

January 29, 2021
File No. 25219179.00

Ms. Sarah Krueger
WDNR – NER
2984 Shawano Avenue
Green Bay, WI 54313

Subject: Interim Action Report for Vapor Mitigation System
Golden Flame Family Restaurant
2604 Custer Street, Manitowoc, WI
Susie's Restaurant Site, BRRTS #02-36-000516

Dear Ms. Krueger:

SCS Engineers (SCS) is providing the following Interim Action Report for a vapor mitigation system (VMS) installed at the Golden Flame Family Restaurant (Golden Flame), 2604 Custer Street, Manitowoc, Wisconsin. The report summarizes VMS construction details and required maintenance activities. The work was performed consistent with the Wisconsin Department of Natural Resources (WDNR) Scope of Work (SOW) dated August 26, 2019. The VMS was required due to elevated concentrations of trichloroethylene (TCE) detected in the Golden Flame indoor air and building sub-slab.

VAPOR MITIGATION SYSTEM CONSTRUCTION

The Golden Flame VMS was installed by Acura Services, LLC (Acura) of Oregon, Wisconsin, under the supervision of SCS. System details are provided on **Figure 1**. Photos of the VMS are included in **Attachment A**. The VMS is a sub-slab depressurization system designed to minimize migration of vapors into the building by creating a vacuum underneath the floor slab.

Acura constructed the VMS in October 2019. The work included replacing a submersible pump and sealing off the basement sump, construction of two vacuum pickup points, installation of pickup point piping and radon fan, electrical hookup for the fan, installation of VMS vacuum manometer and vacuum alarm, and sub-slab pressure field extension (PFE) testing to verify adequate sub-slab vacuum distribution. Additional details are provided in Acura's October 10, 2019, Post Mitigation Report, included in **Attachment B**. SCS installed three sub-slab vacuum observation points (VOP-1 through VOP-3) using Vapor Pin™ ports for PFE testing (**Figure 1**). The ports were installed using a handheld drill and set flush with the floor slab.

POST-MITIGATION TESTING

SCS conducted post-mitigation testing in December 2019 and February 2020. The testing included checking VMS operation, measuring sub-slab PFE, and performing indoor air sampling. The indoor air sampling included collection of one indoor air sample from the basement (IA-3) and two indoor air samples from the first floor (IA-4 and IA-5) per event. The samples were collected using laboratory-supplied 6-liter Summa canisters equipped with 8-hour flow controllers. The sample canisters were submitted under chain of custody to Pace Analytical of Minneapolis, Minnesota, for



analysis of tetrachloroethylene (PCE), TCE, cis-1,2-dichloroethylene (cis-1,2-DCE), trans-1,2-dichloroethylene (trans-1,2-DCE), and vinyl chloride by laboratory method TO-15. PFE vacuum readings are summarized in **Table 1**. Laboratory reports are included in **Attachment C**, and indoor air sample results, including pre- and post-mitigation results, are summarized in **Table 2**.

PFE testing shows very good vacuum distribution under the floor slab with vacuums ranging from -0.206 to -0.350 inches of water column (inches WC) vacuum. The PFE vacuums exceed WDNR's depressurization performance standard of -0.004 inches WC.

Indoor air sample results confirmed the presence of multiple volatile organic compounds in indoor air; however, none exceeded WDNR indoor air vapor action levels for small commercial buildings. TCE was detected in the basement IA-3 pre-mitigation and initial post-mitigation samples at concentrations in excess of the WDNR's residential indoor air vapor action level (VAL). TCE was not detected in the final IA-3 post-mitigation sample in excess of the residential VAL.

Based on the VMS commissioning testing, it appears that the VMS is functioning properly.

WASTE DISPOSAL

Concrete and sub-slab cuttings generated during installation of the VMS in October 2019 were containerized in a 55-gallon drum and stored on site at the Golden Flame for future disposal. The drum was approximately 1/8 full. When SCS returned in December 2019 the drum could not be located. SCS notified the WDNR of the missing drum.

OPERATION MONITORING AND MAINTENANCE

A VMS maintenance plan is provided in **Attachment D**.

Please contact Robert Langdon at (608) 212-3995 if you have any questions concerning this letter.

