

April 19, 2022
File No. 25216186.00

Mr. Paul Grittner
Wisconsin Department of Natural Resources
141 NW Barstow Street, Room 180
Waukesha, WI 53188

Subject: Addendum to Site Investigation Report
Arctic Laundry & Cleaners (former)
5619 22nd Avenue, Kenosha, Wisconsin
BRRS #02-30-245843

Dear Mr. Grittner:

SCS Engineers (SCS) is providing additional information requested in your April 4, 2022 email for the above-noted Arctic Laundry & Cleaners case. The information you requested is shown in bold italics below followed by our response.

A map showing where sub-slab pressure readings were measured to determine the effectiveness of sub-slab vapor mitigation and a table summarizing these readings.

A map showing where sub-slab pressure readings were measured is provided as **Figure 1**. Sub-slab vacuum measurements are summarized in **Table 1**.

A discussion on whether the high watertable will affect the operation of the sub-slab vapor mitigation system. Was water observed under the slab when the system was installed? Will dewatering be required to ensure the system continues to operate effectively?

The vapor mitigation system (VMS) appears to be operating as intended with infrequent disruptions due to surface water infiltration into the basement. The owner, Mr. John Ekornaas, has previously explained that water gets into the basement approximately 2 to 3 times each year following heavy rainfall. One such event occurred October 1 through October 2, 2019, when over 2 inches of rainfall fell within a 48-hour period according to National Oceanic & Atmospheric Administration (NOAA) climatological data for the Kenosha Waste Water Treatment Plant (WWTP) weather station. During this event, the vapor mitigation system fan continued to operate and produce vacuum at the pickup points, but the corresponding sub-slab pressure field extension was limited due to sub-slab moisture as observed by SCS on October 2, 2019. Photos of the basement on October 2, 2019, are provided in **Attachment A**.

The site elevation according to the Kenosha County Interactive Mapping System is approximately 624 feet above mean sea level (amsl). The depth of the basement is approximately 7 feet below ground surface (bgs) and the average depth to groundwater for monitoring wells near the building (MW-1 and MW-3) is approximately 8 feet bgs or 616 feet amsl.

When SCS was on site for VMS installation in November 2018, the highest historic water level for well MW-3 (617.30 feet amsl or approximately 6.7 feet bgs) had been observed the prior month.



However, during this November 2018 site visit the basement floor appeared dry and neither SCS nor the mitigation contractor (Allis Environmental Services, [AES]) recall there being water in the sub-slab during construction of the VMS pickup points. Subsequent pressure field extension (PFE) testing one week later showed very good sub-slab vacuum distribution from the VMS, indicating the sub-slab was not water-saturated.

Based on the above, we do not believe that the water table at the site is affecting the operation of the VMS or that a dewatering system is necessary. While there may be infrequent disruptions to the VMS during extreme weather events that result in excess water in the basement, we anticipate that those events will be limited in frequency and only temporarily affect the VMS. Further, long-term operation and maintenance of a groundwater dewatering system may not address the infrequent disruptions due to extreme wet weather events and is not practicable as it would likely require the construction of multiple dewatering points and treatment of extracted groundwater due to the presence of chlorinated volatile organic compounds.

A site figure that identifies where the sump discharge pipe is located and where the discharge water flows to. Also confirm whether the sump water has been analyzed and discuss the potential for the sump discharge to impact areas outside the building.

Photos of the sump and discharge piping were provided in our March 24, 2017 update. The sump location and piping are shown on attached **Figure 1**. The sump water has not been sampled. Other than the original tetrachloroethene (PCE) spill in 1994, SCS is not aware of any other significant discharges to the sump that would have impacted areas outside the building.

The sump is located in the middle of the basement floor, and according to our prior communications with Mr. Ekornaas, has a solid bottom without a drain. The sump pump is connected to a plastic pipe which runs overhead to the east side of the building.

Based on our initial conversations with Mr. Ekornaas, and as discussed with former Wisconsin Department of Natural Resources (WDNR) project manager Doug Ciezlak on January 26, 2017, it was assumed that the sump discharged to the sanitary sewer. Based on further inspection and as summarized in our above-noted March 2017 update, the sump pump appears instead to discharge to the ground surface outside the east end of the building.

Prior to installing the VMS, SCS observed two pipes which appeared to discharge into the sump. These included a PVC pipe which drains a sink that's located to the east of the sump, and a smaller PVC pipe, which runs up the wall behind the sump and then overhead to the east. This second pipe appears to be a condensate line potentially originating from the restaurant on the first floor and may no longer be active. There is an approximate 2-inch-diameter opening through the wall of the sump just below the sump rim, which appears to drain some other feature, such as a floor drain or drain tile. However, SCS has not observed any floor drains in the basement and it seems that drain tile, if present, would enter the sump at a lower elevation.

AES determined there would be vacuum loss through the sump from the VMS, so they sealed a lid to the sump and sealed the above-noted pipes and sump discharge pipe into the lid. AES added water traps to the sink and above-noted condensate line to prevent vacuum loss through the pipes and sump. AES also installed a VMS condensate trap using a clear plastic hose and sealed the hose through the sump lid.

In September 2019, AES removed the VMS condensate line from the lid and sealed it through the concrete floor slab next to the sump so that if condensate were generated from the VMS, it would drain back into the sub-slab.

Notification letters provided to off-site owner regarding 2018 sample results. Explain how building residents of the former Arctic building are notified of the results.

The 2018 notification letters regarding indoor air sampling at 5605 22nd Avenue and 5621/5625 22nd Avenue were sent by Stafford Rosenbaum, LLP by certified mail and are included in **Attachment B**.

From communications with Stafford Rosenbaum, we understand that Mr. Ekornaas was the occupant of source property Units #1 and #2. We also understand that Mr. Ekornaas did not provide the names of occupants of units #3 or #4, and that these units were only occupied periodically. We also understand that Mr. Ekornaas indicated he would provide the tenants in Units #3 and #4 with sampling results. Results regarding sampling at the source property are also sent to Mr. Ekornaas, commercial space tenants, and the occupants of Units #3 and #4 via certified mail.

A description of where the indoor air samples were collected within the buildings and why these locations were chosen. Explain why the samples are considered to be representative of conditions on the floor where they were collected.

Indoor air samples locations are shown on **Figure 1** and revised Site Investigation Report (SIR) **Figures 2** and **8**. The indoor air sample locations were selected based on accessibility and communication with the owners and tenants. The sample canisters were placed away from windows, doors, or vents to the extent practical in order to limit influence from outdoor air. The samples were collected over multiple seasons, including the “heating season” where windows and doors are typically closed and there’s a higher risk of vapor intrusion.

Commercial space first floor indoor air sample canisters were placed within active businesses including a bar, liquor store, and restaurant. To avoid tampering with or theft of the canisters, these canisters were placed in areas generally out of customer access, but in relatively open areas such that it is assumed the samples are representative of the entire first floor.

Second floor residential sample canisters for 5605 and 5619 22nd Avenue buildings were placed within communal spaces rather than inside the multiple individual units due to access limitations. The locations are considered representative of air quality on the entire second floor since there does not appear to be a central air system or another mechanism which would redistribute or dilute air from one area to the next.

The basement indoor air samples are considered the most telling in terms of identifying potential indoor air issues resulting from vapor intrusion. It is expected that if vapor were to enter the building it would be through the basement and as noted above, there does not appear to be a central air system which would redistribute air from one level of the building to the next. Repeated sampling has shown no exceedances for commercial basement space, first floor commercial space, or third floor residential space. As a precaution, the VMS will be maintained and continue to minimize the potential for vapor intrusion into the building.

The maintenance plan for the vapor mitigation system if you would like DNR input on it before it is submitted with a closure request.

A vapor mitigation system maintenance plan is provided in **Attachment C** for your review.

Feel free to contact Robert Langdon of SCS at (608) 212-3995 or rlangdon@scsengineers.com if you have questions concerning this letter.

Sincerely,



Robert Langdon
Project Manager
SCS Engineers



Jacob Krause, PG
Project Hydrogeologist
SCS Engineers

REL/REO/JJK

cc: Vanessa Wishart, Stafford Rosenbaum, LLP

Attachments: Table 1 – Pressure Field Extension Testing Summary
Figure 1 – Vapor Mitigation System – 5619 22nd Ave., Kenosha, WI
Figure 2 – Site Features Map
Figure 8 – Vapor Results
Attachment A – Photos of Water in Basement
Attachment B – 2018 Notification Letters
Attachment C – Vapor Mitigation System Maintenance Plan

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Tables

- 1 Pressure Field Extension Testing Summary

Table 1. Pressure Field Extension Testing Results
Former Arctic Laundry & Cleaners - 5619 22nd Ave. Kenosha, WI / SCS Engineers Project #25216186.00

Date	Pickup Points	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	Notes
11/21/2018	-3.5	AB	-0.204	-0.613	-0.008	-0.012	-0.791	Vapor mitigation system constructed 11/14/2018
10/2/2019	-3.5	AB	+0.05	NM	+0.001	+0.285	NA	Basement flooded from heavy rains starting 10/1/2019, SS-3 saturated. Owner covered SS-6 with materials.
4/22/2021	-3.8	AB	-0.224	-0.480	-0.008	-0.012	-0.733	--
Performance Standard	0.004	0.004	0.004	0.004	0.004	0.004	0.004	--

Abbreviations:
 AB = Abandoned NM = Not Measured NA = Not Accessible -- = Not Applicable

Notes:
 Vacuums in inches of water.
 Pickup vacuums from manometer on northern pickup point. All other vacuum points measured using digital manometer.
 Performance standard from Wisconsin Department of Natural Resources January 2018 RR-800 vapor intrusion guidance document, Appendix D Commissioning Guidelines for Active Depressurization Systems.

Created by: REL Date: 4/4/2022
 Last Rev by: REL Date: 4/4/2022
 Checked by: JSN Date: 4/14/2022
 Proj Mgr QA/QC: REL Date: 4/14/2022

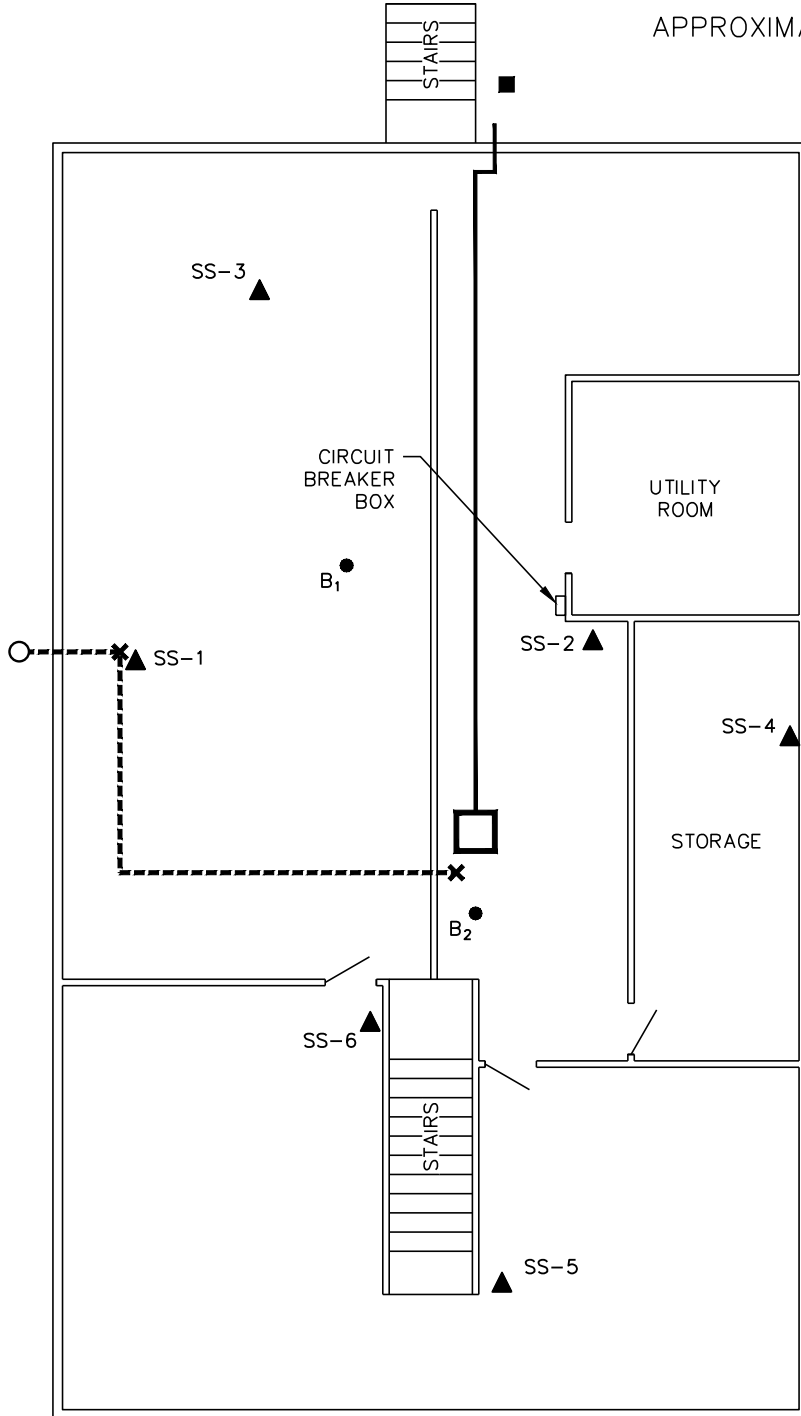
I:\25216186.00\Data and Calculations\Tables\[Table 1_Pressure Field Extension Testing Summary.xlsx]Vapor Intrusion

Figures

- 1 Vapor Mitigation System – 5619 22nd Ave.,
Kenosha, WI
- 2 Site Features Map
- 8 Vapor Results



APPROXIMATE SCALE: 1" = 10'



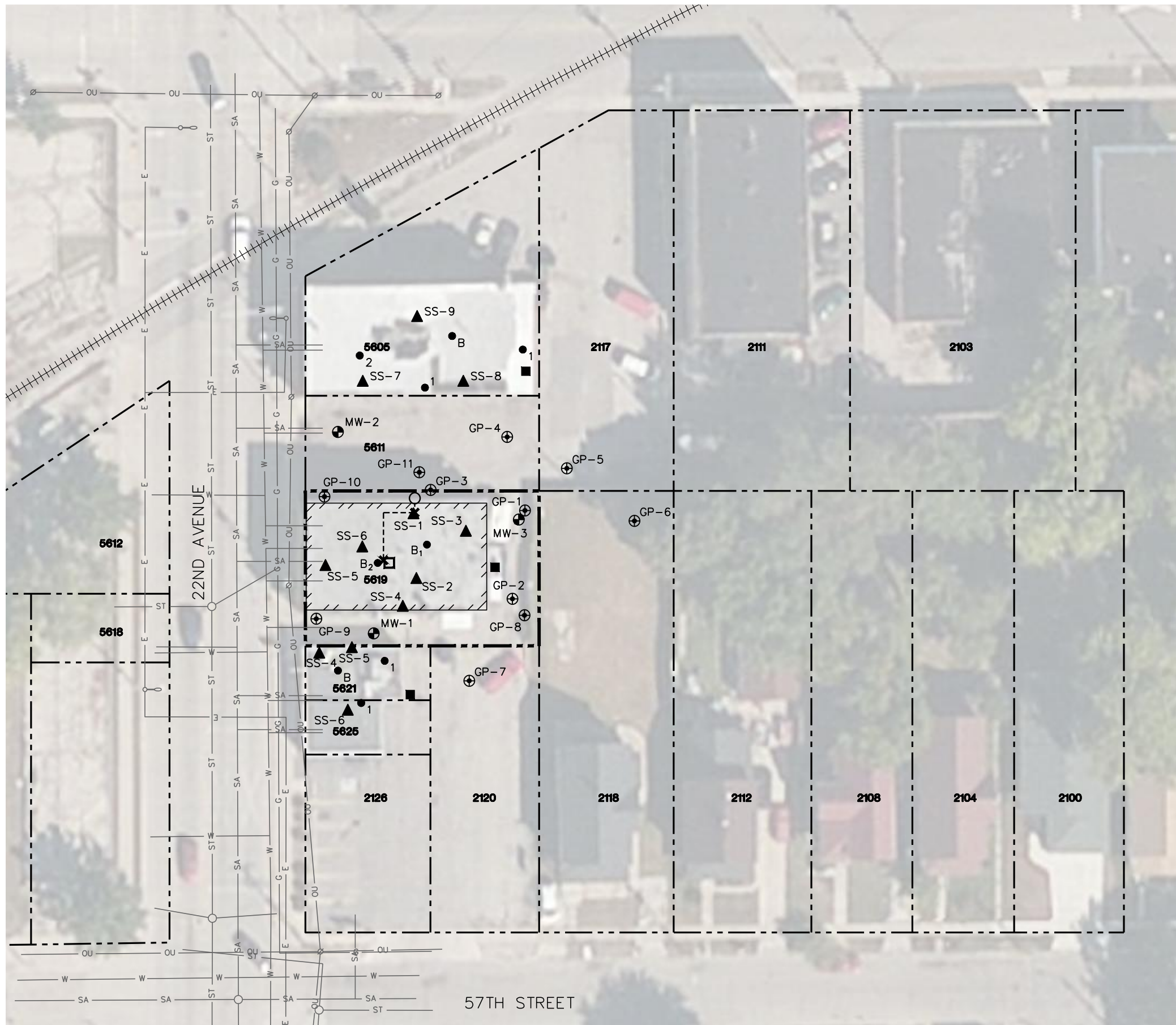
APPROXIMATE PROPERTY LINE

LEGEND

- SUMP
 - SUB-SLAB VAPOR/VACUUM OBSERVATION POINT
 - INDOOR AMBIENT AIR TESTING LOCATION
 - OUTDOOR AIR SAMPLE
 - VAPOR MITIGATION SYSTEM PICKUP POINT
 - VAPOR MITIGATION SYSTEM PIPING
 - VAPOR MITIGATION SYSTEM FAN/EXHAUST
 - SUMP DISCHARGE LINE
- B₁ 02/17/2017
B₂ 04/23/2021

CLIENT	STAFFORD ROSENBAUM, LLP. 222 WEST WASHINGTON AVENUE MADISON, WI 53701	CLIENT	ARCTIC LAUNDRY AND CLEANERS 5619 22ND AVENUE KENOSHA, WISCONSIN	ENGINEER	VAPOR MITIGATION SYSTEM 5619 22ND AVE., KENOSHA, WI	FIGURE 1
	PROJECT NO. 25216186.00		DRAWN BY: BWM		APPROVED BY: REL 04/07/2022	
	DRAWN: 04/06/2022		CHECKED BY: REL			
	REVISED:		APPROVED BY: REL 04/07/2022			

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- LEGEND
- APPROXIMATE PROPERTY LINE (5619 22ND AVENUE)
 - APPROXIMATE PROPERTY LINE
 - 5619** PROPERTY ADDRESS NUMBER
 - RAILROAD TRACKS
 - ELECTRIC (BURIED)
 - ELECTRIC (OVERHEAD)
 - GAS MAIN
 - SANITARY SEWER
 - STORM SEWER
 - WATER MAIN
 - UTILITY POLE
 - STREET LIGHT
 - SUMP
 - GEOPROBE BORING
 - MONITORING WELL
 - SUB-SLAB VAPOR/VACUUM OBSERVATION POINT
 - INDOOR AIR SAMPLE [BASEMENT (B), FIRST FLOOR (1), SECOND FLOOR (2)]
 - OUTDOOR AIR SAMPLE
 - VAPOR MITIGATION SYSTEM PIPING
 - VAPOR MITIGATION SYSTEM PICK-UP POINT
 - VAPOR MITIGATION SYSTEM FAN
 - B₁ 02/17/2017
 - B₂ 04/23/2021

- NOTES:
1. AERIAL PHOTOGRAPH IMPORTED FROM BING MAPS USING AUTOCAD 2016 GEOLOCATION MAP TOOL.
 2. UTILITY LOCATIONS ARE APPROXIMATE, BASED ON 22ND AVENUE STORM SEWER AND LIGHTING DRAWING PROVIDED BY THE CITY OF KENOSHA (STATE PROJECT NO. 3994-03-70, SHEET 2.5).
 3. SAMPLE LOCATIONS ARE APPROXIMATE.
- 40 0 40
-
- SCALE: 1" = 40'

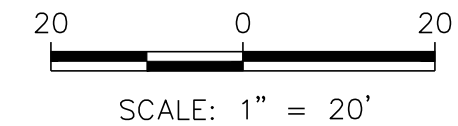
CLIENT	STAFFORD ROSENBAUM, LLP. 222 WEST WASHINGTON AVENUE MADISON, WI 53701		
	PROJECT NO.	25216186.00	
SITE	ARCTIC LAUNDRY AND CLEANERS 5619 22ND AVENUE KENOSHA, WISCONSIN		
	DRAWN BY:	KP/BWM	ENGINEER
FIGURE	SITE FEATURES MAP		
	DRAWN:	10/20/2016	2
SCS ENGINEERS	2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830		
	REVISD:	04/07/2022	PHONE: (608) 224-2830

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- LEGEND
- APPROXIMATE PROPERTY LINE (5619 22ND AVENUE)
 - APPROXIMATE PROPERTY LINE
 - 5619** PROPERTY ADDRESS NUMBER
 - RAILROAD TRACKS
 - ELECTRIC (BURIED)
 - ELECTRIC (OVERHEAD)
 - GAS MAIN
 - SANITARY SEWER
 - STORM SEWER
 - WATER MAIN
 - UTILITY POLE
 - STREET LIGHT
 - SUMP
 - SUB-SLAB VAPOR/VACUUM OBSERVATION POINT
 - INDOOR AIR SAMPLE [BASEMENT (B), FIRST FLOOR (1), SECOND FLOOR (2)]
 - OUTDOOR AIR SAMPLE
 - 973** VAPOR TETRACHLOROETHENE (PCE) SAMPLE RESULTS (ppbV)
 - ESTIMATED EXTENT OF SUB-SLAB VAPOR CONCENTRATIONS GREATER THAN VAPOR RISK SCREENING LEVELS
- | | |
|----------------|------------|
| B ₁ | 02/17/2017 |
| B ₂ | 04/23/2021 |

NOTES:
1. SEE FIGURE 2 FOR BASE MAP NOTES.



