									
Received: 04/08/19 10:05									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.37	ug/m3	1.4	0.37	1.68		04/18/19 13:44	156-59-2	
trans-1,2-Dichloroethene	<0.48	ug/m3	1.4	0.48	1.68		04/18/19 13:44	156-60-5	
Tetrachloroethene	63.5	ug/m3	1.2	0.53	1.68		04/18/19 13:44	127-18-4	
Trichloroethene	<0.43	ug/m3	0.92	0.43	1.68		04/18/19 13:44	79-01-6	
Vinyl chloride	<0.21	ug/m3	0.44	0.21	1.68		04/18/19 13:44	75-01-4	

Sample: V-2									
Lab ID: 10469953002									
Collected: 04/05/19 10:06									
Received: 04/08/19 10:05									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.38	ug/m3	1.4	0.38	1.75		04/18/19 14:42	156-59-2	
trans-1,2-Dichloroethene	<0.50	ug/m3	1.4	0.50	1.75		04/18/19 14:42	156-60-5	
Tetrachloroethene	115	ug/m3	1.2	0.55	1.75		04/18/19 14:42	127-18-4	
Trichloroethene	<0.45	ug/m3	0.96	0.45	1.75		04/18/19 14:42	79-01-6	
Vinyl chloride	<0.22	ug/m3	0.46	0.22	1.75		04/18/19 14:42	75-01-4	

Sample: V-3									
Lab ID: 10469953003									
Collected: 04/05/19 10:40									
Received: 04/08/19 10:05									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.38	ug/m3	1.4	0.38	1.75		04/18/19 15:11	156-59-2	
trans-1,2-Dichloroethene	<0.50	ug/m3	1.4	0.50	1.75		04/18/19 15:11	156-60-5	
Tetrachloroethene	12500	ug/m3	289	132	420		04/19/19 16:01	127-18-4	
Trichloroethene	1.3	ug/m3	0.96	0.45	1.75		04/18/19 15:11	79-01-6	
Vinyl chloride	<0.22	ug/m3	0.46	0.22	1.75		04/18/19 15:11	75-01-4	

Sample: V-4									
Lab ID: 10469953004									
Collected: 04/05/19 11:02									
Received: 04/08/19 10:05									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.38	ug/m3	1.4	0.38	1.75		04/18/19 15:40	156-59-2	
trans-1,2-Dichloroethene	<0.50	ug/m3	1.4	0.50	1.75		04/18/19 15:40	156-60-5	
Tetrachloroethene	3570	ug/m3	145	65.9	210		04/19/19 15:36	127-18-4	
Trichloroethene	2.9	ug/m3	0.96	0.45	1.75		04/18/19 15:40	79-01-6	
Vinyl chloride	<0.22	ug/m3	0.46	0.22	1.75		04/18/19 15:40	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25219095 WDNR Rimrock Rd
Pace Project No.: 10469953

QC Batch: 600318 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10469953001, 10469953002, 10469953003, 10469953004

METHOD BLANK: 3245200 Matrix: Air
Associated Lab Samples: 10469953001, 10469953002, 10469953003, 10469953004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.11	0.40	04/18/19 10:20	
Tetrachloroethene	ug/m3	<0.16	0.34	04/18/19 10:20	
trans-1,2-Dichloroethene	ug/m3	<0.14	0.40	04/18/19 10:20	
Trichloroethene	ug/m3	<0.13	0.27	04/18/19 10:20	
Vinyl chloride	ug/m3	<0.063	0.13	04/18/19 10:20	

LABORATORY CONTROL SAMPLE: 3245201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	40.3	47.6	118	70-130	
Tetrachloroethene	ug/m3	68.9	76.8	111	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	47.3	117	70-130	
Trichloroethene	ug/m3	54.6	60.5	111	70-130	
Vinyl chloride	ug/m3	26	27.4	105	70-130	

SAMPLE DUPLICATE: 3246389

Parameter	Units	10469953001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.37	<0.37			25
Tetrachloroethene	ug/m3	63.5	64.1	1		25
trans-1,2-Dichloroethene	ug/m3	<0.48	<0.48			25
Trichloroethene	ug/m3	<0.43	<0.43			25
Vinyl chloride	ug/m3	<0.21	<0.21			25

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25219095 WDNR Rimrock Rd

Pace Project No.: 10469953

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25219095 WDNR Rimrock Rd
Pace Project No.: 10469953