CLIENT	STAFFORD ROSENBAUM, LLP, 222 WEST WASHINGTON AVENUE MADISON, WI 53701	PROJECT NO. 25216186.00	DRAWN BY: 03/01/2022	CHECKED BY: 04/07/2022	APPROVED BY:	ENGINEER	VAPOR RESULTS	FIGURE	8
	ARCTIC LAUNDRY AND CLEANERS 5619 22ND AVENUE KENOSHA, WISCONSIN							SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	

Attachment A

Photos of Water in Basement

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 1: Looking west from near center south side of basement.

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 2: Looking west in basement at northern vapor mitigation system pickup point.

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 3: Looking east at east side entrance to basement.

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 4: Looking at northeast corner of basement.

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 5: Looking at sub-slab port SS-3 at northeast corner of basement.

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 6: Looking west along south side of basement.

Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00



Photo 7: Looking at basement sump lid and southern vapor mitigation system pickup point. Owner had unsealed and removed sump lid. Floor is dry near sump.

**Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00**



Photo 8: Looking east from south center of basement.

**Photos of Water in Basement, Former Arctic Laundry & Cleaners
5619 22nd Avenue, Kenosha, WI
October 2, 2019 / SCS Engineers Project #25216186.00**



Photo 9: Looking at utility room near southeast corner of basement.

Attachment B
2018 Notification Letters

Vanessa D. Wishart

222 West Washington Avenue, Suite 900
P.O. Box 1784
Madison, WI 53701-1784
vwishart@staffordlaw.com
608.210.6307

March 1, 2018

BY CERTIFIED U.S. MAIL

Mr. John Ekornaas
5605 22nd Avenue
Kenosha, WI 53140

RE: Vapor Sampling Results

Dear Mr. Ekornaas:

As part of the ongoing investigation of environmental contamination at the former Arctic Laundry & Cleaners site, 5619 22nd Avenue, Kenosha, Wisconsin, SCS Engineers conducted vapor sampling at your property in January 2018. These samples were submitted to Test America for laboratory analysis for volatile organic compounds (VOCs) including Tetrachloroethene (PCE) and Trichloroethene (TCE).

The analysis found **no detections** of VOCs in the indoor or outdoor air samples. TCE and/or PCE was detected in the sub-slab samples but at concentrations that did **not** exceed the vapor risk screening levels established by the Wisconsin Department of Natural Resources (DNR) for either commercial or residential buildings.

Based on these results, we do not anticipate further testing at your property at this time. It is possible that may change based on additional communication with the DNR. If that is the case, we will alert you of potential additional testing.

If you have questions about the results or next steps, please contact me.

Best regards,

STAFFORD ROSENBAUM LLP



Vanessa D. Wishart

VDW:mai
Enclosures

Madison Office

222 West Washington Avenue
P.O. Box 1784
Madison, Wisconsin
53701-1784
608.256.0226
888.655.4752
Fax 608.259.2600
www.staffordlaw.com

Milwaukee Office

1200 North Mayfair Road
Suite 430
Milwaukee, Wisconsin
53226-3282
414.982.2850
888.655.4752
Fax 414.982.2889
www.staffordlaw.com

Table 3. Indoor Air Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
5605 Basement	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 2nd Floor	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Outdoor	1/25/2018	--	<0.059	<0.071	<0.12	<0.1	<0.069
5605 Bar	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Liquor Store	1/25/2018	--	<0.067	<0.079	<0.14	<0.12	<0.077
5619 Former Arctic Laundry & Cleaners							
5619 Basement	2/7/2017	--	5.6	1	5	<0.15	<0.12
5619 1st Floor	2/7/2017	--	1.3	0.31	1.2	<0.15	<0.12
5619 2nd Floor	2/7/2017	--	1.1	0.22	0.84	<0.16	<0.13
5619 Outdoor	2/7/2017	--	1.8	<0.075	<0.092	<0.14	<0.11
5621/5625 Pa's Pizzeria							
5621 Basement	1/24/2018	--	<0.064	<0.075	<0.13	<0.11	<0.073
5621 1st Floor	1/24/2018	--	<0.061	<0.071	<0.12	<0.11	<0.069
5621 Outdoor	1/24/2018	--	<0.062	<0.073	<0.13	<0.11	<0.073
5625 Storage	1/24/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
Indoor Air Vapor Action Level (Residential Building)			6.2	0.39	NE	NE	0.65
Indoor Air Vapor Action Level (Commercial Building)			27	1.6	NE	NE	11

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
SS-7	1/25/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-8	1/25/2018	--	5.2	0.22	<0.15	<0.13	<0.089
SS-9	1/25/2018	--	1.9	<0.099	<0.17	<0.15	<0.096
5619 Former Arctic Laundry & Cleaners							
SS-1	2/7/2017	--	418,000 A3, E	1,290 A3	5.7	5.8	<0.14
SS-2	2/7/2017	--	973	66.5	1.7	11.8	<0.13
SS-3	2/7/2017	--	26,100 A3	86.4 A3	1.4	0.5	<0.14
5621/5625 Pa's Pizzeria							
SS-4	1/24/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-5	1/24/2018	--	0.78	<0.1	<0.17	<0.15	<0.1
SS-6	1/24/2018	--	0.2	<0.092	<0.16	<0.14	<0.092
Vapor Risk Screening Level (Residential Building)			210	13	NE	NE	22
Vapor Risk Screening Level (Small Commercial Building)			900	53	NE	NE	370

Abbreviations:

ppbV = parts per billion by volume

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

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

NE = not established

-- = not applicable

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00

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:

A3 = The sample was analyzed by serial dilution.

E = Analyte concentration exceeded the calibration range. The reported result is estimated.

Created by:	<u>LMH</u>	Date:	<u>2/24/2017</u>
Last revision by:	<u>LMH</u>	Date:	<u>2/13/2018</u>
Checked by:	<u>AJR</u>	Date:	<u>2/14/2018</u>

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Understanding Chemical Vapor Intrusion Testing Results

RR-977

October 2014

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

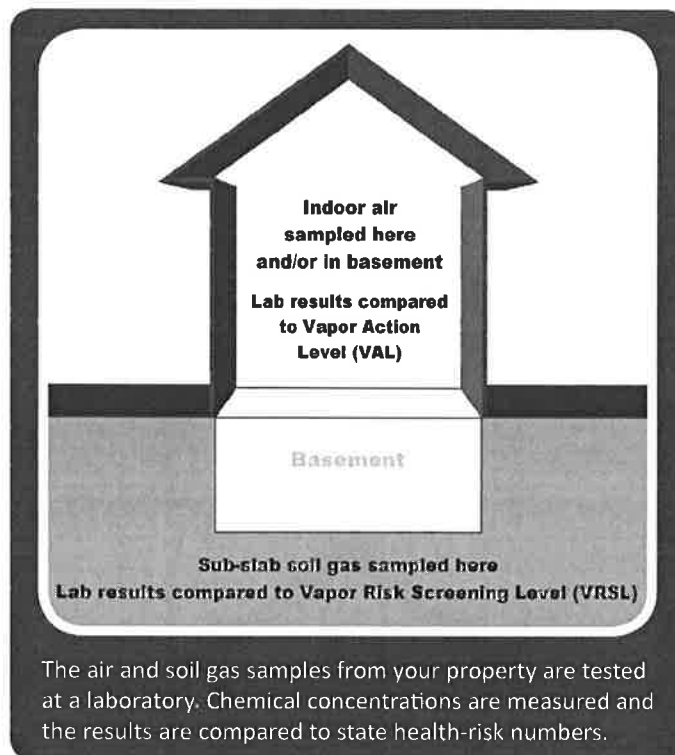
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



The air and soil gas samples from your property are tested at a laboratory. Chemical concentrations are measured and the results are compared to state health-risk numbers.

Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

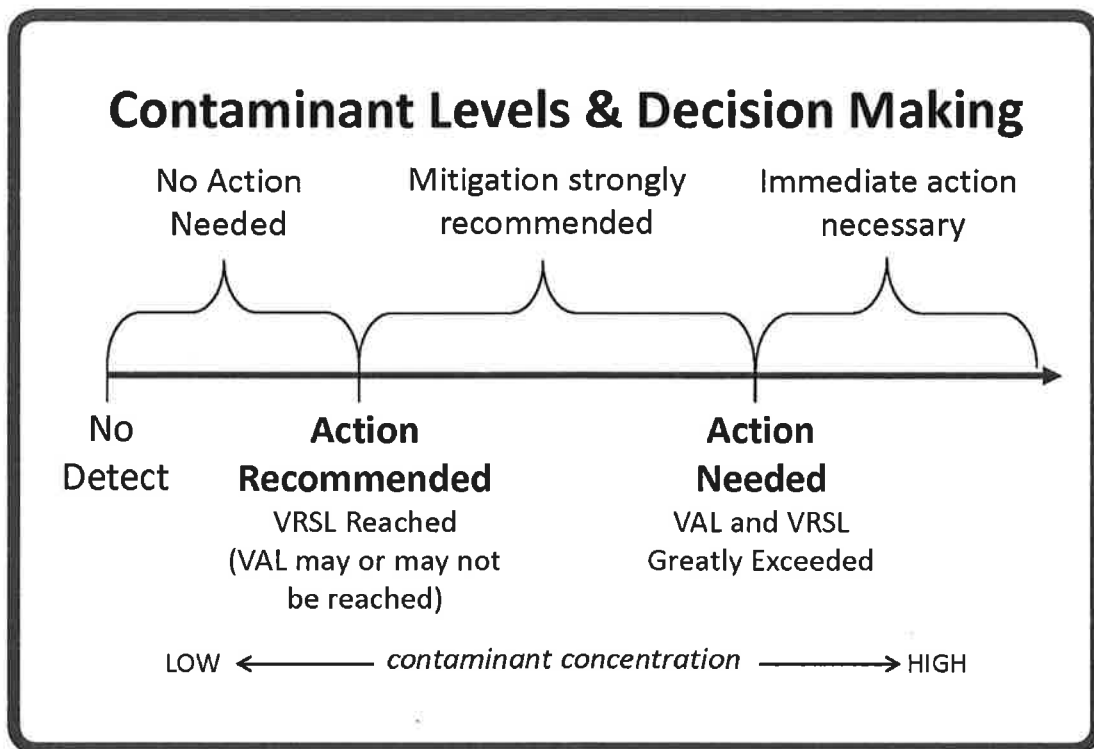
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as "screening levels."

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.

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 City, State, ZIP+4® Kenosha WI 53140

PS Form 3800, April 2015 PSN 7530-02-000-9047

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Mr. John Ekornaas
5605 - 22nd Avenue
Kenosha, WI 53140



9590 9402 3215 7196 5843 13

2. Article Number (Transfer from service label)

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 Addressee

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PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

Vanessa D. Wishart

222 West Washington Avenue, Suite 900
P.O. Box 1784
Madison, WI 53701-1784
vwishart@staffordlaw.com
608.210.6307

March 1, 2018

BY CERTIFIED U.S. MAIL

Ms. Mary Lynn Dudeck or Current Owner
5621 22nd Avenue
Kenosha, WI 53140

Ms. Mary Lynn Dudeck or Current Owner
5625 22nd Avenue
Kenosha, WI 53140

RE: Vapor Sampling Results

Dear Ms. Dudeck or current property owner:

As part of the ongoing investigation of environmental contamination at the former Arctic Laundry & Cleaners site, 5619 22nd Avenue, Kenosha, Wisconsin, SCS Engineers conducted vapor sampling at your property in January 2018. These samples were submitted to Test America for laboratory analysis for volatile organic compounds (VOCs) including Tetrachloroethene (PCE) and Trichloroethene (TCE).

The analysis found **no detections** of VOCs in the indoor or outdoor air samples. PCE was detected in the sub-slab samples but at concentrations that did **not** exceed the vapor risk screening levels established by the Wisconsin Department of Natural Resources (DNR) for either commercial or residential buildings.

Based on these results, we do not anticipate further testing at your property at this time. It is possible that may change based on additional communication with the DNR. If that is the case, we will alert you of potential additional testing.

If you have questions about the results or next steps, please contact me.

Best regards,

STAFFORD ROSENBAUM LLP


Vanessa D. Wishart

VDW:mai
Enclosures

Madison Office

222 West Washington Avenue
P.O. Box 1784
Madison, Wisconsin
53701-1784
608.256.0226
888.655.4752
Fax 608.259.2600
www.staffordlaw.com

Milwaukee Office

1200 North Mayfair Road
Suite 430
Milwaukee, Wisconsin
53226-3282
414.982.2850
888.655.4752
Fax 414.982.2889
www.staffordlaw.com

Table 3. Indoor Air Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
5605 Basement	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 2nd Floor	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Outdoor	1/25/2018	--	<0.059	<0.071	<0.12	<0.1	<0.069
5605 Bar	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Liquor Store	1/25/2018	--	<0.067	<0.079	<0.14	<0.12	<0.077
5619 Former Arctic Laundry & Cleaners							
5619 Basement	2/7/2017	--	5.6	<u>1</u>	5	<0.15	<0.12
5619 1st Floor	2/7/2017	--	1.3	0.31	1.2	<0.15	<0.12
5619 2nd Floor	2/7/2017	--	1.1	0.22	0.84	<0.16	<0.13
5619 Outdoor	2/7/2017	--	1.8	<0.075	<0.092	<0.14	<0.11
5621/5625 Pa's Pizzeria							
5621 Basement	1/24/2018	--	<0.064	<0.075	<0.13	<0.11	<0.073
5621 1st Floor	1/24/2018	--	<0.061	<0.071	<0.12	<0.11	<0.069
5621 Outdoor	1/24/2018	--	<0.062	<0.073	<0.13	<0.11	<0.073
5625 Storage	1/24/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
Indoor Air Vapor Action Level (Residential Building)			6.2	0.39	NE	NE	0.65
Indoor Air Vapor Action Level (Commercial Building)			27	1.6	NE	NE	11

Table 3. Indoor Air Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00

Abbreviations:

ppbV = parts per billion by volume

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

NE = not established

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

Notes:

1. Samples were collected in 6-liter summa canisters over a 24-hour period and analyzed using the USEPA TO-15 analytical method.
2. Vapor Action 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 exceed Indoor Air Vapor Action Levels.

Lab Notes:

None

Created by:	<u>LMH</u>	Date:	<u>2/24/2017</u>
Last revision by:	<u>LMH</u>	Date:	<u>2/13/2018</u>
Checked by:	<u>AJR</u>	Date:	<u>2/14/2018</u>

I:\25216186.00\Data and Calculations\Tables\[Indoor Air.xlsx]Results

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
SS-7	1/25/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-8	1/25/2018	--	5.2	0.22	<0.15	<0.13	<0.089
SS-9	1/25/2018	--	1.9	<0.099	<0.17	<0.15	<0.096
5619 Former Arctic Laundry & Cleaners							
SS-1	2/7/2017	--	418,000 A3, E	1,290 A3	5.7	5.8	<0.14
SS-2	2/7/2017	--	973	66.5	1.7	11.8	<0.13
SS-3	2/7/2017	--	26,100 A3	86.4 A3	1.4	0.5	<0.14
5621/5625 Pa's Pizzeria							
SS-4	1/24/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-5	1/24/2018	--	0.78	<0.1	<0.17	<0.15	<0.1
SS-6	1/24/2018	--	0.2	<0.092	<0.16	<0.14	<0.092
Vapor Risk Screening Level (Residential Building)			210	13	NE	NE	22
Vapor Risk Screening Level (Small Commercial Building)			900	53	NE	NE	370

Abbreviations:

ppbV = parts per billion by volume

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

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

NE = not established

-- = not applicable

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00

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. **Values** meet or exceed Vapor Risk Screening Levels.

Lab Notes:

A3 = The sample was analyzed by serial dilution.

E = Analyte concentration exceeded the calibration range. The reported result is estimated.

Created by:	<u>LMH</u>	Date:	<u>2/24/2017</u>
Last revision by:	<u>LMH</u>	Date:	<u>2/13/2018</u>
Checked by:	<u>AJR</u>	Date:	<u>2/14/2018</u>

I:\25216186.00\Data and Calculations\Tables\[Sub-Slab Vapor.xlsx]Sub-Slab Results

Understanding Chemical Vapor Intrusion Testing Results

RR-977

October 2014

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

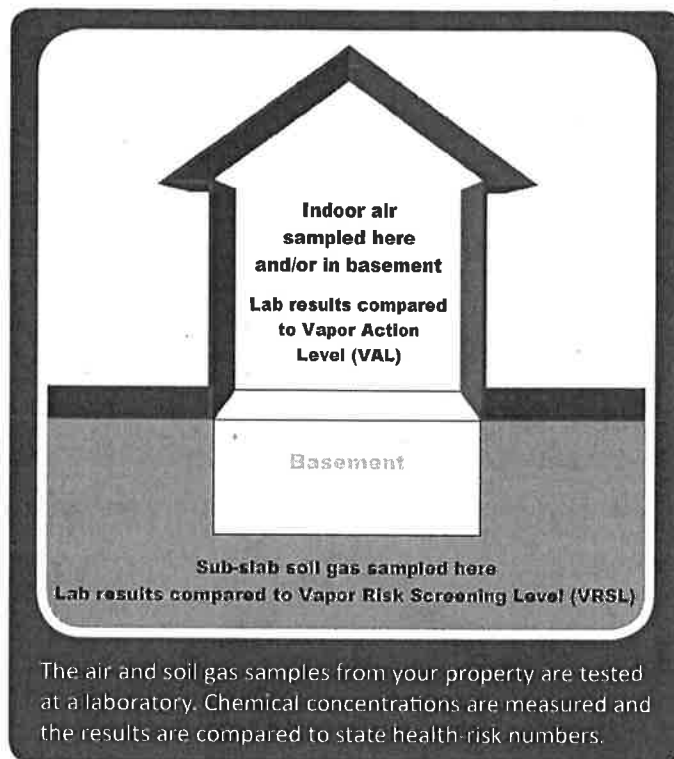
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

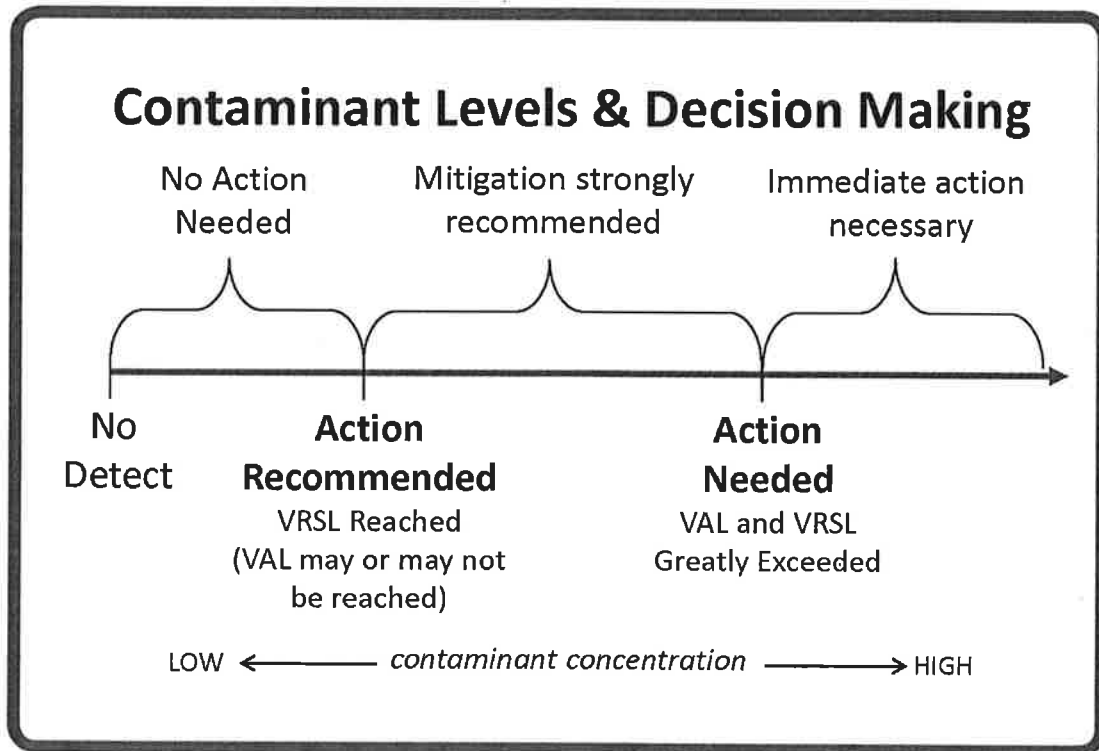
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as "screening levels."

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

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5625 - 22nd Avenue
City, State, ZIP+4®
Kenosha, WI 53140

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*Ms. Mary Lynn Dudeck
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5625 - 22nd Avenue
Kenosha, WI 53140*



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 City, State, ZIP+4® Kenosha WI 53140

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

Ms. Mary Lynn Dudeck
or current owner
5621 - 22nd Avenue
Kenosha, WI 53140



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2. Article Number (Transfer from service label)

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 Addressee

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| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

Vanessa D. Wishart

222 West Washington Avenue, Suite 900
P.O. Box 1784
Madison, WI 53701-1784
vwishart@staffordlaw.com
608.210.6307

March 27, 2018

BY CERTIFIED U.S. MAIL

Ms. Mary Lynn Dudeck or Current Owner
5621 22nd Avenue
Kenosha, WI 53140

Ms. Mary Lynn Dudeck or Current Owner
5625 22nd Avenue
Kenosha, WI 53140

RE: Vapor Sampling Results at Former Arctic Laundry & Cleaners Site, 5619 22nd Avenue,
Kenosha, WI, BRRTS No. 02-30-245843

Dear Ms. Dudeck:

On March 1, 2018, I sent you correspondence regarding vapor sampling at your property that was conducted as part of the ongoing investigation of environmental contamination at the former Arctic Laundry & Cleaners site, 5619 22nd Avenue, Kenosha, Wisconsin. I am now updating that correspondence to include additional contact information, a map of the sampling locations, and analytical results.

As I stated in the prior correspondence, SCS Engineers conducted vapor sampling at your property in January 2018. These samples were submitted to Test America for laboratory analysis for volatile organic compounds (VOCs) including Tetrachloroethene (PCE) and Trichloroethene (TCE).

The analysis found **no detections** of VOCs in the indoor or outdoor air samples. TCE and/or PCE was detected in the sub-slab samples but at concentrations that did **not** exceed the vapor risk screening levels established by the Wisconsin Department of Natural Resources (DNR) for either commercial or residential buildings.

Based on these results, we do not **anticipate** further testing at your property at this time. It is possible that may change based on **additional** communication with the DNR. If that is the case, we will alert you of potential additional testing.

L:\DOCS\028430\000001\CORR\3G87390.DOCX
0327181548

Madison Office

222 West Washington Avenue
P.O. Box 1784
Madison, Wisconsin
53701-1784
608.256.0226
888.655.4752
Fax 608.259.2600
www.staffordlaw.com

Milwaukee Office

1200 North Mayfair Road
Suite 430
Milwaukee, Wisconsin
53226-3282
414.982.2850
888.655.4752
Fax 414.982.2889
www.staffordlaw.com

March 27, 2018
Page 2

If you have questions about the results or next steps, please feel free to contact me.

Best regards,

STAFFORD ROSENBAUM LLP



Vanessa D. Wishart

VDW:mai
Enclosures

cc: Robert Langdon, SCS Engineers, by email
Doug Cieslak, Wisconsin DNR, by email

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name		DNR ID # (BRRTS #)	
Former Arctic Laundry & Cleaners		02-30-245843	
Address	City	State	ZIP Code
5619 22nd Avenue	Kenosha	WI	53140

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner

Roy Baietto (former owner)

Address	City	State	ZIP Code
1850 19th Avenue	Kenosha	WI	53140

Contact Person	Phone Number (include area code)
Vanessa Wishart	(608) 210-6307

Person or company that collected samples

SCS Engineers

Sample Results (Results Attached)

Reason for Sampling: Routine Other (define) NR 716 Site Investigation

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil?		In Groundwater?	
	Yes	No	Yes	No
Gasoline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diesel or Fuel Oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solvents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heavy Metals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pesticides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This sampling event included sampling of a drinking water well. <input type="radio"/> Yes <input type="radio"/> No
If yes, the sampled drinking water well had detectable contaminants. <input type="radio"/> Yes <input type="radio"/> No

Contaminants in Vapor

	Yes	No
Indoor Air	<input checked="" type="radio"/>	<input type="radio"/>
Sub-slab	<input checked="" type="radio"/>	<input type="radio"/>
Exterior Soil Gas	<input type="radio"/>	<input type="radio"/>

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Page 2 of 2

Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a \$700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

Company Name		Contact Person Last Name	First Name	
SCS Engineers		Langdon	Robert	
Address		City	State	ZIP Code
2830 Dairy Drive		Madison	WI	53718
Phone # (inc. area code)	Email			
(608) 216-7329	rlangdon@scsengineers.com			

Select which agency: Natural Resources Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name	First Name	Phone # (inc. area code)		
Cieslak	Doug	(262) 574-2182		
Address		City	State	ZIP Code
141 NW Barstow Rm 180		Waukesha	WI	53188
Email				
douglas.cieslak@wisconsin.gov				

Table 3. Indoor Air Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
5605 Basement	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 2nd Floor	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Outdoor	1/25/2018	--	<0.059	<0.071	<0.12	<0.1	<0.069
5605 Bar	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Liquor Store	1/25/2018	--	<0.067	<0.079	<0.14	<0.12	<0.077
5619 Former Arctic Laundry & Cleaners							
5619 Basement	2/7/2017	--	5.6	<u>1</u>	5	<0.15	<0.12
5619 1st Floor	2/7/2017	--	1.3	0.31	1.2	<0.15	<0.12
5619 2nd Floor	2/7/2017	--	1.1	0.22	0.84	<0.16	<0.13
5619 Outdoor	2/7/2017	--	1.8	<0.075	<0.092	<0.14	<0.11
5621/5625 Pa's Pizzeria							
5621 Basement	1/24/2018	--	<0.064	<0.075	<0.13	<0.11	<0.073
5621 1st Floor	1/24/2018	--	<0.061	<0.071	<0.12	<0.11	<0.069
5621 Outdoor	1/24/2018	--	<0.062	<0.073	<0.13	<0.11	<0.073
5625 Storage	1/24/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
Indoor Air Vapor Action Level (Residential Building)			6.2	0.39	NE	NE	0.65
Indoor Air Vapor Action Level (Commercial Building)			27	1.6	NE	NE	11

Table 3. Indoor Air Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00

Abbreviations:

ppbV = parts per billion by volume
cis-1,2-DCE = cis-1,2-dichloroethylene

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

NE = not established

Notes:

1. Samples were collected in 6-liter summa canisters over a 24-hour period and analyzed using the USEPA TO-15 analytical method.
2. Vapor Action 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 exceed Indoor Air Vapor Action Levels.

Lab Notes:

None

Created by:	<u>LMH</u>	Date:	<u>2/24/2017</u>
Last revision by:	<u>LMH</u>	Date:	<u>2/13/2018</u>
Checked by:	<u>AJR</u>	Date:	<u>2/14/2018</u>

f:\25216186.00\Data and Calculations\Tables\[Indoor Air.xlsx]Results

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
SS-7	1/25/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-8	1/25/2018	--	5.2	0.22	<0.15	<0.13	<0.089
SS-9	1/25/2018	--	1.9	<0.099	<0.17	<0.15	<0.096
5619 Former Arctic Laundry & Cleaners							
SS-1	2/7/2017	--	418,000 A3, E	1,290 A3	5.7	5.8	<0.14
SS-2	2/7/2017	--	973	66.5	1.7	11.8	<0.13
SS-3	2/7/2017	--	26,100 A3	86.4 A3	1.4	0.5	<0.14
5621/5625 Pa's Pizzeria							
SS-4	1/24/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-5	1/24/2018	--	0.78	<0.1	<0.17	<0.15	<0.1
SS-6	1/24/2018	--	0.2	<0.092	<0.16	<0.14	<0.092
Vapor Risk Screening Level (Residential Building)			210	13	NE	NE	22
Vapor Risk Screening Level (Small Commercial Building)			900	53	NE	NE	370

Abbreviations:

ppbV = parts per billion by volume

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

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

NE = not established

-- = not applicable

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00

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.

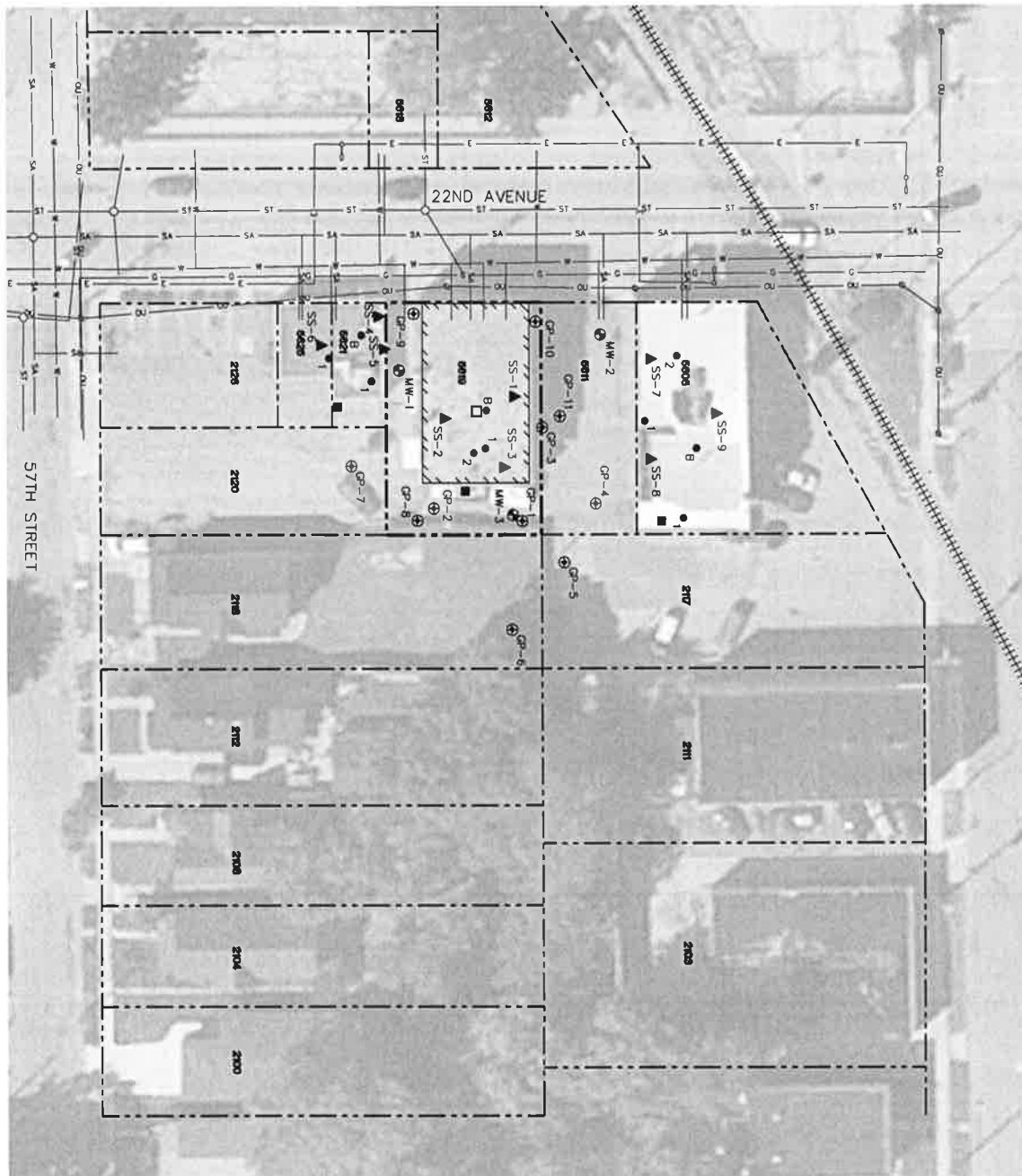
Lab Notes:

A3 = The sample was analyzed by serial dilution.

E = Analyte concentration exceeded the calibration range. The reported result is estimated.

Created by:	<u>LMH</u>	Date:	<u>2/24/2017</u>
Last revision by:	<u>LMH</u>	Date:	<u>2/13/2018</u>
Checked by:	<u>AJR</u>	Date:	<u>2/14/2018</u>

I:\25216186.00\Data and Calculations\Tables\[Sub-Slab Vapor.xlsx]Sub-Slab Results



LEGEND

- APPROXIMATE PROPERTY LINE (5619 22ND AVENUE)
- - - APPROXIMATE PROPERTY LINE
- 0000 PROPERTY ADDRESS NUMBER
- +++++ RAILROAD TRACKS
- E — ELECTRIC (BURIED)
- OU — ELECTRIC (OVERHEAD)
- G — GAS MAIN
- SA — SANITARY SEWER
- ST — STORM SEWER
- W — WATER MAIN
- ⊕ UTILITY POLE
- SUMP
- ⊙ GEOPROBE BORING
- ⊕ MONITORING WELL
- ▲ SUB-SLAB VAPOR SAMPLE
- INDOOR AIR SAMPLE (BASEMENT (B), FIRST FLOOR (1), SECOND FLOOR (2))
- ◆ OUTDOOR AIR SAMPLE

NOTES:

1. AERIAL PHOTOGRAPH IMPORTED FROM Bing Maps USING AUTOCAD 2016 GEOLOCATION MAP TOOL.
2. UTILITY LOCATIONS ARE APPROXIMATE, BASED ON 22ND AVENUE STORM SEWER AND LIGHTING DRAWING PROVIDED BY THE CITY OF KENOSHA (STATE PROJECT NO. 3994-03-70, SHEET 2.5)
3. SAMPLE LOCATIONS ARE APPROXIMATE.



STAFFORD ROSENBAUM, LLP 22 WEST WASHINGTON AVENUE MADISON, WI 53701		ARCTIC LAUNDRY AND CLEANERS 5619 22ND AVENUE KENOSHA, WISCONSIN		SITE FEATURES MAP		FIGURE 2	
PROJECT NO.	25216186.00	DRAWN BY:	KP	 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830			
DRAWN:	10/20/16	CHECKED BY:	JD				
REVISED:	02/15/18	APPROVED BY:	REL 02/15/18				

Understanding Chemical Vapor Intrusion Testing Results

RR-977

October 2014

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

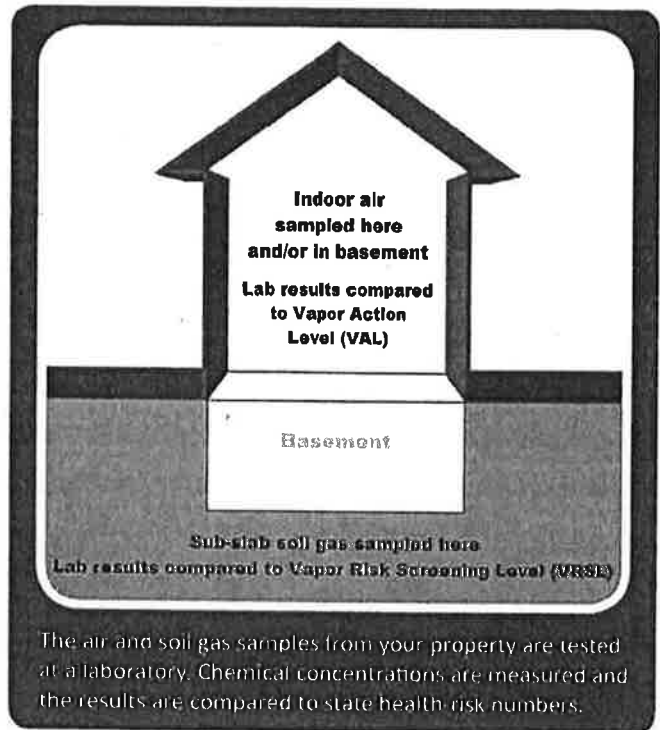
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

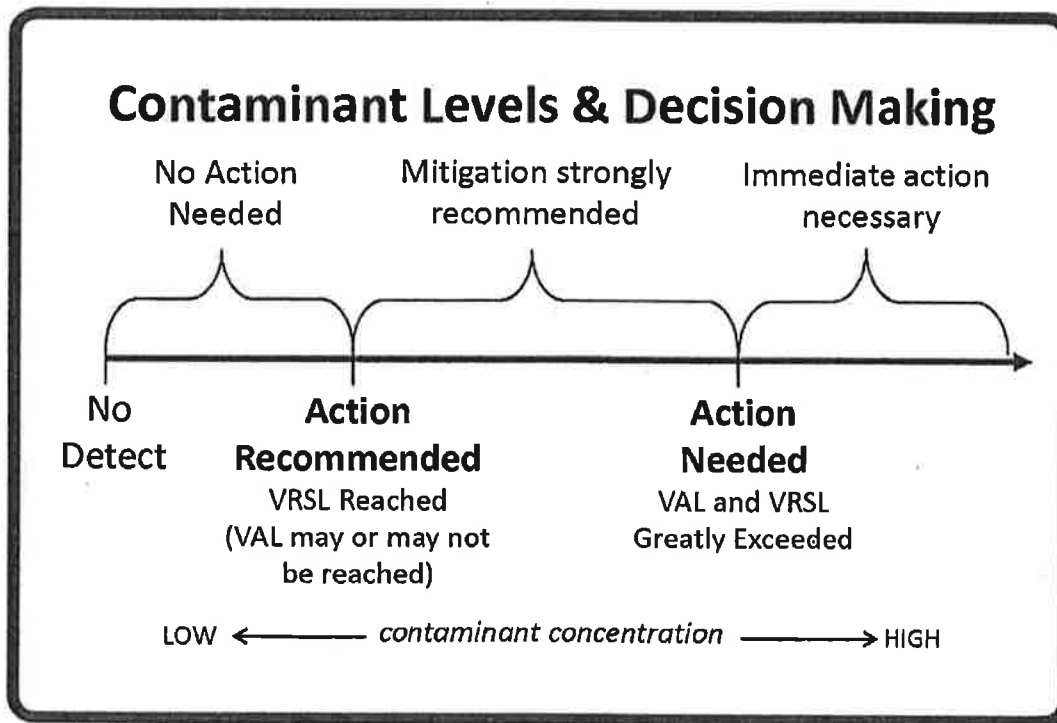
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as “screening levels.”

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.