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10469953001	V-1	TO-15	600318		
10469953002	V-2	TO-15	600318		
10469953003	V-3	TO-15	600318		
10469953004	V-4	TO-15	600318		

REPORT OF LABORATORY ANALYSIS

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AIR: CHAIN-OF-CUSTODY
The Chain-of-Custody is a LEGAL DOCUMENT. All rel

WO#: 10469953



Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		35439		Page: 1 of 1	
Company: SCS Engineers		Report To: Robert Langdon		Attention: Robert Langdon		Program			
Address: 2060 Dairy Drive Madison WI 53716		Copy To:		Company Name: SCS Engineers		<input type="checkbox"/> UST <input type="checkbox"/> Superfund <input type="checkbox"/> Emissions <input type="checkbox"/> Clean Air Act <input type="checkbox"/> Voluntary Clean Up <input type="checkbox"/> Dry Clean <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> Other			
Email To: rlangdon@scsengineers.com		Purchase Order No.:		Address: Same		Location of Sampling by State: WI		Reporting Units: <input checked="" type="checkbox"/> ug/m ³ <input type="checkbox"/> mg/m ³ <input type="checkbox"/> PPBV <input type="checkbox"/> PPMV Other:	
Phone: 608-266-7329 Fax:		Project Name: WDWK Rimrock Rd		Pace Quote Reference:		Report Level: II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> Other <input type="checkbox"/>			
Requested Due Date/TAT:		Project Number: 25219095		Pace Project Manager/Sales Rep.					
				Pace Profile #: 32630					

ITEM #	Section D Required Client Information		Valid Media Codes MEDIA CODE	COMPOSITE START	COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number				Flow Control Number				Method:	Pace Lab ID					
	AIR SAMPLE ID				DATE		TIME				COMPOSITE - END/GRAB		TO-15 Full List VOCs		TO-15 Short List VOCs		TO-15 Short List Chlorinated				TO-15 Short List Other				
	Sample IDs MUST BE UNIQUE				DATE	TIME	DATE	TIME			TO-3 BTEX		TO-14		TO-15 Short List VOCs		TO-15 Short List Chlorinated				TO-15 Short List Other				
1	V-1		GC	4/5/19	9:15	4/5/19	9:45	28	25	3	5	6	8	10	02					X	001				
2	V-2		GC		9:36		10:06	29	7	2	7	5	3	0	9	4	1					X	002		
3	V-3		GC		10:10		10:40	29	8	3	4	7	4	1	1	8	4						X	003	
4	V-4		GC		10:32		11:02	29	25	0	9	3	3	0	6	5	0							X	004

Comments:
* Analyze for PCB, TOC
cis 12 DCE, Trans 12 DCE,
and vinyl chloride

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Robert Langdon / SCS	4/5/19	1300	[Signature]	4/8/19	1005	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Robert Langdon
SIGNATURE of SAMPLER: [Signature]
DATE Signed (MM/DD/YY): 4/5/19

ORIGINAL



Document Name:
Air Sample Condition Upon Receipt

Document No.:
F-MN-A-106-rev.18

Document Revised: 31Jan2019
Page 1 of 1
Issuing Authority:

Air Sample Condition Upon Receipt

Client Name: SCS Engineers

Project #:

WO#: 10469953

PM: CT1

Due Date: 04/15/19

CLIENT: SCS Engineer

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exception

Tracking Number: 9545 99110677

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Tin Can Other: _____ Temp Blank rec: Yes No

Temp. (TO17 and TO13 samples only) (°C): _____ Corrected Temp (°C): _____ Thermometer Used: G87A9170600254 G87A9155100842

Temp should be above freezing to 6°C Correction Factor: _____ Date & Initials of Person Examining Contents: r 4/8/19

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Media: <u>Air Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <u>N</u> (list which samples)
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
Do cans need to be pressurized (3C and ASTM 1946 DO NOT PRESSURIZE)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13.