February 12, 2018

Rob Langdon
SCS Engineers
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

Dear Rob Langdon:

Enclosed are the analytical results for sample(s) received by the laboratory on January 29, 2018. 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,

Megan McCabe
megan.mccabe@pacelabs.com
(612)607-1700
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, 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 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
Mississippi Certification #: MN00064
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 NwTPH 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
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10418567001	5621, Basement	Air	01/24/18 11:01	01/29/18 12:15
10418567002	5621, First Floor	Air	01/24/18 10:59	01/29/18 12:15
10418567003	5625, Storage	Air	01/24/18 11:08	01/29/18 12:15
10418567004	5621, Outdoor	Air	01/24/18 10:47	01/29/18 12:15

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SAMPLE ANALYTE COUNT

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10418567001	5621, Basement	TO-15	EMC	5	PASI-M
10418567002	5621, First Floor	TO-15	EMC	5	PASI-M
10418567003	5625, Storage	TO-15	EMC	5	PASI-M
10418567004	5621, Outdoor	TO-15	EMC	5	PASI-M

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ANALYTICAL RESULTS

Project: 25216186 Former Arctic Cleaner
 Pace Project No.: 10418567

Sample: 5621, Basement **Lab ID: 10418567001** Collected: 01/24/18 11:01 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.52	ug/m3	1.2	0.52	1.52		02/09/18 20:18	156-59-2	
trans-1,2-Dichloroethene	<0.45	ug/m3	1.2	0.45	1.52		02/09/18 20:18	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.0	0.44	1.52		02/09/18 20:18	127-18-4	
Trichloroethene	<0.41	ug/m3	0.83	0.41	1.52		02/09/18 20:18	79-01-6	
Vinyl chloride	<0.19	ug/m3	0.40	0.19	1.52		02/09/18 20:18	75-01-4	

Sample: 5621, First Floor **Lab ID: 10418567002** Collected: 01/24/18 10:59 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.50	ug/m3	1.2	0.50	1.46		02/09/18 20:45	156-59-2	
trans-1,2-Dichloroethene	<0.43	ug/m3	1.2	0.43	1.46		02/09/18 20:45	156-60-5	
Tetrachloroethene	<0.42	ug/m3	1.0	0.42	1.46		02/09/18 20:45	127-18-4	
Trichloroethene	<0.39	ug/m3	0.80	0.39	1.46		02/09/18 20:45	79-01-6	
Vinyl chloride	<0.18	ug/m3	0.38	0.18	1.46		02/09/18 20:45	75-01-4	

Sample: 5625, Storage **Lab ID: 10418567003** Collected: 01/24/18 11:08 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.53	ug/m3	1.2	0.53	1.55		02/09/18 21:12	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.2	0.46	1.55		02/09/18 21:12	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.1	0.44	1.55		02/09/18 21:12	127-18-4	
Trichloroethene	<0.42	ug/m3	0.85	0.42	1.55		02/09/18 21:12	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.40	0.20	1.55		02/09/18 21:12	75-01-4	

Sample: 5621, Outdoor **Lab ID: 10418567004** Collected: 01/24/18 10:47 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.51	ug/m3	1.2	0.51	1.49		02/09/18 19:51	156-59-2	
trans-1,2-Dichloroethene	<0.44	ug/m3	1.2	0.44	1.49		02/09/18 19:51	156-60-5	
Tetrachloroethene	<0.43	ug/m3	1.0	0.43	1.49		02/09/18 19:51	127-18-4	
Trichloroethene	<0.40	ug/m3	0.81	0.40	1.49		02/09/18 19:51	79-01-6	
Vinyl chloride	<0.19	ug/m3	0.39	0.19	1.49		02/09/18 19:51	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

QC Batch: 522249 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10418567001, 10418567002, 10418567003, 10418567004

METHOD BLANK: 2835447 Matrix: Air
Associated Lab Samples: 10418567001, 10418567002, 10418567003, 10418567004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.34	0.81	02/09/18 09:15	
Tetrachloroethene	ug/m3	<0.29	0.69	02/09/18 09:15	
trans-1,2-Dichloroethene	ug/m3	<0.30	0.81	02/09/18 09:15	
Trichloroethene	ug/m3	<0.27	0.55	02/09/18 09:15	
Vinyl chloride	ug/m3	<0.13	0.26	02/09/18 09:15	

LABORATORY CONTROL SAMPLE: 2835448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	40.3	35.6	88	70-136	
Tetrachloroethene	ug/m3	68.9	68.2	99	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	35.2	87	70-132	
Trichloroethene	ug/m3	54.6	49.8	91	70-135	
Vinyl chloride	ug/m3	26	23.2	89	70-141	

SAMPLE DUPLICATE: 2835940

Parameter	Units	10418421001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.46		25	
Tetrachloroethene	ug/m3	ND	<0.38		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.40		25	
Trichloroethene	ug/m3	ND	<0.36		25	
Vinyl chloride	ug/m3	ND	<0.17		25	

SAMPLE DUPLICATE: 2835941

Parameter	Units	10418421002 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.51		25	
Tetrachloroethene	ug/m3	ND	<0.43		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.44		25	
Trichloroethene	ug/m3	ND	<0.40		25	
Vinyl chloride	ug/m3	ND	<0.19		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: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

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 and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
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: 25216186 Former Arctic Cleaner
Pace Project No.: 10418567

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10418567001	5621, Basement	TO-15	522249		
10418567002	5621, First Floor	TO-15	522249		
10418567003	5625, Storage	TO-15	522249		
10418567004	5621, Outdoor	TO-15	522249		

REPORT OF LABORATORY ANALYSIS

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AIR: CHAIN-OF-CUSTODY / Analytical Request Document

10418567

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Section B
Required Project Information:

Section C
Invoice Information:

30711

Page: 1 of 1

Company: SCS Engineers	Report To: Robert Langdon	Attention: Robert Langdon
Address: 2830 Darny Drive Madison, WI 53718	Copy To:	Company Name: SCS Engineers
Email To: R.Langdon@scsengineers.com	Purchase Order No.: com	Address: 2830 Darny Drive, Madison, WI 53718
Phone: 608-216-7321 Fax:	Project Name: Former Arctic Cleaners	Pace Quote Reference:
Requested Due Date/TAT:	Project Number: 25210186	Pace Project Manager/Sales Rep.
		Pace Profile #: 32630

Program

UST Superfund Emissions Clean Air Act

Voluntary Clean Up Dry Clean RCRA Other

Location of Sampling by State: **WI**

Reporting Units: ug/m³ mg/m³ PPBV PPMV Other

Report Level: II III IV Other

ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes MEDIA CODE Tedlar Bag TB 1 Liter Summa Can 1LC 6 Liter Summa Can 6LC Low Volume Puff LVP High Volume Puff HVP Other PM10	MEDIA CODE	PID Reading (Client only)	COLLECTED				Canister Pressure (Initial Field - In Hg)	Canister Pressure (Final Field - In Hg)	Summa Can Number	Flow Control Number	Method: PM10 3C - Fixed Gas (%) TO-15 BTEX TO-15M (Methane) TO-14 TO-15 Full List VOCs TO-15 Short List BTEX TO-15 Short List Chlorinated TO-15 Short List (Other)	Face Lab ID
					COMPOSITE START		COMPOSITE - END/GRAB							
					DATE	TIME	DATE	TIME						
1	5621, Basement		6LL		1-23-18	12:53	1-24-18	11:01	-29	-3	2340	0272		001
2	5621, First floor		6LL		1-23-18	12:25	1-24-18	10:59	-26	-3	1074	1366		002
3	5625, Storage		6LL		1-23-18	12:41	1-24-18	11:08	-30	-5	0053	0340		003
4	5621, Outdoor		6LL		1-23-18	12:48	1-24-18	10:47	-30	-4	2046	0890		004

Comments :	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
⊗ PCE, TCE, Vinyl Chloride cis 1,2-DCE, trans 1,2-DCE	Walt Harris	1-24-18	11:30	6LL PACE	1-29-18	12:15	Y/N Y/N Y/N Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: **Walt Harris**

SIGNATURE of SAMPLER: *Walt Harris* DATE Signed (MM/DD/YY): **01/24/18**

Temp in °C: _____

Received on Ice:

Custody Sealed Cooler:

Samples Intact:

ORIGINAL

Air Sample Condition Upon Receipt

Client Name: SCS Eng. Project #: WO# : 10418567

Courier: Fed Ex UPS Speedee Client
 Commercial Pace Other: _____



Tracking Number: 7476 3004 5528

Optional: Proj. Due Date: _____ Proj. Name: _____

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): Thermom. Used: 151401163
 G87A9155100842
 Temp should be above freezing to 6°C Correction Factor: X Date & Initials of Person Examining Contents: 1-29-18 JA

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: <u>Air Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <u>N</u> (list which samples)
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.

Samples Received:					Pressure Gauge # 10AIR26				
Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
<u>Basement</u>			<u>-3.5</u>	<u>+5</u>					
<u>First Floor</u>			<u>-2.5</u>	<u>"</u>					
<u>Storage</u>			<u>-4</u>	<u>"</u>					
<u>Outdoor</u>			<u>-3</u>	<u>"</u>					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Nathan Peters

Date: 1/29/18

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 containers)



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: 10418567
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418567001 ProjSampleNum: 10418567001 Date Collected: 01/24/18 11:01
 Client Sample ID: 5621, Basement Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.13	ppbv	0.3	0.13	02/09/18 20:18 EMC	156-59-2	
Tetrachloroethene	<0.064	ppbv	0.15	0.064	02/09/18 20:18 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 20:18 EMC	156-60-5	
Trichloroethene	<0.075	ppbv	0.15	0.075	02/09/18 20:18 EMC	79-01-6	
Vinyl chloride	<0.073	ppbv	0.15	0.073	02/09/18 20:18 EMC	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: 10418567
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418567002 ProjSampleNum: 10418567002 Date Collected: 01/24/18 10:59
 Client Sample ID: 5621, First Floor Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.12	ppbv	0.3	0.12	02/09/18 20:45 EMC	156-59-2	
Tetrachloroethene	<0.061	ppbv	0.15	0.061	02/09/18 20:45 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 20:45 EMC	156-60-5	
Trichloroethene	<0.071	ppbv	0.15	0.071	02/09/18 20:45 EMC	79-01-6	
Vinyl chloride	<0.069	ppbv	0.15	0.069	02/09/18 20:45 EMC	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

Date: 2/12/2018

Page 2



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: 10418567
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418567003 ProjSampleNum: 10418567003 Date Collected: 01/24/18 11:08
 Client Sample ID: 5625, Storage Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.13	ppbv	0.3	0.13	02/09/18 21:12 EMC	156-59-2	
Tetrachloroethene	<0.064	ppbv	0.16	0.064	02/09/18 21:12 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 21:12 EMC	156-60-5	
Trichloroethene	<0.077	ppbv	0.16	0.077	02/09/18 21:12 EMC	79-01-6	
Vinyl chloride	<0.077	ppbv	0.15	0.077	02/09/18 21:12 EMC	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: 10418567
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418567004 ProjSampleNum: 10418567004 Date Collected: 01/24/18 10:47
 Client Sample ID: 5621, Outdoor Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.13	ppbv	0.3	0.13	02/09/18 19:51 EMC	156-59-2	
Tetrachloroethene	<0.062	ppbv	0.15	0.062	02/09/18 19:51 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 19:51 EMC	156-60-5	
Trichloroethene	<0.073	ppbv	0.15	0.073	02/09/18 19:51 EMC	79-01-6	
Vinyl chloride	<0.073	ppbv	0.15	0.073	02/09/18 19:51 EMC	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: 10418567
Project Name: 25216186 Former Arctic Cleaner

PARAMETER FOOTNOTES

February 12, 2018

Rob Langdon
SCS Engineers
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

Dear Rob Langdon:

Enclosed are the analytical results for sample(s) received by the laboratory on January 29, 2018. 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,



Megan McCabe
megan.mccabe@pacelabs.com
(612)607-1700
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, 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 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 VVW 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

Mississippi Certification #: MN00064

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 VVW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH 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

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10418572001	SS-4	Air	01/24/18 14:36	01/29/18 12:15
10418572002	SS-5	Air	01/24/18 15:07	01/29/18 12:15
10418572003	SS-6	Air	01/24/18 15:57	01/29/18 12:15

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SAMPLE ANALYTE COUNT

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10418572001	SS-4	TO-15	EMC	5	PASI-M
10418572002	SS-5	TO-15	AFV	5	PASI-M
10418572003	SS-6	TO-15	AFV	5	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

Sample: SS-4 Lab ID: 10418572001 Collected: 01/24/18 14:36 Received: 01/29/18 12:15 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.61	ug/m3	1.4	0.61	1.79		02/09/18 23:56	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/m3	1.4	0.53	1.79		02/09/18 23:56	156-60-5	
Tetrachloroethene	<0.51	ug/m3	1.2	0.51	1.79		02/09/18 23:56	127-18-4	
Trichloroethene	<0.48	ug/m3	0.98	0.48	1.79		02/09/18 23:56	79-01-6	
Vinyl chloride	<0.23	ug/m3	0.47	0.23	1.79		02/09/18 23:56	75-01-4	

Sample: SS-5 Lab ID: 10418572002 Collected: 01/24/18 15:07 Received: 01/29/18 12:15 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.70	ug/m3	1.7	0.70	2.06		02/10/18 19:42	156-59-2	
trans-1,2-Dichloroethene	<0.61	ug/m3	1.7	0.61	2.06		02/10/18 19:42	156-60-5	
Tetrachloroethene	5.4	ug/m3	1.4	0.59	2.06		02/10/18 19:42	127-18-4	
Trichloroethene	<0.55	ug/m3	1.1	0.55	2.06		02/10/18 19:42	79-01-6	
Vinyl chloride	<0.26	ug/m3	0.54	0.26	2.06		02/10/18 19:42	75-01-4	

Sample: SS-6 Lab ID: 10418572003 Collected: 01/24/18 15:57 Received: 01/29/18 12:15 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.64	ug/m3	1.5	0.64	1.87		02/10/18 20:09	156-59-2	
trans-1,2-Dichloroethene	<0.55	ug/m3	1.5	0.55	1.87		02/10/18 20:09	156-60-5	
Tetrachloroethene	1.4	ug/m3	1.3	0.54	1.87		02/10/18 20:09	127-18-4	
Trichloroethene	<0.50	ug/m3	1.0	0.50	1.87		02/10/18 20:09	79-01-6	
Vinyl chloride	<0.24	ug/m3	0.49	0.24	1.87		02/10/18 20:09	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

QC Batch: 522249 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10418572001

METHOD BLANK: 2835447 Matrix: Air
Associated Lab Samples: 10418572001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.34	0.81	02/09/18 09:15	
Tetrachloroethene	ug/m3	<0.29	0.69	02/09/18 09:15	
trans-1,2-Dichloroethene	ug/m3	<0.30	0.81	02/09/18 09:15	
Trichloroethene	ug/m3	<0.27	0.55	02/09/18 09:15	
Vinyl chloride	ug/m3	<0.13	0.26	02/09/18 09:15	

LABORATORY CONTROL SAMPLE: 2835448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	40.3	35.6	88	70-136	
Tetrachloroethene	ug/m3	68.9	68.2	99	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	35.2	87	70-132	
Trichloroethene	ug/m3	54.6	49.8	91	70-135	
Vinyl chloride	ug/m3	26	23.2	89	70-141	

SAMPLE DUPLICATE: 2835940

Parameter	Units	10418421001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.46		25	
Tetrachloroethene	ug/m3	ND	<0.38		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.40		25	
Trichloroethene	ug/m3	ND	<0.36		25	
Vinyl chloride	ug/m3	ND	<0.17		25	

SAMPLE DUPLICATE: 2835941

Parameter	Units	10418421002 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.51		25	
Tetrachloroethene	ug/m3	ND	<0.43		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.44		25	
Trichloroethene	ug/m3	ND	<0.40		25	
Vinyl chloride	ug/m3	ND	<0.19		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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QUALITY CONTROL DATA

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

QC Batch: 522334 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10418572002, 10418572003

METHOD BLANK: 2835946 Matrix: Air
Associated Lab Samples: 10418572002, 10418572003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.34	0.81	02/10/18 09:20	
Tetrachloroethene	ug/m3	<0.29	0.69	02/10/18 09:20	
trans-1,2-Dichloroethene	ug/m3	<0.30	0.81	02/10/18 09:20	
Trichloroethene	ug/m3	<0.27	0.55	02/10/18 09:20	
Vinyl chloride	ug/m3	<0.13	0.26	02/10/18 09:20	

LABORATORY CONTROL SAMPLE: 2835947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	40.3	38.7	96	70-136	
Tetrachloroethene	ug/m3	68.9	73.8	107	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	37.8	94	70-132	
Trichloroethene	ug/m3	54.6	52.2	96	70-135	
Vinyl chloride	ug/m3	26	23.9	92	70-141	

SAMPLE DUPLICATE: 2836483

Parameter	Units	10419404006 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.51		25	
Tetrachloroethene	ug/m3	ND	<0.43		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.44		25	
Trichloroethene	ug/m3	ND	<0.40		25	
Vinyl chloride	ug/m3	ND	<0.19		25	

SAMPLE DUPLICATE: 2836484

Parameter	Units	92371692001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	1.5J	1.3J		25	
Tetrachloroethene	ug/m3	12.9	10.1	25	25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.57		25	
Trichloroethene	ug/m3	9.0	7.6	16	25	
Vinyl chloride	ug/m3	ND	<0.24		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: 25216186 Former Arctic Cleaner
Pace Project No.: 10418572

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 and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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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10418572



AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Section B
Required Project Information:

Section C
Invoice Information:

30710

Page: of

Company: <u>SCS Engineers</u>	Report To: <u>Robert Langdon</u>	Attention: <u>Robert Langdon</u>
Address: <u>2930 Dairy Drive</u>	Copy To:	Company Name: <u>SCS Engineers</u>
<u>Madison, WI 53718</u>		Address: <u>2930 Dairy Drive</u>
Email To: <u>R.Langdon@scsengineers.com</u>	Purchase Order No.:	Pace Quote Reference:
Phone: <u>608-216-7329</u> Fax:	Project Name: <u>Former Aviatil Cleanups</u>	Pace Project Manager/Sales Rep.:
Requested Due Date/TAT:	Project Number: <u>25216186</u>	Pace Profile #: <u>32670</u>

Program

UST Superfund Emissions Clean Air Act

Voluntary Clean Up Dry Clean RCRA Other

Location of Sampling by State: WI

Reporting Units:
 µg/m³
 PPBV mg/m³
 Other

Report Level: II III IV Other

ITEM #	Valid Media Codes		MEDIA CODE	PID Reading (Client only)	COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method:								Pace Lab ID
	MEDIA	CODE			COMPOSITE START		COMPOSITE - END/GRAB						RM10	3c - Fixed Gas (%)	TO-3 BTEX	TO-14	TO-15 Full List VOCs	TO-15 Short List VOCs	TO-15 Short List BTEX	TO-15 Short List PCBs/PAHs	
	1 Liter Summa Can	1LC			DATE	TIME	DATE	TIME													
1	SS-4	6LC	1-24-18	1406	1-24-18	1436	-30	-8	1611	0770						X		001			
2	SS-5	6LC	1-24-18	1437	1-24-18	1507	-29	-10	0577	1218						X		002			
3	SS-6	6LC	1-24-18	1527	1-24-18	1557	-28	-7	0093	1243						X		003			
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments:
 PID = SS-4 = 1110 ppb
 SS-5 = 4086 ppb
 SS-6 = 0

Analyze for: PCE, TCE, Vinyl Chloride,
 cis 1,2-DCE, ORIGINAL trans 1,2-DCE

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
<u>Nate Havens</u>	<u>1-24-18</u>	<u>1900</u>	<u>Allyson</u>	<u>1-24-18</u>	<u>1215</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Y/N	<input checked="" type="checkbox"/> Y/N	<input checked="" type="checkbox"/> Y/N
						<input type="checkbox"/>	<input type="checkbox"/> Y/N	<input type="checkbox"/> Y/N	<input type="checkbox"/> Y/N
						<input type="checkbox"/>	<input type="checkbox"/> Y/N	<input type="checkbox"/> Y/N	<input type="checkbox"/> Y/N

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Nate Havens
 SIGNATURE of SAMPLER: Nate Havens DATE Signed (MM/DD/YY): 01/25/18

Temp in °C
 Received on Ice Custody Sealed Cooler Samples Intact

Page 10 of 15

Air Sample Condition Upon Receipt

Client Name: SCS Eng. Project #: WO# : 10418572

Courier: Fed Ex UPS Speedee Client
 Commercial Pace Other: _____

Tracking Number: 7476 3004 5539



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

Optional: Proj. Due Date: _____ Proj. Name: _____

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

Temp. (TO17 and TO13 samples only) (°C): X Corrected Temp (°C): X Thermom. Used: 151401163
 G87A9155100842
 Temp should be above freezing to 6°C Correction Factor: X Date & Initials of Person Examining Contents: 1-29-18 MA

Type of Ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: <u>Air Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <u>N</u> (list which samples)
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.