Samples Received: _____ Pressure Gauge # 10AIR34 10AIR35

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
<u>1</u>	<u>3568</u>	<u>1002</u>	<u>-6</u>	<u>3</u>					
<u>2</u>	<u>2753</u>	<u>0941</u>	<u>-7</u>	<u>"</u>					
<u>3</u>	<u>3474</u>	<u>1184</u>	<u>-7</u>	<u>"</u>					
<u>4</u>	<u>0933</u>	<u>0658</u>	<u>-7</u>	<u>"</u>					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review:

Kirsten Hofer

Date: 4/9/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect container)



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers
 Phone: 843.746.8525
 Lab Sample No: 10469953001
 Client Sample ID: V-1

Lab Project Number: 10469953
 Project Name: 25219095 WDNR Rimrock Rd
 ProjSampleNum: 10469953001
 Matrix: Air
 Date Collected: 04/05/19 9:45
 Date Received: 04/08/19 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-15							
cis-1,2-Dichloroethene	<0.092	ppbv	0.35	1.68	04/18/19 13:44 AFV	156-59-2	
Tetrachloroethene	9.2	ppbv	0.17	1.68	04/18/19 13:44 AFV	127-18-4	
trans-1,2-Dichloroethene	<0.12	ppbv	0.35	1.68	04/18/19 13:44 AFV	156-60-5	
Trichloroethene	<0.079	ppbv	0.17	1.68	04/18/19 13:44 AFV	79-01-6	
Vinyl chloride	<0.081	ppbv	0.17	1.68	04/18/19 13:44 AFV	75-01-4	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers
 Phone: 843.746.8525
 Lab Sample No: 10469953002
 Client Sample ID: V-2

Lab Project Number: 10469953
 Project Name: 25219095 WDNR Rimrock Rd
 ProjSampleNum: 10469953002
 Matrix: Air
 Date Collected: 04/05/19 10:06
 Date Received: 04/08/19 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-15							
cis-1,2-Dichloroethene	<0.094	ppbv	0.35	1.75	04/18/19 14:42	AFV 156-59-2	
Tetrachloroethene	16.7	ppbv	0.17	1.75	04/18/19 14:42	AFV 127-18-4	
trans-1,2-Dichloroethene	<0.12	ppbv	0.35	1.75	04/18/19 14:42	AFV 156-60-5	
Trichloroethene	<0.082	ppbv	0.18	1.75	04/18/19 14:42	AFV 79-01-6	
Vinyl chloride	<0.085	ppbv	0.18	1.75	04/18/19 14:42	AFV 75-01-4	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers
 Phone: 843.746.8525
 Lab Sample No: 10469953003
 Client Sample ID: V-3

ProjSampleNum: 10469953003
 Matrix: Air

Lab Project Number: 10469953
 Project Name: 25219095 WDNR Rimrock Rd
 Date Collected: 04/05/19 10:40
 Date Received: 04/08/19 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-15							
cis-1,2-Dichloroethene	<0.094	ppbv	0.35	1.75	04/18/19 15:11	AFV 156-59-2	
Tetrachloroethene	1810	ppbv	41.9	420	04/19/19 16:01	MJL 127-18-4	
trans-1,2-Dichloroethene	<0.12	ppbv	0.35	1.75	04/18/19 15:11	AFV 156-60-5	
Trichloroethene	0.24	ppbv	0.18	1.75	04/18/19 15:11	AFV 79-01-6	
Vinyl chloride	<0.085	ppbv	0.18	1.75	04/18/19 15:11	AFV 75-01-4	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers
 Phone: 843.746.8525

Lab Project Number: 10469953
 Project Name: 25219095 WDNR Rimrock Rd

Lab Sample No: 10469953004
 Client Sample ID: V-4

ProjSampleNum: 10469953004
 Matrix: Air

Date Collected: 04/05/19 11:02
 Date Received: 04/08/19 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-15							
cis-1,2-Dichloroethene	<0.094	ppbv	0.35	1.75	04/18/19 15:40 AFV	156-59-2	
Tetrachloroethene	518	ppbv	21	210	04/19/19 15:36 MJL	127-18-4	
trans-1,2-Dichloroethene	<0.12	ppbv	0.35	1.75	04/18/19 15:40 AFV	156-60-5	
Trichloroethene	0.53	ppbv	0.18	1.75	04/18/19 15:40 AFV	79-01-6	
Vinyl chloride	<0.085	ppbv	0.18	1.75	04/18/19 15:40 AFV	75-01-4	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



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ANALYTICAL RESULTS

Client: SCS Engineers
Phone: 843.746.8525

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Project Name: 25219095 WDNR Rimrock Rd

PARAMETER FOOTNOTES

SUPPLEMENTAL REPORT

Units Conversion Request

Date: 4/22/2019

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