Samples Received: FFFT, 2 cones Pressure Gauge # 10AIR26

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
<u>SS-4</u>			<u>-7.5</u>	<u>+5</u>					
<u>-5</u>			<u>-10.5</u>	<u>"</u>					
<u>-6</u>			<u>-8.5</u>	<u>"</u>					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____

Project Manager Review: Nathan Baberg

Date: 1/29/18

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 containers)



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: 10418572
Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418572001 ProjSampleNum: 10418572001 Date Collected: 01/24/18 14:36
Client Sample ID: SS-4 Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
------------	---------	-------	--------------	-----	----------	---------	--------

Air TO-15

cis-1,2-Dichloroethene	<0.15	ppbv	0.35	0.15	02/09/18 23:56 EMC	156-59-2	
Tetrachloroethene	<0.074	ppbv	0.17	0.074	02/09/18 23:56 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.13	ppbv	0.35	0.13	02/09/18 23:56 EMC	156-60-5	
Trichloroethene	<0.088	ppbv	0.18	0.088	02/09/18 23:56 EMC	79-01-6	
Vinyl chloride	<0.089	ppbv	0.18	0.089	02/09/18 23:56 EMC	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

Date: 2/12/2018

Page 1



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: 10418572
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418572002 ProjSampleNum: 10418572002 Date Collected: 01/24/18 15:07
 Client Sample ID: SS-5 Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.17	ppbv	0.42	0.17	02/10/18 19:42 AFV	156-59-2	
Tetrachloroethene	0.78	ppbv	0.2	0.086	02/10/18 19:42 AFV	127-18-4	
trans-1,2-Dichloroethene	<0.15	ppbv	0.42	0.15	02/10/18 19:42 AFV	156-60-5	
Trichloroethene	<0.1	ppbv	0.2	0.1	02/10/18 19:42 AFV	79-01-6	
Vinyl chloride	<0.1	ppbv	0.21	0.1	02/10/18 19:42 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

Date: 2/12/2018

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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: 10418572
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418572003 ProjSampleNum: 10418572003 Date Collected: 01/24/18 15:57
 Client Sample ID: SS-6 Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.16	ppbv	0.37	0.16	02/10/18 20:09 AFV	156-59-2	
Tetrachloroethene	0.2	ppbv	0.19	0.078	02/10/18 20:09 AFV	127-18-4	
trans-1,2-Dichloroethene	<0.14	ppbv	0.37	0.14	02/10/18 20:09 AFV	156-60-5	
Trichloroethene	<0.092	ppbv	0.18	0.092	02/10/18 20:09 AFV	79-01-6	
Vinyl chloride	<0.092	ppbv	0.19	0.092	02/10/18 20:09 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

Date: 2/12/2018

Page 3



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: 10418572
Project Name: 25216186 Former Arctic Cleaner

PARAMETER FOOTNOTES

SUPPLEMENTAL REPORT

Units Conversion Request

Date: 2/12/2018

Page 4

Vanessa D. Wishart

222 West Washington Avenue, Suite 900
P.O. Box 1784
Madison, WI 53701-1784
vwishart@staffordlaw.com
608.210.6307

March 27, 2018

BY CERTIFIED U.S. MAIL

Mr. John Ekornaas
5605 22nd Avenue
Kenosha, WI 53140

RE: Vapor Sampling Results at Former Arctic Laundry & Cleaners Site, 5619 22nd Avenue,
Kenosha, WI, BRRTS No. 02-30-245843

Dear Mr. Ekornaas:

On March 1, 2018, I sent you correspondence regarding vapor sampling at your property that was conducted as part of the ongoing investigation of environmental contamination at the former Arctic Laundry & Cleaners site, 5619 22nd Avenue, Kenosha, Wisconsin. I am now updating that correspondence to include additional contact information, a map of the sampling locations, and analytical results.

As I stated in the prior correspondence, SCS Engineers conducted vapor sampling at your property in January 2018. These samples were submitted to Test America for laboratory analysis for volatile organic compounds (VOCs) including Tetrachloroethene (PCE) and Trichloroethene (TCE).

The analysis found **no detections** of VOCs in the indoor or outdoor air samples. TCE and/or PCE was detected in the sub-slab samples but at concentrations that did **not** exceed the vapor risk screening levels established by the Wisconsin Department of Natural Resources (DNR) for either commercial or residential buildings.

Based on these results, we do not anticipate further testing at your property at this time. It is possible that may change based on additional communication with the DNR. If that is the case, we will alert you of potential additional testing.

If you have questions about the results or next steps, please feel free to contact me.

Madison Office

222 West Washington Avenue
P.O. Box 1784
Madison, Wisconsin
53701-1784
608.256.0226
888.655.4752
Fax 608.259.2600
www.staffordlaw.com

Milwaukee Office

1200 North Mayfair Road
Suite 430
Milwaukee, Wisconsin
53226-3282
414.982.2850
888.655.4752
Fax 414.982.2889
www.staffordlaw.com

March 27, 2018
Page 2

Best regards,

STAFFORD ROSENBAUM LLP



Vanessa D. Wishart

VDW:mai
Enclosures

cc: Robert Langdon, SCS Engineers, by email
Doug Cieslak, Wisconsin DNR, by email

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name		DNR ID # (BRRTS #)	
Former Arctic Laundry & Cleaners		02-30-245843	
Address	City	State	ZIP Code
5619 22nd Avenue	Kenosha	WI	53140

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner

Roy Baietto (former owner)

Address	City	State	ZIP Code
1850 19th Avenue	Kenosha	WI	53140

Contact Person

Vanessa Wishart

Person or company that collected samples

SCS Engineers

Sample Results (Results Attached)

Reason for Sampling: Routine Other (define) NR 716 Site Investigation

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil?		In Groundwater?	
	Yes	No	Yes	No
Gasoline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diesel or Fuel Oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solvents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heavy Metals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pesticides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This sampling event included sampling of a drinking water well. <input type="radio"/> Yes <input type="radio"/> No
If yes, the sampled drinking water well had detectable contaminants. <input type="radio"/> Yes <input type="radio"/> No

Contaminants in Vapor

	Yes	No
	Indoor Air	<input checked="" type="radio"/>
Sub-slab	<input checked="" type="radio"/>	<input type="radio"/>
Exterior Soil Gas	<input type="radio"/>	<input type="radio"/>

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Page 2 of 2

Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a \$700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

Company Name		Contact Person Last Name	First Name	
SCS Engineers		Langdon	Robert	
Address		City	State	ZIP Code
2830 Dairy Drive		Madison	WI	53718
Phone # (inc. area code)	Email			
(608) 216-7329	rlangdon@scsengineers.com			

Select which agency: Natural Resources Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name	First Name	Phone # (inc. area code)		
Cieslak	Doug	(262) 574-2182		
Address	City	State	ZIP Code	
141 NW Barstow Rm 180	Waukesha	WI	53188	
Email				
douglas.cieslak@wisconsin.gov				

Table 3. Indoor Air Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
5605 Basement	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 2nd Floor	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Outdoor	1/25/2018	--	<0.059	<0.071	<0.12	<0.1	<0.069
5605 Bar	1/25/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
5605 Liquor Store	1/25/2018	--	<0.067	<0.079	<0.14	<0.12	<0.077
5619 Former Arctic Laundry & Cleaners							
5619 Basement	2/7/2017	--	5.6	<u>1</u>	5	<0.15	<0.12
5619 1st Floor	2/7/2017	--	1.3	0.31	1.2	<0.15	<0.12
5619 2nd Floor	2/7/2017	--	1.1	0.22	0.84	<0.16	<0.13
5619 Outdoor	2/7/2017	--	1.8	<0.075	<0.092	<0.14	<0.11
5621/5625 Pa's Pizzeria							
5621 Basement	1/24/2018	--	<0.064	<0.075	<0.13	<0.11	<0.073
5621 1st Floor	1/24/2018	--	<0.061	<0.071	<0.12	<0.11	<0.069
5621 Outdoor	1/24/2018	--	<0.062	<0.073	<0.13	<0.11	<0.073
5625 Storage	1/24/2018	--	<0.064	<0.077	<0.13	<0.11	<0.077
Indoor Air Vapor Action Level (Residential Building)			6.2	0.39	NE	NE	0.65
Indoor Air Vapor Action Level (Commercial Building)			27	1.6	NE	NE	11

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00
 (Results are in ppbV)

Sample/Location	Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
5605 Midnight Liquor and Bar							
SS-7	1/25/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-8	1/25/2018	--	5.2	0.22	<0.15	<0.13	<0.089
SS-9	1/25/2018	--	1.9	<0.099	<0.17	<0.15	<0.096
5619 Former Arctic Laundry & Cleaners							
SS-1	2/7/2017	--	418,000 A3, E	1,290 A3	5.7	5.8	<0.14
SS-2	2/7/2017	--	973	66.5	1.7	11.8	<0.13
SS-3	2/7/2017	--	26,100 A3	86.4 A3	1.4	0.5	<0.14
5621/5625 Pa's Pizzeria							
SS-4	1/24/2018	--	<0.074	<0.088	<0.15	<0.13	<0.089
SS-5	1/24/2018	--	0.78	<0.1	<0.17	<0.15	<0.1
SS-6	1/24/2018	--	0.2	<0.092	<0.16	<0.14	<0.092
Vapor Risk Screening Level (Residential Building)			210	13	NE	NE	22
Vapor Risk Screening Level (Small Commercial Building)			900	53	NE	NE	370

Abbreviations:

ppbV = parts per billion by volume

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

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

NE = not established

-- = not applicable

Table 4. Sub-Slab Vapor Analytical Results Summary
22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00

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:

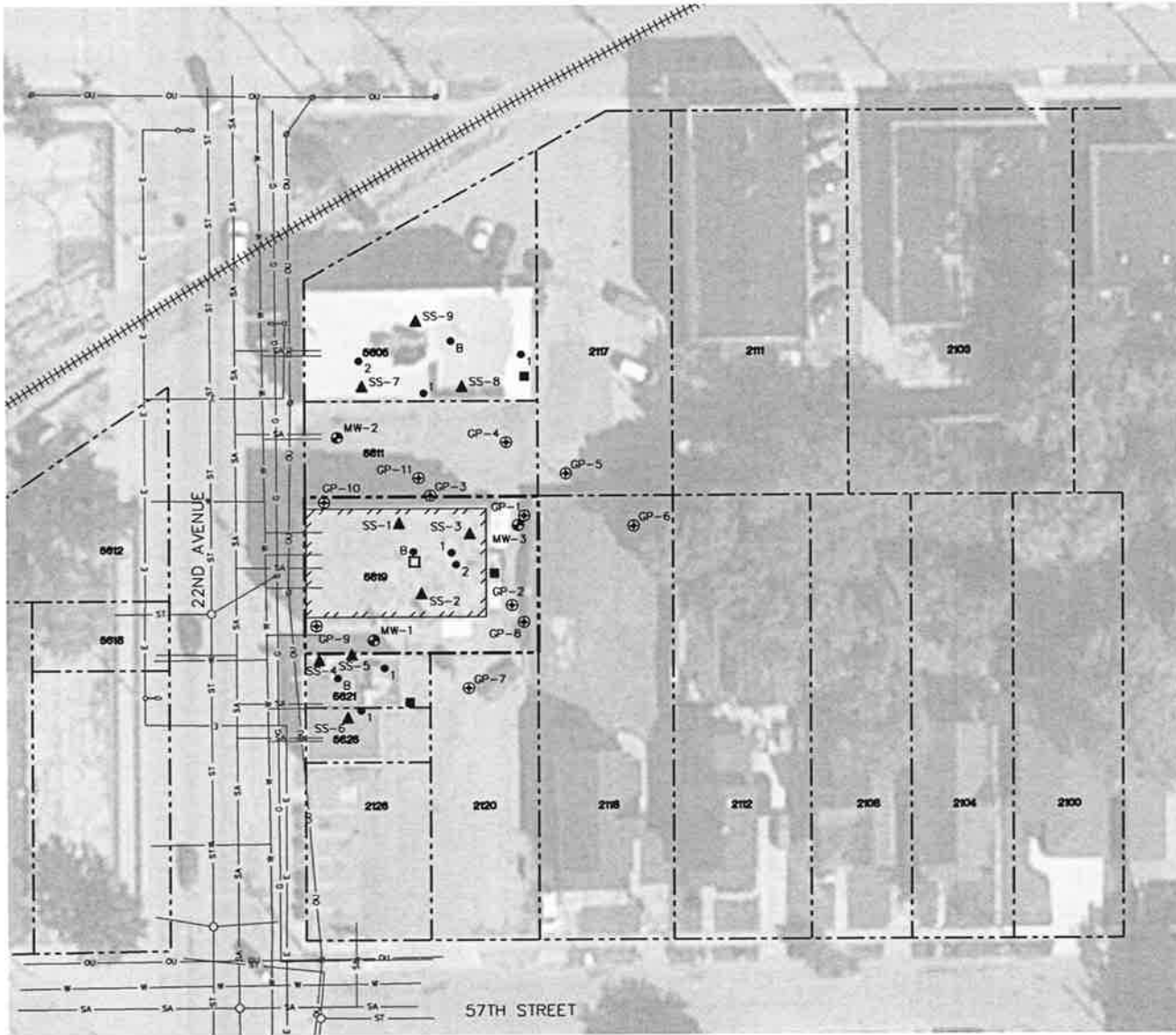
A3 = The sample was analyzed by serial dilution.

E = Analyte concentration exceeded the calibration range. The reported result is estimated.

Created by:	<u>LMH</u>	Date:	<u>2/24/2017</u>
Last revision by:	<u>LMH</u>	Date:	<u>2/13/2018</u>
Checked by:	<u>AJR</u>	Date:	<u>2/14/2018</u>

I:\25216186.00\Data and Calculations\Tables\[Sub-Slab Vapor.xlsx]Sub-Slab Results

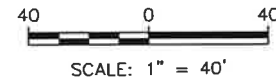
1/22/2018 8:00 AM Project: 2102018 11:21:19 AM



- LEGEND
- APPROXIMATE PROPERTY LINE (5619 22ND AVENUE)
 - APPROXIMATE PROPERTY LINE
 - PROPERTY ADDRESS NUMBER
 - RAILROAD TRACKS
 - ELECTRIC (BURIED)
 - ELECTRIC (OVERHEAD)
 - GAS MAIN
 - SANITARY SEWER
 - STORM SEWER
 - WATER MAIN
 - UTILITY POLE
 - STREET LIGHT
 - SUMP
 - GEOPROBE BORING
 - MONITORING WELL
 - SUB-SLAB VAPOR SAMPLE
 - INDOOR AIR SAMPLE [BASEMENT (B), FIRST FLOOR (1), SECOND FLOOR (2)]
 - OUTDOOR AIR SAMPLE

NOTES:

1. AERIAL PHOTOGRAPH IMPORTED FROM BING MAPS USING AUTOCAD 2016 GEOLOCATION MAP TOOL.
2. UTILITY LOCATIONS ARE APPROXIMATE, BASED ON 22ND AVENUE STORM SEWER AND LIGHTING DRAWING PROVIDED BY THE CITY OF KENOSHA (STATE PROJECT NO. 3994-03-70, SHEET 2.5).
3. SAMPLE LOCATIONS ARE APPROXIMATE.



CLIENT		STAFFORD RASCHLAMA, LLC 212 WEST WASHINGTON AVENUE MADISON, WI 53701	
		PROJECT NO. 25216166.00	DATE 10/20/16
ENGINEER		DRAWN BY: JKP	CHECKED BY: JLD
		DATE 02/15/18	APPROVED BY:
SITE		ARCTIC LAUNDRY AND CLEANERS 5619 22ND AVENUE KENOSHA, WISCONSIN	
SITE FEATURES MAP		SCS ENGINEERS 2830 DIXIE AVENUE, MADISON, WI 53718-6751 PHONE: (608) 224-2830	
		FIGURE	2

Understanding Chemical Vapor Intrusion Testing Results

RR-977

October 2014

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

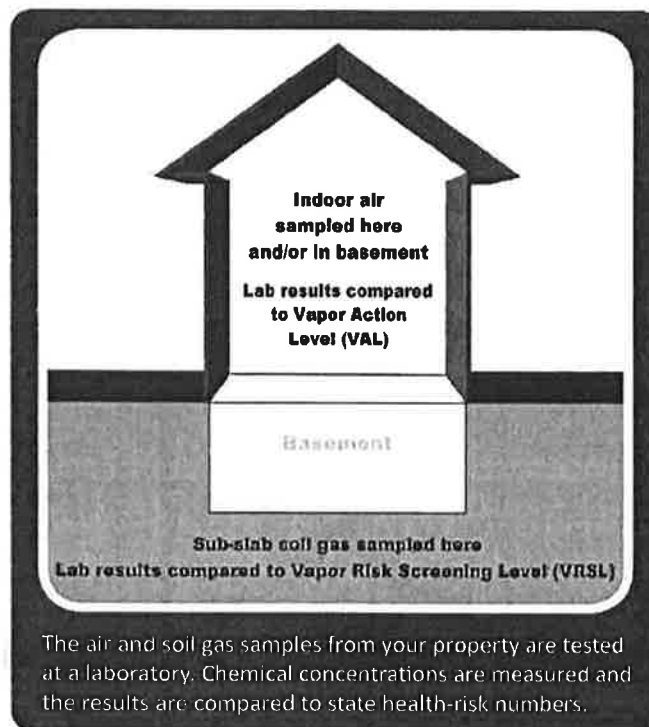
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

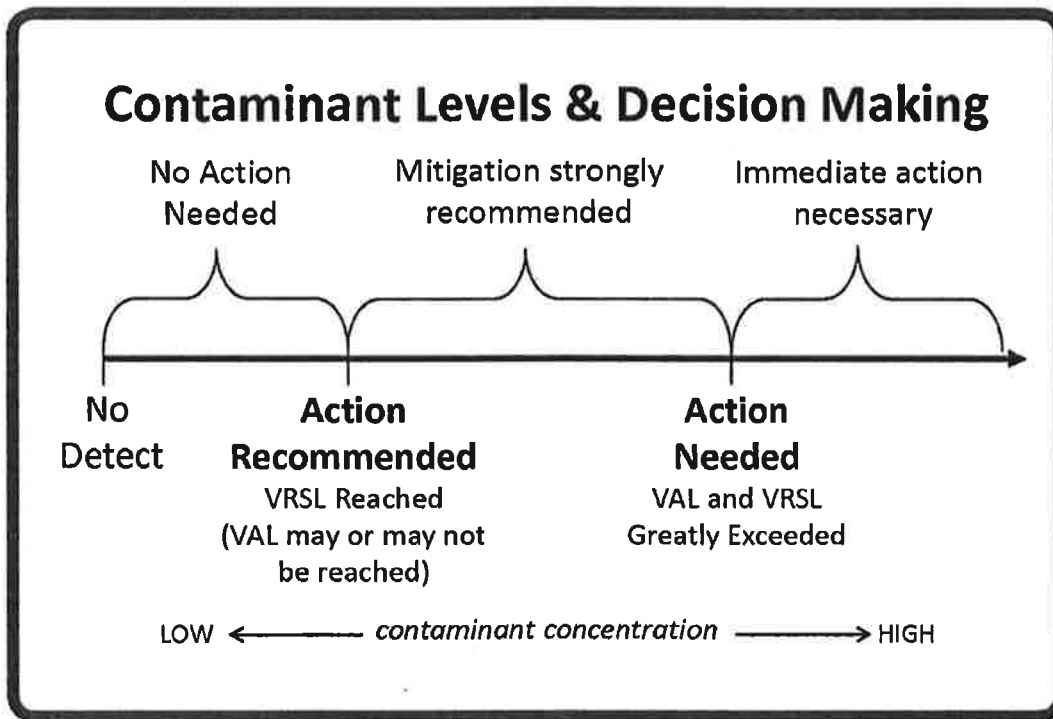
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as "screening levels."

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.



February 12, 2018

Rob Langdon
SCS Engineers
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Dear Rob Langdon:

Enclosed are the analytical results for sample(s) received by the laboratory on January 29, 2018. 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,

Megan McCabe
megan.mccabe@pacelabs.com
(612)607-1700
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, 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 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
Mississippi Certification #: MN00064
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 NwTPH 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
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10418569001	5605-Outdoor	Air	01/25/18 11:08	01/29/18 12:15
10418569002	5605-Bar	Air	01/25/18 11:09	01/29/18 12:15
10418569003	5605-Liquor Store	Air	01/25/18 11:13	01/29/18 12:15
10418569004	5605-Basement	Air	01/25/18 11:15	01/29/18 12:15
10418569005	5605-2nd Floor	Air	01/25/18 11:07	01/29/18 12:15

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SAMPLE ANALYTE COUNT

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10418569001	5605-Outdoor	TO-15	EMC	5	PASI-M
10418569002	5605-Bar	TO-15	EMC	5	PASI-M
10418569003	5605-Liquor Store	TO-15	EMC	5	PASI-M
10418569004	5605-Basement	TO-15	EMC	5	PASI-M
10418569005	5605-2nd Floor	TO-15	EMC	5	PASI-M

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ANALYTICAL RESULTS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Sample: 5605-Outdoor **Lab ID: 10418569001** Collected: 01/25/18 11:08 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.49	ug/m3	1.2	0.49	1.44		02/09/18 21:38	156-59-2	
trans-1,2-Dichloroethene	<0.42	ug/m3	1.2	0.42	1.44		02/09/18 21:38	156-60-5	
Tetrachloroethene	<0.41	ug/m3	0.99	0.41	1.44		02/09/18 21:38	127-18-4	
Trichloroethene	<0.39	ug/m3	0.79	0.39	1.44		02/09/18 21:38	79-01-6	
Vinyl chloride	<0.18	ug/m3	0.37	0.18	1.44		02/09/18 21:38	75-01-4	

Sample: 5605-Bar **Lab ID: 10418569002** Collected: 01/25/18 11:09 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.53	ug/m3	1.2	0.53	1.55		02/09/18 22:07	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.2	0.46	1.55		02/09/18 22:07	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.1	0.44	1.55		02/09/18 22:07	127-18-4	
Trichloroethene	<0.42	ug/m3	0.85	0.42	1.55		02/09/18 22:07	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.40	0.20	1.55		02/09/18 22:07	75-01-4	

Sample: 5605-Liquor Store **Lab ID: 10418569003** Collected: 01/25/18 11:13 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.55	ug/m3	1.3	0.55	1.61		02/09/18 22:33	156-59-2	
trans-1,2-Dichloroethene	<0.47	ug/m3	1.3	0.47	1.61		02/09/18 22:33	156-60-5	
Tetrachloroethene	<0.46	ug/m3	1.1	0.46	1.61		02/09/18 22:33	127-18-4	
Trichloroethene	<0.43	ug/m3	0.88	0.43	1.61		02/09/18 22:33	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.42	0.20	1.61		02/09/18 22:33	75-01-4	

Sample: 5605-Basement **Lab ID: 10418569004** Collected: 01/25/18 11:15 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.53	ug/m3	1.2	0.53	1.55		02/09/18 23:01	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.2	0.46	1.55		02/09/18 23:01	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.1	0.44	1.55		02/09/18 23:01	127-18-4	
Trichloroethene	<0.42	ug/m3	0.85	0.42	1.55		02/09/18 23:01	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.40	0.20	1.55		02/09/18 23:01	75-01-4	

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ANALYTICAL RESULTS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Sample: 5605-2nd Floor Lab ID: 10418569005 Collected: 01/25/18 11:07 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
cis-1,2-Dichloroethene	<0.53	ug/m3	1.2	0.53	1.55		02/09/18 23:28	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.2	0.46	1.55		02/09/18 23:28	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.1	0.44	1.55		02/09/18 23:28	127-18-4	
Trichloroethene	<0.42	ug/m3	0.85	0.42	1.55		02/09/18 23:28	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.40	0.20	1.55		02/09/18 23:28	75-01-4	

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QUALITY CONTROL DATA

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

QC Batch: 522249 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10418569001, 10418569002, 10418569003, 10418569004, 10418569005

METHOD BLANK: 2835447 Matrix: Air
Associated Lab Samples: 10418569001, 10418569002, 10418569003, 10418569004, 10418569005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.34	0.81	02/09/18 09:15	
Tetrachloroethene	ug/m3	<0.29	0.69	02/09/18 09:15	
trans-1,2-Dichloroethene	ug/m3	<0.30	0.81	02/09/18 09:15	
Trichloroethene	ug/m3	<0.27	0.55	02/09/18 09:15	
Vinyl chloride	ug/m3	<0.13	0.26	02/09/18 09:15	

LABORATORY CONTROL SAMPLE: 2835448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	40.3	35.6	88	70-136	
Tetrachloroethene	ug/m3	68.9	68.2	99	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	35.2	87	70-132	
Trichloroethene	ug/m3	54.6	49.8	91	70-135	
Vinyl chloride	ug/m3	26	23.2	89	70-141	

SAMPLE DUPLICATE: 2835940

Parameter	Units	10418421001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.46		25	
Tetrachloroethene	ug/m3	ND	<0.38		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.40		25	
Trichloroethene	ug/m3	ND	<0.36		25	
Vinyl chloride	ug/m3	ND	<0.17		25	

SAMPLE DUPLICATE: 2835941

Parameter	Units	10418421002 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.51		25	
Tetrachloroethene	ug/m3	ND	<0.43		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.44		25	
Trichloroethene	ug/m3	ND	<0.40		25	
Vinyl chloride	ug/m3	ND	<0.19		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.

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QUALIFIERS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

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 and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418569

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10418569001	5605-Outdoor	TO-15	522249		
10418569002	5605-Bar	TO-15	522249		
10418569003	5605-Liquor Store	TO-15	522249		
10418569004	5605-Basement	TO-15	522249		
10418569005	5605-2nd Floor	TO-15	522249		

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10418569



AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

30997 Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Program	
Company: <u>SCS Engineers</u>		Report To: <u>Robert Langdon</u>		Attention: <u>Robert Langdon</u>		<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	
Address: <u>2830 Dairy Drive</u> <u>MADISON, WI 53718</u>		Copy To:		Company Name: <u>SCS Engineers</u>		Location of Sampling by State: <u>WI</u>	
Email To: <u>R.Langdon@SCSEngineers.com</u>		Purchase Order No.:		Address: <u>2830 Dairy Drive, Madison, WI 53718</u>		Reporting Units: <input type="checkbox"/> ug/m ³ <input type="checkbox"/> mg/m ³ <input checked="" type="checkbox"/> PPMV <input type="checkbox"/> PPMW <input type="checkbox"/> Other	
Phone: <u>608-216-7529</u> Fax:		Project Name: <u>Former Antic Chemicals</u>		Pace Quote Reference:		Report Level: <u>II</u> <input type="checkbox"/> <u>III</u> <input type="checkbox"/> <u>IV</u> <input type="checkbox"/> <u>Other</u> <input type="checkbox"/>	
Requested Due Date/TAT:		Project Number: <u>25216186</u>		Pace Project Manager/Sales Rep.		Pace Profile #: <u>32630</u>	

ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes MEDIA CODE Tether Bag TB 1 Liter Summa Can 1LC 6 Liter Summa Can 6LC Low Volume Puff LVP High Volume Puff HVP Other PM10	MEDIA CODE	PID Reading (Client only)	COLLECTED				Canister Pressure (Initial Field - In Hg)	Canister Pressure (Final Field - In Hg)	Summa Can Number	Flow Control Number	Method: <input type="checkbox"/> PM10 <input type="checkbox"/> AC - Fixed Gas (%) <input type="checkbox"/> TO-3 BTEX <input type="checkbox"/> TO-15M (Methane) <input type="checkbox"/> TO-14 <input type="checkbox"/> TO-15 Full List VOCs <input type="checkbox"/> TO-15 Short List VOCs <input type="checkbox"/> TO-15 Short List BTEX <input type="checkbox"/> TO-15 Short List (other)	Pace Lab ID
					COMPOSITE START		COMPOSITE - END/DRAW							
					DATE	TIME	DATE	TIME						
1	5605- Outdoor	6LC	Ø	1-24-18	1153	1-25-18	1108	-29	-2	2369	0858	X	001	
2	5605- Bar	6LC	Ø	1-24-18	1219	1-25-18	1109	-30	-3	2184	0143		002	
3	5605- Liquor Store	6LC	Ø	1-24-18	1223	1-25-18	1113	-28	-4	2122	1418		003	
4	5605- Basement	6LC	Ø	1-24-18	1230	1-25-18	1115	-30	-4	2315	1371		004	
5	5605- 2 nd Floor	6LC	Ø	1-24-18	1241	1-25-18	1107	-30	-3	1651	1426		005	

Comments:
 Analyze for:
 PCE, TCE, Vinyl Chloride,
 cis 1,2-DCE, trans 1,2-DCE


RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
<u>Nath Harms / SCS</u>	<u>1-26-18</u>	<u>1115</u>	<u>Ullmann</u>	<u>1-29-18</u>	<u>1215</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Nath Harms
 Date: 1/26/18

temp in °C
 stored on ice
 velocity of Cooler
 please intact

Air Sample Condition Upon Receipt

Client Name: SCS Eng. Project #: _____

WO#: 10418569

 10418569

Courier: Fed Ex UPS Speedee Client
 Commercial Pace Other: _____

Tracking Number: 7476 3003 9772 / 9783

Optional: Proj. Due Date: _____ Proj. Name: _____

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): X Corrected Temp (°C): X Thermom. Used: 151401163
 G87A9155100842
 Temp should be above freezing to 6°C Correction Factor: X Date & Initials of Person Examining Contents: 1-29-18 JA

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: <u>Air Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <u>N</u> (list which samples)
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.

Samples Received:					Pressure Gauge # 10AIR26				
Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
Outdoor			-2	+5					
Bar			-4	"					
Liquor store			-5	"					
Basement			-4	"					
2nd Floor			-4	"					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: William Berg

Date: 1/29/18

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 containers)



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: 10418569
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418569001 ProjSampleNum: 10418569001 Date Collected: 01/25/18 11:08
 Client Sample ID: 5605-Outdoor Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.12	ppbv	0.3	0.12	02/09/18 21:38 EMC	156-59-2	
Tetrachloroethene	<0.059	ppbv	0.14	0.059	02/09/18 21:38 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.1	ppbv	0.3	0.1	02/09/18 21:38 EMC	156-60-5	
Trichloroethene	<0.071	ppbv	0.14	0.071	02/09/18 21:38 EMC	79-01-6	
Vinyl chloride	<0.069	ppbv	0.14	0.069	02/09/18 21:38 EMC	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.
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 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers
 Phone: 843.746.8525

Lab Project Number: 10418569
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418569002 ProjSampleNum: 10418569002 Date Collected: 01/25/18 11:09
 Client Sample ID: 5605-Bar Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.13	ppbv	0.3	0.13	02/09/18 22:07 EMC	156-59-2	
Tetrachloroethene	<0.064	ppbv	0.16	0.064	02/09/18 22:07 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 22:07 EMC	156-60-5	
Trichloroethene	<0.077	ppbv	0.16	0.077	02/09/18 22:07 EMC	79-01-6	
Vinyl chloride	<0.077	ppbv	0.15	0.077	02/09/18 22:07 EMC	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: 10418569
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418569003 ProjSampleNum: 10418569003 Date Collected: 01/25/18 11:13
 Client Sample ID: 5605-Liquor Store Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.14	ppbv	0.32	0.14	02/09/18 22:33 EMC	156-59-2	
Tetrachloroethene	<0.067	ppbv	0.16	0.067	02/09/18 22:33 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.12	ppbv	0.32	0.12	02/09/18 22:33 EMC	156-60-5	
Trichloroethene	<0.079	ppbv	0.16	0.079	02/09/18 22:33 EMC	79-01-6	
Vinyl chloride	<0.077	ppbv	0.16	0.077	02/09/18 22:33 EMC	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: 10418569
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418569004 ProjSampleNum: 10418569004 Date Collected: 01/25/18 11:15
 Client Sample ID: 5605-Basement Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.13	ppbv	0.3	0.13	02/09/18 23:01 EMC	156-59-2	
Tetrachloroethene	<0.064	ppbv	0.16	0.064	02/09/18 23:01 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 23:01 EMC	156-60-5	
Trichloroethene	<0.077	ppbv	0.16	0.077	02/09/18 23:01 EMC	79-01-6	
Vinyl chloride	<0.077	ppbv	0.15	0.077	02/09/18 23:01 EMC	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: 10418569
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418569005 ProjSampleNum: 10418569005 Date Collected: 01/25/18 11:07
 Client Sample ID: 5605-2nd Floor Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.13	ppbv	0.3	0.13	02/09/18 23:28 EMC	156-59-2	
Tetrachloroethene	<0.064	ppbv	0.16	0.064	02/09/18 23:28 EMC	127-18-4	
trans-1,2-Dichloroethene	<0.11	ppbv	0.3	0.11	02/09/18 23:28 EMC	156-60-5	
Trichloroethene	<0.077	ppbv	0.16	0.077	02/09/18 23:28 EMC	79-01-6	
Vinyl chloride	<0.077	ppbv	0.15	0.077	02/09/18 23:28 EMC	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: 10418569
Project Name: 25216186 Former Arctic Cleaner

PARAMETER FOOTNOTES



Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

February 12, 2018

Rob Langdon
SCS Engineers
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

Dear Rob Langdon:

Enclosed are the analytical results for sample(s) received by the laboratory on January 29, 2018. 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,

Megan McCabe
megan.mccabe@pacelabs.com
(612)607-1700
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, 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 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

Mississippi Certification #: MN00064

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 NwTPH 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

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25216186 Former Arctic Cleaner

Pace Project No.: 10418566

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10418566001	SS-7	Air	01/25/18 12:48	01/29/18 12:15
10418566002	SS-8	Air	01/25/18 13:28	01/29/18 12:15
10418566003	SS-9	Air	01/25/18 13:56	01/29/18 12:15

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SAMPLE ANALYTE COUNT

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10418566001	SS-7	TO-15	MLS	5	PASI-M
10418566002	SS-8	TO-15	MLS	5	PASI-M
10418566003	SS-9	TO-15	MLS	5	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

Sample: SS-7 **Lab ID: 10418566001** Collected: 01/25/18 12:48 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.61	ug/m3	1.4	0.61	1.79		02/09/18 23:11	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/m3	1.4	0.53	1.79		02/09/18 23:11	156-60-5	
Tetrachloroethene	<0.51	ug/m3	1.2	0.51	1.79		02/09/18 23:11	127-18-4	
Trichloroethene	<0.48	ug/m3	0.98	0.48	1.79		02/09/18 23:11	79-01-6	
Vinyl chloride	<0.23	ug/m3	0.47	0.23	1.79		02/09/18 23:11	75-01-4	

Sample: SS-8 **Lab ID: 10418566002** Collected: 01/25/18 13:28 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.61	ug/m3	1.4	0.61	1.79		02/09/18 23:45	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/m3	1.4	0.53	1.79		02/09/18 23:45	156-60-5	
Tetrachloroethene	36.0	ug/m3	1.2	0.51	1.79		02/09/18 23:45	127-18-4	
Trichloroethene	1.2	ug/m3	0.98	0.48	1.79		02/09/18 23:45	79-01-6	
Vinyl chloride	<0.23	ug/m3	0.47	0.23	1.79		02/09/18 23:45	75-01-4	

Sample: SS-9 **Lab ID: 10418566003** Collected: 01/25/18 13:56 Received: 01/29/18 12:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.69	ug/m3	1.6	0.69	2.01		02/10/18 00:19	156-59-2	
trans-1,2-Dichloroethene	<0.59	ug/m3	1.6	0.59	2.01		02/10/18 00:19	156-60-5	
Tetrachloroethene	12.9	ug/m3	1.4	0.58	2.01		02/10/18 00:19	127-18-4	
Trichloroethene	<0.54	ug/m3	1.1	0.54	2.01		02/10/18 00:19	79-01-6	
Vinyl chloride	<0.25	ug/m3	0.52	0.25	2.01		02/10/18 00:19	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

QC Batch: 522206 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10418566001, 10418566002, 10418566003

METHOD BLANK: 2835209 Matrix: Air
Associated Lab Samples: 10418566001, 10418566002, 10418566003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.34	0.81	02/09/18 12:19	
Tetrachloroethene	ug/m3	<0.29	0.69	02/09/18 12:19	
trans-1,2-Dichloroethene	ug/m3	<0.30	0.81	02/09/18 12:19	
Trichloroethene	ug/m3	<0.27	0.55	02/09/18 12:19	
Vinyl chloride	ug/m3	<0.13	0.26	02/09/18 12:19	

LABORATORY CONTROL SAMPLE: 2835210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	40.3	41.3	102	70-136	
Tetrachloroethene	ug/m3	68.9	69.7	101	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	42.3	105	70-132	
Trichloroethene	ug/m3	54.6	57.8	106	70-135	
Vinyl chloride	ug/m3	26	27.4	105	70-141	

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: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

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 and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
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: 25216186 Former Arctic Cleaner
Pace Project No.: 10418566

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10418566001	SS-7	TO-15	522206		
10418566002	SS-8	TO-15	522206		
10418566003	SS-9	TO-15	522206		

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AIR: CHAIN-OF-CUSTODY / Analytical Request Document

10418526

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

30997

Page: 1 of 1

Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: **SCS Engineers** Report To: **Robert Livengood** Attention: **Robert Livengood**
 Address: **2930 Davy Drive** Copy To: **SCS Engineers** Company Name: **SCS Engineers**
 Address: **2930 Davy Drive, MSN, WI 53716** Purchase Order No.: **32630** Project Name: **Former Arctic Chemical**
 Email: **ELivengood@scsengineers.com** Project Number: **8216116** Project Manager/Sales Rep: **Patrice Project Manager/Sales Rep.**
 Phone: **608-216-7529** For: **Patrice Project Manager/Sales Rep.** PACE Profile #:
 Requested Due Date/TAT: **3/26/16**

Section D Required Client Information
AIR SAMPLE ID
 Sample IDs MUST BE UNIQUE

Vials Media Codes: MEDIA CODE, TB, 1LC, 6LC, LVP, HVP, PK10
 Tester Bag, 1 Liter Summa Can, 6 Liter Summa Can, Low Volume Puff, High Volume Puff, Other

ITEM #	MEDIA CODE	COLLECTED		Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method:	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
		DATE	TIME									
1	66C	1-25-18	12:18	-30	-7	1730	1582	PM10	1	Y	Y	Y
2	66C	1-25-18	12:38	-30	-7	1488	1202	3C - Fixed Gas (%)	1	Y	Y	Y
3	66C	1-25-18	13:26	-29	-10	1834	6655	TO-3 BTEX	1	Y	Y	Y
4								TO-3M (Methane)				
5								TO-14				
6								TO-15 Full List VOCs				
7								TO-15 Short List VOCs				
8								TO-15 Short List BTEX				
9								TO-15 Short List (other)				
10								Other				
11												
12												

Comments: **PTD (ppb)**

RELINQUISHED BY / AFFILIATION: **Abby Horvath** DATE: **1-25-18** TIME: **11:38** ACCEPTED BY / AFFILIATION: **Abby Horvath** DATE: **1-29-18** TIME: **12:15**

SAMPLER NAME AND SIGNATURE: **Abby Horvath** DATE SIGNED (MM/DD/YYYY): **01/26/18**

Temp in °C: **1** Received on Ice: **Y/N** Custody Sealed Cooler: **Y/N** Samples Intact: **Y/N**


SS-7 = 649ppb
 SS-8 = 4206ppb
 SS-9 = 711, PBO ORIGINAL

PE, TCE, CIS 12DCE, CIS 12DCE, from 12DCE, GWSL Chalkridge

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

Page 9 of 14

FC046Rev.01, 03Feb2010

Air Sample Condition Upon Receipt
 Client Name: SCS Eng. Project #: **WO#: 10418566**
 Courier: Fed Ex UPS Speedee Client
 Commercial Pace Other: _____
 Tracking Number: 747630039783
 Barcode: 
 10418566

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): X Corrected Temp (°C): X Thermom. Used: 151401163
 G87A9155100842
 Temp should be above freezing to 6°C Correction Factor: X Date & Initials of Person Examining Contents: 1-29-18 AA
 Type of Ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: <u>At Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <input checked="" type="checkbox"/> N (list which samples)
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.

Samples Received: _____ Pressure Gauge # 10AIR26

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
55-7			-7.5	+5					
-8			-7.5	"					
-9			-10	"					

CLIENT NOTIFICATION/RESOLUTION
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____
 Field Data Required? Yes No

Project Manager Review: Walter Babery Date: 1/29/18
 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 containers)



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: 10418566
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418566001 ProjSampleNum: 10418566001 Date Collected: 01/25/18 12:48
 Client Sample ID: SS-7 Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.15	ppbv	0.35	0.15	02/09/18 23:11	MLS 156-59-2	
Tetrachloroethene	<0.074	ppbv	0.17	0.074	02/09/18 23:11	MLS 127-18-4	
trans-1,2-Dichloroethene	<0.13	ppbv	0.35	0.13	02/09/18 23:11	MLS 156-60-5	
Trichloroethene	<0.088	ppbv	0.18	0.088	02/09/18 23:11	MLS 79-01-6	
Vinyl chloride	<0.089	ppbv	0.18	0.089	02/09/18 23:11	MLS 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

Date: 2/12/2018

Page 1



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: 10418566
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418566002 ProjSampleNum: 10418566002 Date Collected: 01/25/18 13:28
 Client Sample ID: SS-8 Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Fnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.15	ppbv	0.35	0.15	02/09/18 23:45	MLS 156-59-2	
Tetrachloroethene	5.2	ppbv	0.17	0.074	02/09/18 23:45	MLS 127-18-4	
trans-1,2-Dichloroethene	<0.13	ppbv	0.35	0.13	02/09/18 23:45	MLS 156-60-5	
Trichloroethene	0.22	ppbv	0.18	0.088	02/09/18 23:45	MLS 79-01-6	
Vinyl chloride	<0.089	ppbv	0.18	0.089	02/09/18 23:45	MLS 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: 10418566
 Project Name: 25216186 Former Arctic Cleaner

Lab Sample No: 10418566003 ProjSampleNum: 10418566003 Date Collected: 01/25/18 13:56
 Client Sample ID: SS-9 Matrix: Air Date Received: 01/29/18 12:15

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
Air							
TO-15							
cis-1,2-Dichloroethene	<0.17	ppbv	0.4	0.17	02/10/18 0:19	MLS 156-59-2	
Tetrachloroethene	1.9	ppbv	0.2	0.084	02/10/18 0:19	MLS 127-18-4	
trans-1,2-Dichloroethene	<0.15	ppbv	0.4	0.15	02/10/18 0:19	MLS 156-60-5	
Trichloroethene	<0.099	ppbv	0.2	0.099	02/10/18 0:19	MLS 79-01-6	
Vinyl chloride	<0.096	ppbv	0.2	0.096	02/10/18 0:19	MLS 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: 10418566
Project Name: 25216186 Former Arctic Cleaner

PARAMETER FOOTNOTES

SUPPLEMENTAL REPORT
Units Conversion Request

Date: 2/12/2018

Page 4

Attachment C

Vapor Mitigation System Maintenance Plan

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN

Former Arctic Laundry and Cleaners

5619 22nd Avenue, Kenosha, Wisconsin

April 18, 2022

Property Located at: 5619 22nd Avenue, Kenosha, Wisconsin

WDNR BRRTS/Activity # 02-30-245843

Legal Description: COM ON E LINE OF 22ND AVE 105.43 FT N OF N LINE 57TH ST TH E 86 FT N 57 FT W 86 FT S 57 FT TO BEG BEING PT OF SW 1/4 SEC 31 T 2 R 23

Parcel ID # 12-223-31-354-013

INTRODUCTION

This document is the Maintenance Plan for an active vapor mitigation system (VMS) at the above-referenced property in accordance with the requirements of s. NR 724.13 (2), Wisconsin Administrative Code (Wis. Adm. Code). More site-specific information about this property may be found in:

- The case file in the Wisconsin Department of Natural Resources (WDNR) Southeast Region office.
- BRRTS on the Web (WDNR's internet-based database of contaminated sites) for the link to a PDF for site-specific information at the time of closure and on continuing obligations.
- RR Sites Map/GIS Registry layer for a map view of the site.
- The WDNR project manager for Kenosha County.

Descriptions

System Description, Purpose, and Location

The VMS was constructed for the 5619 22nd Avenue commercial (basement and first level) and residential (second level) building which was formerly operated as Arctic Laundry and Cleaners until the mid-1990s. The VMS was constructed by Allis Environmental Services and operation started up on November 21, 2018. The VMS was designed to reduce the potential for vapor intrusion by depressurizing the basement sub-slab where tetrachloroethylene (PCE) and trichloroethylene (TCE) vapors were detected in excess of the WDNR's vapor risk screening levels.

The sub-slab vapor at 5619 22nd Avenue originated from a release of PCE dry cleaning solvent during the building's former use as a dry cleaning and laundry business. The locations of various VMS components are shown on **Figure 1**.

System Design and Construction Documentation

Photographs of the VMS are included in **Attachment 1**. The VMS construction included the installation of two sub-slab vacuum pickup points. The pickup points were constructed with 2-inch-diameter and 3-inch-diameter schedule 40 PVC pipe and sealed into the basement floor. The PVC pipe was extended through the basement wall and above the roofline at the north side of the building. The basement sump was also sealed during VMS construction.

A Fantech Rn4EC-4 vacuum fan capable of producing up to approximately 20 cubic feet per minute flow at 4.75 inches of water column (WC) vacuum was installed in line with the exhaust piping which extended to the roof level.

Power was supplied to the fan inside the basement. The fan can be turned on and off at a breaker box or with a switch located on the fan.

A manometer was fitted to the northern pickup point to show vacuum at the pickup points and to check fan operation. At startup, the manometer read approximately 3.5 inches WC, which is at the upper end of the fan range (0 to 4.75 inches WC).

Additional fan details are provided in **Attachment 2**.

System Maintenance

Minimal operator control or maintenance is required. There are no service requirements for the fan. The fan status is checked using the manometer mounted on the pickup points.

The sump lid should be kept sealed to the sump pit. If the owner has a plumber or others work on the sump it needs to be properly re-sealed. The potential for vapor intrusion of vapors should be reevaluated if there are changes to the floor, HVAC system, sealed sump, or other changes that may influence the sub-slab vacuum distribution. If changes are made, pressure field extension testing of the sub-slab should be completed to make sure that adequate sub-slab vacuum is maintained.

Malfunctioning or damaged system components should be replaced as soon as possible, and any changes or repairs should be documented in the attached inspection and maintenance log (**Attachment 3**).

Inspections

The VMS manometer should be inspected monthly as follows:

- Inspect manometer:
 - If the manometer vacuum reads zero:
 - Check to make sure the tube from the manometer to the pickup point is properly seated and sealed into the manometer and pickup point. Reseat/reseal with silicone calk as necessary.
 - Check the on/off switch next to the fan and the circuit breaker to make sure the fan has power.

- If the manometer shows low vacuum (e.g., less than 1.5 inches of WC) check for vacuum leaks in the manometer tubing as noted above or pickup point piping and repair as necessary.
- If the fan vacuum cannot be rectified contact the WDNR Project Manager.
- Record manometer readings on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 3**).

The remaining items should be inspected at least once per year during the heating season (e.g., December) as follows:

- Inspect floors and maintain as necessary to prevent vapor migration and vacuum loss. Include an inspection of the sump seal integrity.
- Document repairs to the VMS, floors, or HVAC system on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 3**).
- Keep copies of the Vapor Mitigation System Inspection Log at the residence and available for submittal or inspection by WDNR representatives upon request.

Any system components found to be ineffective or malfunctioning need to be replaced immediately by a mitigation professional and the system recommissioned, documented, and stored on-site with the inspection information. Any changes need to be communicated with WDNR (ideally in advance).

A copy of the Maintenance Plan should be put in a plastic sleeve and zip-tied to the VMS piping.

Prohibition of Activities and Notification of WDNR Prior to Actions Affecting the VMS

The following activities are prohibited unless prior written approval has been obtained from the WDNR:

1. Shutdown or removal of the VMS.
2. Replacement of the VMS, other than replacement of the vacuum fan.
3. Construction or placement of a building or other structure.

If removal, replacement, or other changes are considered, the property owner will contact WDNR at least 45 days before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare, or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of WDNR.

Contact Information

Property Owner: John C Ekornaas Revocable Trust
5605 22nd Avenue
Kenosha, WI 53140

Consultant: Robert Langdon, SCS Engineers
2830 Dairy Drive
Madison, WI 53718
(608) 224-2830
rlangdon@scsengineers.com

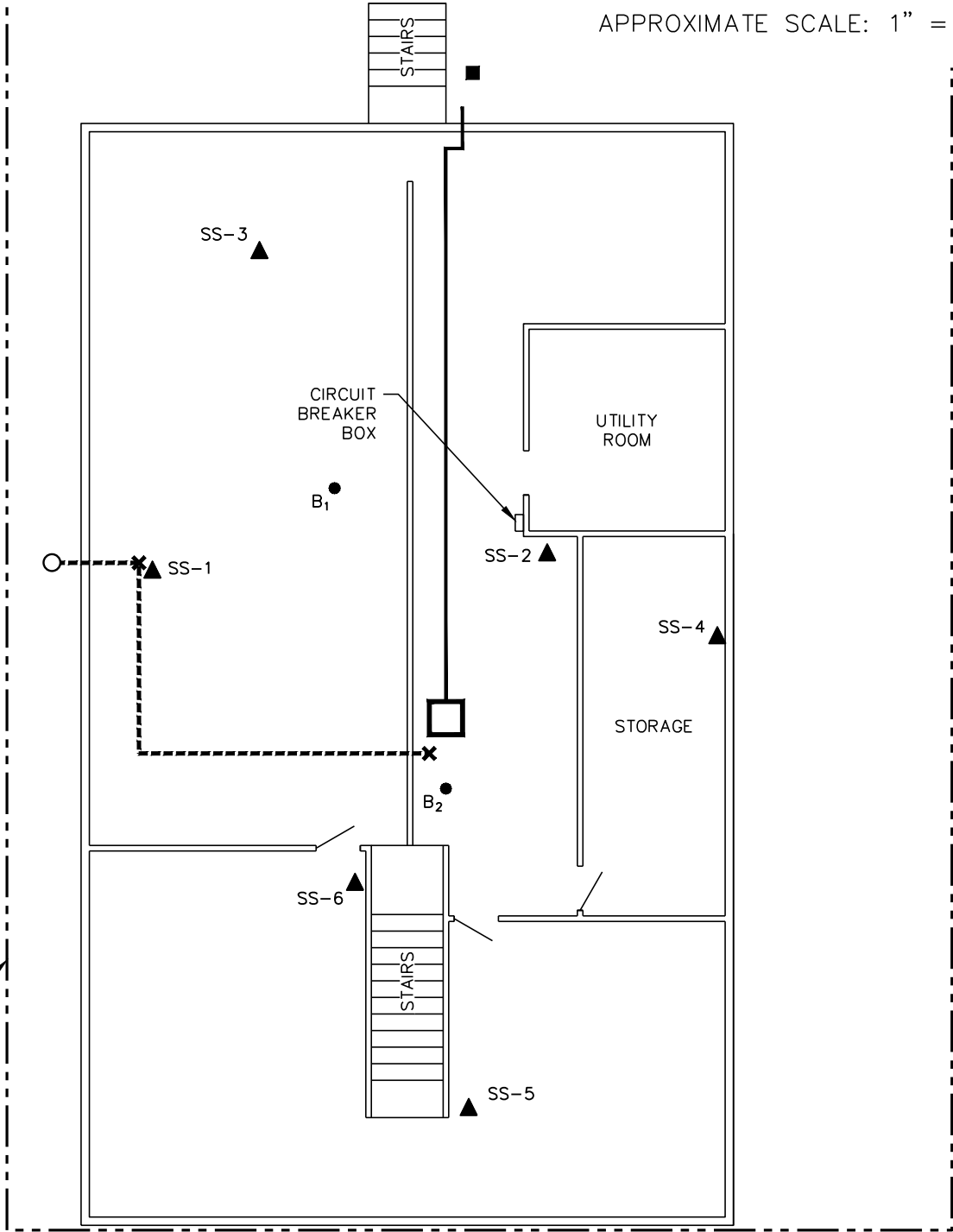
WDNR: Paul Grittner, WDNR
141 NW Barstow St, Room 180
Waukesha, WI 53188
(414)405-0764
Paul.Grittner@wisconsin.gov

FIGURE 1









Vapor Mitigation System – 5619 22nd Ave., Kenosha, WI



APPROXIMATE SCALE: 1" = 10'



LEGEND

- | | |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|  SUMP |  VAPOR MITIGATION SYSTEM PIPING |
|  SUB-SLAB VAPOR/VACUUM OBSERVATION POINT |  VAPOR MITIGATION SYSTEM FAN/EXHAUST |
|  INDOOR AMBIENT AIR TESTING LOCATION |  SUMP DISCHARGE LINE |
|  OUTDOOR AIR SAMPLE | B ₁ 02/17/2017 |
|  VAPOR MITIGATION SYSTEM PICKUP POIN | B ₂ 04/23/2021 |

CLIENT
STAFFORD ROSENBAUM, LLP.
222 WEST WASHINGTON AVENUE
MADISON, WI 53701

SITE
ARCTIC LAUNDRY AND CLEANERS
5619 22ND AVENUE
KENOSHA, WISCONSIN

VAPOR MITIGATION SYSTEM
5619 22ND AVE., KENOSHA, WI

PROJECT NO. 25216186.00
DRAWN: 04/06/2022
REVISED:

DRAWN BY: BWM
CHECKED BY: REL
APPROVED BY: REL 04/07/2022

ENGINEER

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

FIGURE
1

ATTACHMENT 1

Photos

Vapor Mitigation System Photos
Artic Laundry & Cleaners, 5619 22nd Avenue, Kenosha, Wisconsin
SCS Engineers Project #25216186.00



Photo 1: Looking southeast at vapor mitigation system (VMS) fan and exhaust line on north side of 5619 22nd Avenue building (former Arctic Laundry & Cleaners). 11/21/18



Photo 2: Looking at VMS fan and electrical connection. 11/21/18

Vapor Mitigation System Photos
Artic Laundry & Cleaners, 5619 22nd Avenue, Kenosha, Wisconsin
SCS Engineers Project #25216186.00



Photo 3: Looking north at ceiling from inside 5619 22nd Avenue at electrical connection and pipe to fan. 11/21/18



Photo 4: Looking east at northern pickup point and lateral to southern pickup point. 11/21/18

Vapor Mitigation System Photos
Artic Laundry & Cleaners, 5619 22nd Avenue, Kenosha, Wisconsin
SCS Engineers Project #25216186.00



Photo 5: Looking west at northern pickup point and lateral piping to southern pickup point. 11/21/18



Photo 6: Manometer on northern pickup point. 11/21/18

Vapor Mitigation System Photos
Artic Laundry & Cleaners, 5619 22nd Avenue, Kenosha, Wisconsin
SCS Engineers Project #25216186.00



Photo 7: Floor at northern pickup point.
11/21/18



Photo 8: Looking south at lateral piping to
southern pickup point. 11/21/18

Vapor Mitigation System Photos
Artic Laundry & Cleaners, 5619 22nd Avenue, Kenosha, Wisconsin
SCS Engineers Project #25216186.00



Photo 9: Looking northeast at southern pickup point (left side of photo) and sealed sump. 4/22/21

ATTACHMENT 2

Additional Fan Details

Installation and Operation Manual Manuel d'installation et d'opération

Item #: 142001
Rev Date: 2018-05-02

Rn4EC

Inline EC Radon Fan

Ventilateur pour radon en ligne EC



Technical / Customer Support:






Support technique et service à la clientèle


United States Tel.: 800.747.1762

Canada Tel.: 800.565.3548



fantech[®]
a systemair company

				
Note	Warning / Important note Avertissement / Note importante	Information	Technical information Information technique	Practical tip Conseil pratique

 **DO NOT CONNECT POWER SUPPLY until fan is completely installed.**
Make sure electrical service to the fan is in the locked "OFF" position.

1. Fantech recommends installation of this product by a trained, licensed, certified mitigation professional. Incorrect installation will void any and all product warranties or liability. Verification of safe/acceptable radon levels after installation is required.

Check your local code restrictions for additional safety measures that may be needed for proper code compliant installation.

2. This fan has rotating parts and safety precaution should be exercised during installation, operation and maintenance.

3. **WARNING! TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS - OBSERVE THE FOLLOWING:**


- a. Use this unit in the manner intended by the manufacturer. If you have any questions, contact your manufacturer's representative or contact us directly.
- b. **CAUTION:** Before installation, servicing or cleaning unit, switch power off at service panel and lock the service disconnection means to prevent power from being switched on accidentally. When the service disconnection means cannot be locked, securely fasten a prominent warning device, such as tag, to the panel.
- c. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- d. The combustion airflow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) and the local code authorities.
- e. When cutting or drilling into wall and ceiling, do not damage electrical wiring and other hidden utilities.
- f. Ducted fans must always be vented to the outdoors.

4. **WARNING!** Check voltage at the fan to see if it corresponds to the motor name plate.

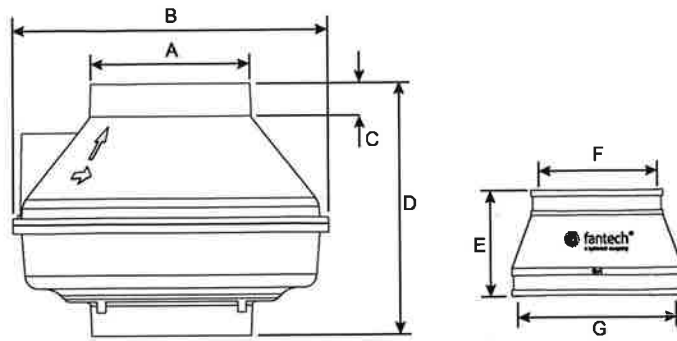
5. For radon mitigation use only. **DO NOT** use to exhaust hazardous or explosive materials and vapors.

6. Do not use this fan with any solid state speed control device.

GUARDS MUST BE INSTALLED WHEN FAN IS WITHIN REACH OF PERSONNEL OR WITHIN SEVEN (7) FEET OF WORKING LEVEL OR WHEN DEEMED ADVISABLE FOR SAFETY.

 The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated air flow.

DIMENSIONS



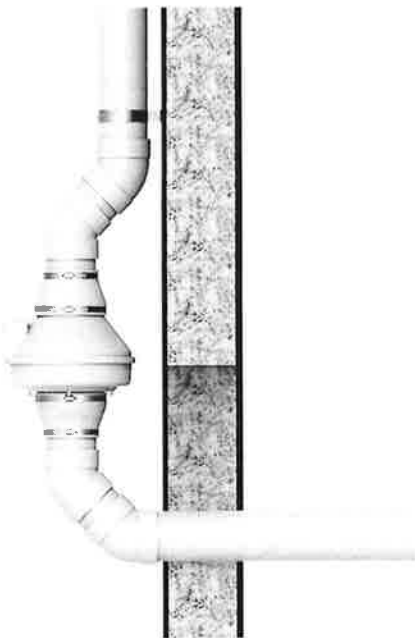
Model/ Modelo	A	B	C	D	E	F	G
Rn4EC-3	5 7/8 (149)	11 1/2 (292)	1 1/4 (32)	9 1/4 (235)	4 (102)	3 1/2 (89)	8 (152)
Rn4EC-4	5 7/8 (149)	11 1/2 (292)	1 1/4 (32)	9 1/4 (235)	4 (102)	4 1/2 (114)	8 (152)

Dimensions in inches (mm).
Dimensions en pouces (mm)

INSTALLATION

The Rn4EC-3 is designed for use with 3" schedule 40 PVC pipe.
The Rn4EC-4 is designed for use with 4" schedule 40 PVC pipe

Prior to installation, the suction pipe should be terminated at the exterior wall. The suction pipe should be installed with slight incline to drain water from the fan.

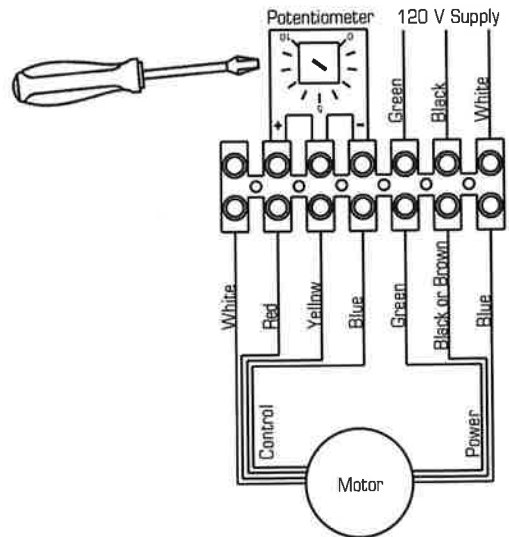


DO NOT connect fan directly to building structure

WIRING DIAGRAM



To reduce fan speed use a small screwdriver and turn potentiometer knob counter clockwise



WARRANTY

Five (5) Year Warranty

This warranty supersedes all prior warranties

DURING ENTIRE WARRANTY PERIOD:

Fantech will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling Fantech either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE

Limitation of Warranty and Liability

This warranty does not apply to any Fantech product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, or use under abnormal operating conditions or misapplication of the product or parts. We will not approve for payment any repair not made by us or our authorized agent without prior written consent. The foregoing shall constitute our sole and exclusive warranty and our sole exclusive liability, and is in lieu of any other warranties, whether written, oral, implied or statutory. There are no warranties which extend beyond the description on the page hereof. In no event, whether as a result of breach of contract, or warranty or alleged

END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:
 1. Improper maintenance
 2. Misuse, abuse, abnormal use, or accident, and
 3. Incorrect electrical voltage or current.
- Removal or any alteration made on the Fantech label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

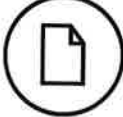




- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

negligence, defect incorrect advice or other causes, shall Fantech be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of equipment or any other associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of purchase for such damages. Fantech neither assumes or authorizes any person to assume for it any other liability in connection with the sale of product(s) or part(s). Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.

Warning

Fantech products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free from defects. Even reliable products will experience occasional failures and this possibility should be recognized by the user. If these products are used in a

life support ventilation system where failure could result in loss or injury, the user should provide adequate backup ventilation, supplementary natural ventilation, failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

				
Note	Avertissement / Note importante	Information	Information technique	Conseil pratique



NE PAS BRANCHER À L'ALIMENTATION ÉLECTRIQUE avant l'installation complète du ventilateur.
Assurez-vous que l'alimentation électrique du ventilateur est en position hors tension verrouillée (OFF).

- Fantech recommande l'installation de ce produit par un professionnel de l'atténuation formé, agréé et certifié. Une installation incorrecte entraînera l'annulation de toutes les garanties ou responsabilités du produit. La vérification des niveaux de radon sécuritaires / acceptables après l'installation est requise.
Vérifiez les restrictions de votre code local pour les mesures de sécurité supplémentaires qui peuvent être nécessaires pour une installation conforme au code approprié.
- Ce ventilateur comporte des pièces rotatives; il est essentiel de faire preuve de prudence pendant l'installation, le fonctionnement et l'entretien.
- AVERTISSEMENT! POUR RÉDUIRE LE RISQUE D'INCENDIE, D'ÉLECTROCUTION OU DE BLESSURES, VEUILLEZ RESPECTER LES RÈGLES SUIVANTES :**
 - Utilisez cet appareil de la manière prévue par le fabricant. Si vous avez des questions, communiquez avec le représentant du fabricant ou directement avec nous.
 - MISE EN GARDE :** Avant d'installer, de réparer ou de nettoyer l'appareil, coupez l'alimentation électrique au panneau de service et bloquez les dispositifs de sectionnement pour éviter que l'alimentation ne soit rétablie par accident. Si les dispositifs de sectionnement ne peuvent pas être bloqués, apposez une note d'avertissement bien visible, comme une étiquette, sur le panneau de service.
 - Tous les travaux relatifs à l'installation et aux fils électriques devraient être effectués par un technicien qualifié, conformément aux normes et aux règlements en vigueur, y compris les travaux de construction classés résistants au feu.
 - Le fonctionnement de cet appareil pourrait modifier la circulation d'air de combustion nécessaire au fonctionnement sécuritaire des appareils de combustion. Suivez les consignes du fabricant pour les appareils de chauffage et respectez les normes de sécurité comme celles établies par la National Fire Protection Association (NFPA), la American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) ainsi que les codes des autorités locales.
 - Lorsque vous coupez ou percez un mur ou un plafond pour l'installation de l'appareil, assurez-vous de ne pas endommager le câblage électrique et les autres services publics cachés.
 - Les conduits d'air des ventilateurs doivent toujours être éventés à l'extérieur.
- AVERTISSEMENT!** Vérifiez la tension du ventilateur pour confirmer qu'elle correspond à celle inscrite sur la plaque signalétique du moteur.
- Uniquement pour la mise en oeuvre de mesures d'atténuation du radon. **NE PAS** utiliser pour évacuer des vapeurs ou des substances dangereuses ou explosives.
- Ne pas utiliser cet appareil avec une commande de vitesse à semi-conducteurs.

DES DISPOSITIFS PROTECTEURS DOIVENT ÊTRE INSTALLÉS SI LE VENTILATEUR SE TROUVE À PORTÉE DE MEMBRES DU PERSONNEL OU À SEPT (7) PIEDS OU MOINS DU NIVEAU DE FONCTIONNEMENT OU LORSQU'ILS SONT JUGÉS NÉCESSAIRES POUR DES RAISONS DE SÉCURITÉ



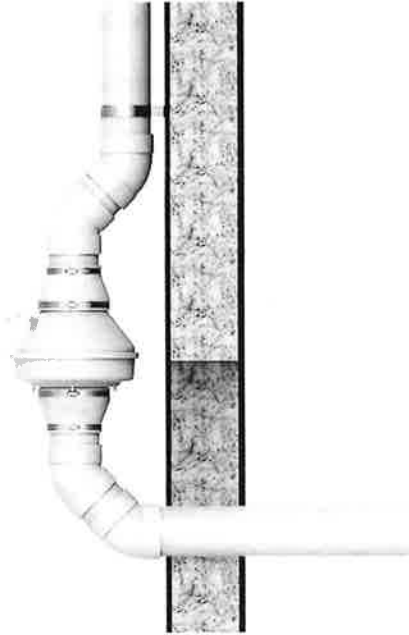
Le conduit de raccordement de ce ventilateur avec l'extérieur de l'immeuble a un effet important sur le débit d'air, le bruit et la consommation d'énergie du ventilateur. Veuillez utiliser le conduit le plus court et le plus droit possible pour obtenir un rendement optimal, et évitez d'installer des conduits plus petits que ceux recommandés pour le ventilateur. L'isolation autour des conduits peut réduire les pertes d'énergie et empêcher la moisissure. Les ventilateurs installés avec des conduits existants pourraient ne pas offrir le débit d'air nominal.

INSTALLATION

Le modèle Rn4EC-3 est conçu pour un usage avec des conduits de PVC de série 40 de 3 po.

Le modèle Rn4EC-4 est conçu pour un usage avec des conduits de PVC de série 40 de 4 po.

Avant l'installation, il faut prévoir une sortie pour le tuyau d'aspiration sur un mur extérieur. Le tuyau d'aspiration devrait être installé avec une pente légère pour drainer l'eau du ventilateur.

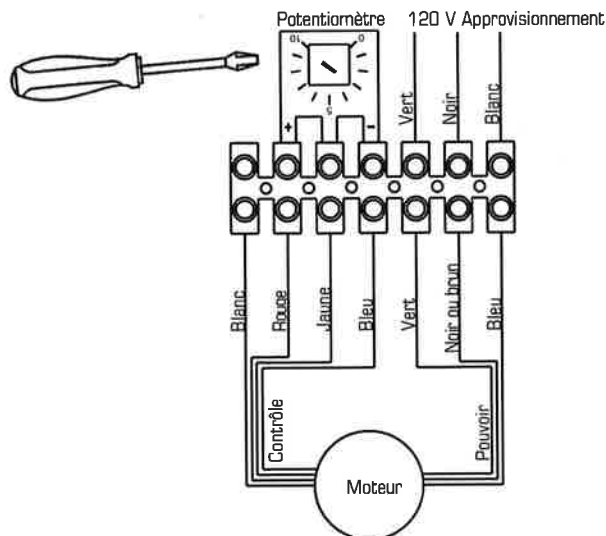


NE PAS attacher le ventilateur directement dans la structure du bâtiment.

SCHÉMA ÉLECTRIQUE



Pour réduire la vitesse du ventilateur, utilisez un petit tournevis et tournez le bouton du potentiomètre dans le sens inverse des aiguilles d'une montre.



GARANTIE

Garantie de 5 ans

Cette garantie remplace toutes les garanties précédentes.

DURANT TOUTE LA PÉRIODE DE GARANTIE:

Fantech s'engage à réparer ou à remplacer toute pièce présentant un défaut d'usine en matière de qualité d'exécution ou de matériau. Il sera peut être nécessaire de retourner le produit à l'usine Fantech, accompagné d'une copie du contrat de vente et du numéro d'autorisation de retour.

POUR RETOURNER UN PRODUIT À L'USINE, VOUS DEVEZ:

- Obtenir un numéro d'autorisation de retour; pour ce faire, communiquer avec Fantech aux États-Unis au numéro 1.800.747.1762, ou au Canada, au numéro 1.800.565.3548. Veuillez avoir votre contrat de vente à portée de la main.
- S'assurer que le numéro d'autorisation de retour est lisible sur l'extérieur de la boîte, sinon la boîte sera refusée.
- Toutes les pièces et/ou le produit seront réparés ou remplacés puis retournés à l'acheteur. Aucun crédit ne sera accordé.

OU

Le Distributeur peut commander une pièce ou un produit couvert par la garantie; la facture lui sera envoyée. Le distributeur ne sera crédité du montant de sa facture qu'après que le produit a été retourné port payé et qu'il a été trouvé défectueux.

LES TERMES DE LA GARANTIE DE Fantech NE PRÉVOIENT PAS DE REMPLACEMENT SANS FRAIS AVANT QUE LA PIÈCE OU LE PRODUIT DÉFECTUEUX AIT ÉTÉ INSPECTÉ. LES PRODUITS OU PIÈCES REMPLACÉS AVANT L'INSPECTION DE LA DÉFECTUOSITÉ SERONT FACTURÉS ET LE MONTANT DU CRÉDIT EST FONCTION DE L'INSPECTION DE LA PIÈCE OU DU PRODUIT RETOURNÉ. LE DISTRIBUTEUR NE DOIT PAS REMPLACER SANS FRAIS POUR

Limites de garanties et de responsabilités

Cette garantie ne s'applique à aucun produit de Fantech ou à aucune pièce détachée dont la défectuosité relève d'une erreur d'installation ou d'abus ou de mauvaise installation électrique ou dut à des modifications extérieures ou utilisées dans des conditions anormales ou encore une mauvaise installation du produit ou des pièces détachées. Nous n'approuverons aucun remboursement pour des réparations qui ne sont pas effectuées par un agent américain ou un agent autorisé sans un accord écrit. Ce dernier constituera notre seule et exclusive garantie et notre seule exclusive responsabilité et tient lieu de toute autre garantie ou bien écrite ou orale implicite ou statuaire. Aucune garantie ne s'appliquera au-delà des descriptions faites de la page ci-dessus. En aucun cas, que ce soit pour une rupture de contrat ou de garanties ou

Avertissement

Les produits de Fantech sont conçus et fabriqués pour produire des performances fiables, mais il n'y a aucune garantie qu'ils soient 100% sans défaut. Les plus produits les plus fiables ont occasionnellement des défectuosités et cette possibilité devraient être reconnu par les usagers. Si ces produits sont utilisés comme une source de ventilation ou leur panne risque de mettre en danger des vies humaines ou entraîner des

L'UTILISATEUR FINAL L'ÉQUIPEMENT DÉFECTUEUX RETOURNÉ PAR L'UTILISATEUR FINAL, CAR LE COMPTE DU DISTRIBUTEUR NE SERA CRÉDITÉ QU'APRÈS L'INSPECTION ET LA VÉRIFICATION PAR FANTECH DE LA DÉFECTUOSITÉ.

LES GARANTIES NE S'APPLIQUENT PAS DANS LES CAS SUIVANTS:

- Dommages dus au transport (dissimulés ou visibles). Les réclamations doivent être faites à la compagnie de fret.
- Dommages dus au mauvais câblage ou à l'installation inappropriée.
- Dommages ou défectuosité causés par une calamité naturelle ou résultant d'une procédure irrégulière de l'acheteur, notamment :
 1. Entretien irrégulier
 2. Mauvais usage, usage abusif, usage anormal ou accident
 3. Tension ou courant électrique incorrect
- Enlèvement ou toute modification du numéro de contrôle ou de la date de fabrication de l'étiquette Fantech
- Toute autre garantie expresse, écrite ou implicite, pour les dommages accidentels ou indirects, perte de biens, de recettes, manque à gagner ou coûts relatifs à la dépose, à l'installation ou à la réinstallation, en cas de violation de garantie.

CERTIFICATION DE LA GARANTIE:

- L'utilisateur doit conserver une copie du contrat de vente pour confirmer la date d'achat.
- Les présentes garanties vous donnent des droits spécifiques reconnus par la loi et sont régies par les lois sur la protection du consommateur appropriées. Il est possible que différents états offrent d'autres droits.

des dommages dut à la négligence ou a des conseils incorrects ou autres causes, Fantech ne pourra être tenu pour responsable des dommages particuliers ou consécutifs, incluant mais pas limités aux pertes et profits ou bénéfices perte de matériel ou autres matériels associés. Coût du capital, coût des équipements de remplacement, matériels ou services, coût de temps d'arrêt ou les réclamations des clients pour de tels dommages. Fantech ne délègue ou autorise aucune personne d'assumer sa responsabilité sur la vente du produit ou des pièces détachées. Certaines juridictions ne permettent pas l'exclusion de la limitation des dommages accidentels ou consécutifs ainsi ces limitations ci-dessus et les exclusions ne s'appliquent pas à vous.

blessures, les usagers devront avoir une source de ventilation de secours en addition à une ventilation naturelle, le défaut de système d'alarme ou la connaissance de ces conditions entraînent sa responsabilité envers de telles pertes ou blessures.

Fantech reserves the right to make technical changes.
For updated documentation please refer to www.fantech.net

Fantech se réserve le droit de faire des changements techniques. Pour de la documentation à jour, s'il vous plaît se référer au www.fantech.net

Fantech®

ATTACHMENT 3

Vapor Mitigation System Inspection Log

Notice: In accordance with s. NR 727.05(1)(b)3., Wis. Admin. Code, use of this form for documenting the inspections and maintenance of certain vapor-related continuing obligations is required. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31-19.39, Wis. Stats.].

Directions: This form was developed to provide the results of a site inspection of a vapor related continuing obligation, typically a vapor mitigation system. See the approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the approval letter. The letter may be found in the database, [BRRTS on the Web](#), by searching for the site using the BRRTS ID number and then looking in the "Action" section for code 56.

Activity (Site) Name: ARCTIC LAUNDRY & CLEANERS (FMR.) BRRTS No.: 02-30-245843

Address Being Inspected (e.g., 123 N. Main St.): 5619 22nd Avenue Date of Inspection: _____

Inspection Performed By (Name & Title/Company): _____

When submittal of this form is required, submit an electronic version or a scanned copy of this completed form to the [RR Submittal Portal](#).


HOW TO USE THIS FORM

The Activity (Site) Name, BRRTS No., Address Being Inspected and Date of Inspection entered above will auto-populate the table. Complete only the applicable rows/components. Check "Not Applicable" for components that do not apply. For example, if there is no sump sealed and vented as part of the system, check "Not Applicable" in the "NOTES" section for that component.

Multiple components: For systems with multiple components (e.g., two manometers or two fans), add an additional row for that component by clicking the "+" (plus) symbol at the end of the row. After a system component row is added, a "-" (minus) symbol is shown so the added row may be deleted.

Photos: Click on the placeholder photo shown in each row to replace it with your own site-specific photo. Site-specific photos are optional but strongly recommended. Enter specific details and observations within the "NOTES" section to assist the DNR in understanding status of the system components.

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	Date of Inspection:
NAME				WHAT TO FIX?
<p>Manometer or Differential Pressure Gauge</p>	<p>Measures differential pressure between vacuum side of vent pipe and indoor space.</p> <p>This measurement confirms there is a vacuum being pulled by the fan.</p>	<p>Liquid Level on Manometer or Gauge</p>	<p>Liquid level in manometer should be offset (not level with each other).</p>	<p>A change in liquid level indicates a change in the vacuum below foundation. This could be caused by failure of fan, blockage of vent pipe, change in water level below building, or other conditions.</p> <p>Hire a professional to identify cause and repair if needed.</p>

<p>PHOTO</p> 	<p>NOTES: (Record the reading on the gauge. Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>
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BRRTS No. 02-30-245843

Site Name: ARCTIC LAUNDRY & CLEANERS (FMR.)

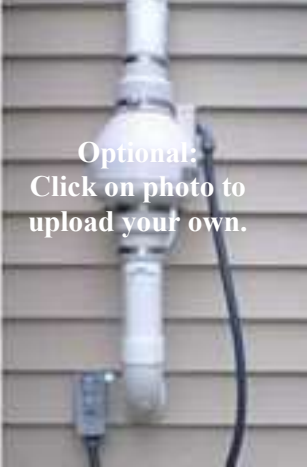
Address Being Inspected: 5619 22nd Avenue

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SYSTEM COMPONENT		Date of Inspection:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Fan	<p>Fan creates a vacuum and lowers pressure below foundation.</p> <p>The fan also removes soil gases from below foundation for discharge to atmosphere.</p>	<p>Fan Operation</p> <p>Fan Location</p> <p>Motor Noise</p>	<p>Fan is on.</p> <p>Fan mounted outside & secure.</p> <p>Fan motor is quiet (loud motor may indicate problem).</p>	<p>Replace the fan immediately once the fan stops running. Fans typically run for 10-20 years, but it may be less.</p> <p>Replacement fan to have similar specifications as original with respect to flow and vacuum.</p> <p>After a fan is replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p> <p>Original Fan Make and Model: Fantech Rn4EC-4</p>

<p>PHOTO</p>  <p style="text-align: center;">Optional: Click on photo to upload your own.</p>	<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>
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BRRTS No. 02-30-245843

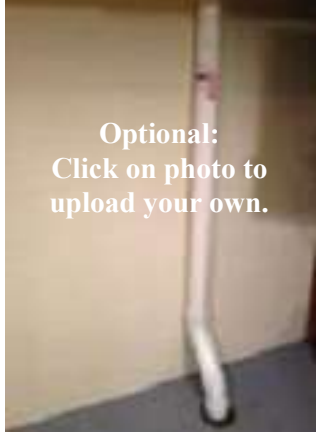
Site Name: ARCTIC LAUNDRY & CLEANERS (FMR.)

Address Being Inspected: 5619 22nd Avenue

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SYSTEM COMPONENT		Date of Inspection:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Suction Drop Point w/ Vent Pipe	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home.</p> <p>Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	Suction Point Seal	Seal is air tight around pipe penetration.	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear.</p> <p>If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
		Vent Pipe Condition	Vent pipe is connected to fan, has not cracked.	
<p>PHOTO</p>  <p>Optional: Click on photo to upload your own.</p>			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

BRRTS No. 02-30-245843

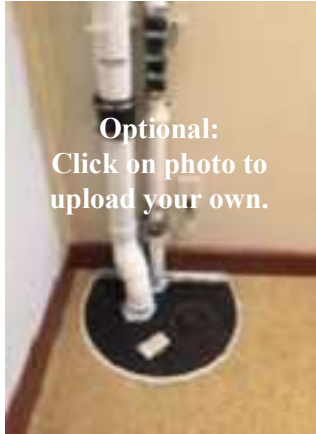
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Address Being Inspected: 5619 22nd Avenue

Vapor Mitigation System Inspection Log

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SYSTEM COMPONENT		Date of Inspection:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Sealed Sump w/Vent Pipe	Sump Cover: Soil gases are collected in sump and the cover prevents soil gas from getting inside home.	Suction Point Seal	Seal is airtight to floor.	Sump cover or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a plumber or a mitigation professional to verify effectiveness, which includes pressure readings.
	Vent Pipe: Pipe transports the soil gas from the sump for discharge to the atmosphere.	Vent Pipe Seal Condition	Vent pipe is connected to the sump cover and is not cracked.	
PHOTO			NOTES: (Identify specific building and location description:)	
			<input type="checkbox"/> Not Applicable	

BRRTS No. 02-30-245843

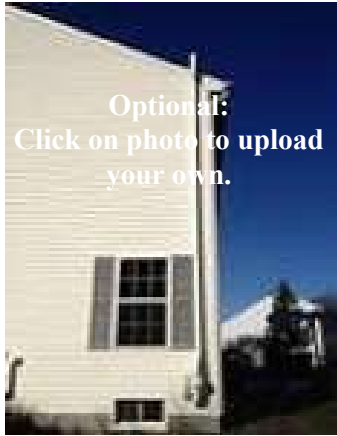
Site Name: ARCTIC LAUNDRY & CLEANERS (FMR.)

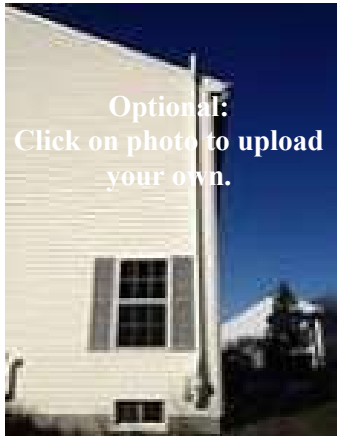
Address Being Inspected: 5619 22nd Avenue

Vapor Mitigation System Inspection Log

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SYSTEM COMPONENT		Date of Inspection:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Outdoor Vent Pipe	Pipe transports the soil gas from beneath the foundation for discharge to the atmosphere.	Vent Pipe Condition Vent Pipe Location	Vent pipe remains connected to fan. End of pipe free from obstructions. The exhaust is more than 15 feet from windows or air intakes.	Vent pipe may require replacement, or cleaning to remove ice or debris. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.
PHOTO			NOTES: (Identify specific building and location description:)	
			<input type="checkbox"/> Not Applicable	



Optional:
Click on photo to upload
your own.

BRRTS No. 02-30-245843


Site Name: ARCTIC LAUNDRY & CLEANERS (FMR.)

Address Being Inspected: 5619 22nd Avenue

Vapor Mitigation System Inspection Log

Form 4400-321 (R 03/22)

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SYSTEM COMPONENT		Date of Inspection:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Foundation Floor	Foundation is a barrier that minimizes soil gas entry into building, and helps fan to work efficiently.	Foundation Condition	No penetrating cracks or holes in foundation.	Seal cracks or other penetrations as you would to prevent water from entering.
		Foundation Footprint	Check if there have been alterations or additions to building or footprint.	If building floor plan has changed, notify DNR and contact a mitigation professional to evaluate if modifications to the vapor mitigation system are necessary.
PHOTO			NOTES: (Identify specific building and location description:)	
 <p>Optional: Click on photo to upload your own.</p>			<input type="checkbox"/> Not Applicable	

BRRTS No. 02-30-245843


Site Name: ARCTIC LAUNDRY & CLEANERS (FMR.)

Address Being Inspected: 5619 22nd Avenue

Vapor Mitigation System Inspection Log

Form 4400-321 (R 03/22)

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SYSTEM COMPONENT				Date of Inspection:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Sub Slab Vapor Port	This is a sample port to measure vacuum or take sample of soil gas if needed. It needs to remain sealed when not in use to prevent soil gas entry into the home.	Port Seal/Cap	If able to measure the vacuum with a micromanometer, the pressure differential should be at least 0.004 inches of H ₂ O or at least one Pascal.	Repair or replace the seal and cover as needed.
		Port Condition	Port is sealed and capped when not in use.	Permanently seal hole if sample port is ever removed.
PHOTO			<p>NOTES: (If taken, record the pressure differential reading. Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	
 <p>Optional: Click on photo to upload your own.</p>				