Sincerely,



Robert Langdon
Senior Project Manager
SCS Engineers



Mark R. Huber
Vice President
SCS Engineers

REL/lmh/MRH

cc: Colin Schmenk, WDNR
Josie Schultz, WDNR

Ms. Sarah Krueger

January 29, 2021

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Attachments: Table 1 – Pressure Field Extension Testing Results
Table 2 – Indoor Air Analytical Results Summary
Figure 1 – Vapor Mitigation System
Attachment A – Photos
Attachment B – Acura Post-Mitigation Report
Attachment C – Laboratory Reports
Attachment D – Maintenance Plan

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VMS_Final.docx

Tables

- 1 Pressure Field Extension Testing Results
- 2 Indoor Air Analytical Results Summary

**Table 1. Pressure Field Extension Testing Results
Golden Flame Family Restaurant - Manitowoc, Wisconsin
SCS Engineers Project #25219179.00**

Date	VMS Manometer	VOP-1	VOP-2	VOP-3
10/4/2019	1.40	-0.258	-0.225	-0.350
12/2/2019	1.25	-0.278	-0.285	-0.288
2/11/2020	1.00	-0.206	-0.210	-0.216
Performance Standard	NA	-0.004	-0.004	-0.004

Abbreviations:

VMS = Vapor Mitigation System

NA = Not Applicable

Notes:

Vacuums in inches of water.

VMS vacuum from manometer on pickup point 1.

Sub-slab vacuums for VOP-1 through VOP-3 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:	<u>REL</u>	Date:	<u>9/9/2020</u>
Last Rev by:	<u>REL</u>	Date:	<u>9/9/2020</u>
Checked by:	<u>LMH</u>	Date:	<u>9/9/2020</u>
Proj Mgr QA/QC:	<u>REL</u>	Date:	<u>9/9/2020</u>

I:\25219179.00\Deliverables\Interim Action Report\[Table 1 - Pressure Field Extension Testing Summary.xlsx]Vapor Intrusion

Table 2. Indoor Air Analytical Results Summary
Golden Flame Family Restaurant - Manitowoc, Wisconsin / SCS Engineers Project #25219179.00
 (Results are in µg/m³)

Sample	Location	Date	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,2-Dichloroethane (1,2-DCA)
CAS #	--	--	127-18-4	79-01-6	156-59-2	156-60-5	75-01-4	107-06-2
IA-3	Golden Flame Restaurant 2604 Custer (Basement)	8/7/2019	1.02	<u>4</u>	5.5	1.03	0.23 J	<u>1.25</u>
		12/3/2019	0.98 J	<u>4.1</u>	2.0	0.44 J	<0.19	NA
		2/11/2020	0.52 J	0.89	0.53 J	<0.46	<0.20	NA
IA-4	Golden Flame Restaurant 2604 Custer (Men's Restroom)	8/7/2019	<0.278	<0.237	<0.197	<0.231	<0.148	<0.24
		12/3/2019	<0.47	<0.38	<0.33	<0.42	<0.19	NA
		2/11/2020	0.57 J	<0.44	<0.38	<0.50	<0.22	NA
IA-5	Golden Flame Restaurant 2604 Custer (1st Floor)	8/7/2019	<0.278	<0.237	0.44 J	<0.231	<0.148	<0.24
		12/3/2019	<0.45	<0.36	<0.32	<0.41	<0.18	NA
		2/11/2020	0.75 J	<0.43	<0.37	<0.48	<0.21	NA
Residential Indoor Air Vapor Action Level			42	2.1	NE	NE	1.7	1.1
Small Commercial Indoor Air Vapor Action Level			180	8.8	NE	NE	28	4.7
Large Commercial/Industrial Indoor Air Vapor Action Level			180	8.8	NE	NE	28	4.7

Abbreviations:

µg/m³ = micrograms per cubic meter of air
 CAS # = Chemical Abstracts Service Number

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

NA = Not Analyzed
 NE = No Established Vapor Risk Screening Level

Notes:

1. Samples were collected in 6-liter summa canisters over 8-hour period for commercial buildings. Samples were analyzed using the USEPA TO-15 analytical method.
2. Indoor air Vapor Action Levels (VALs) from Wisconsin Department of Natural Resources (WDNR) WI Vapor Quick Look-Up Table, based on November 2017 USEPA Regional Screening Levels.
3. **Bold+underlined** values meet or exceed residential indoor air VALs.
4. **Bold+double underlined** values meet or exceed commercial indoor air VALs.

8/7/2019 sample collected by General Engineering Company.
 12/3/2019 and 2/11/2020 samples collected by SCS Engineers.

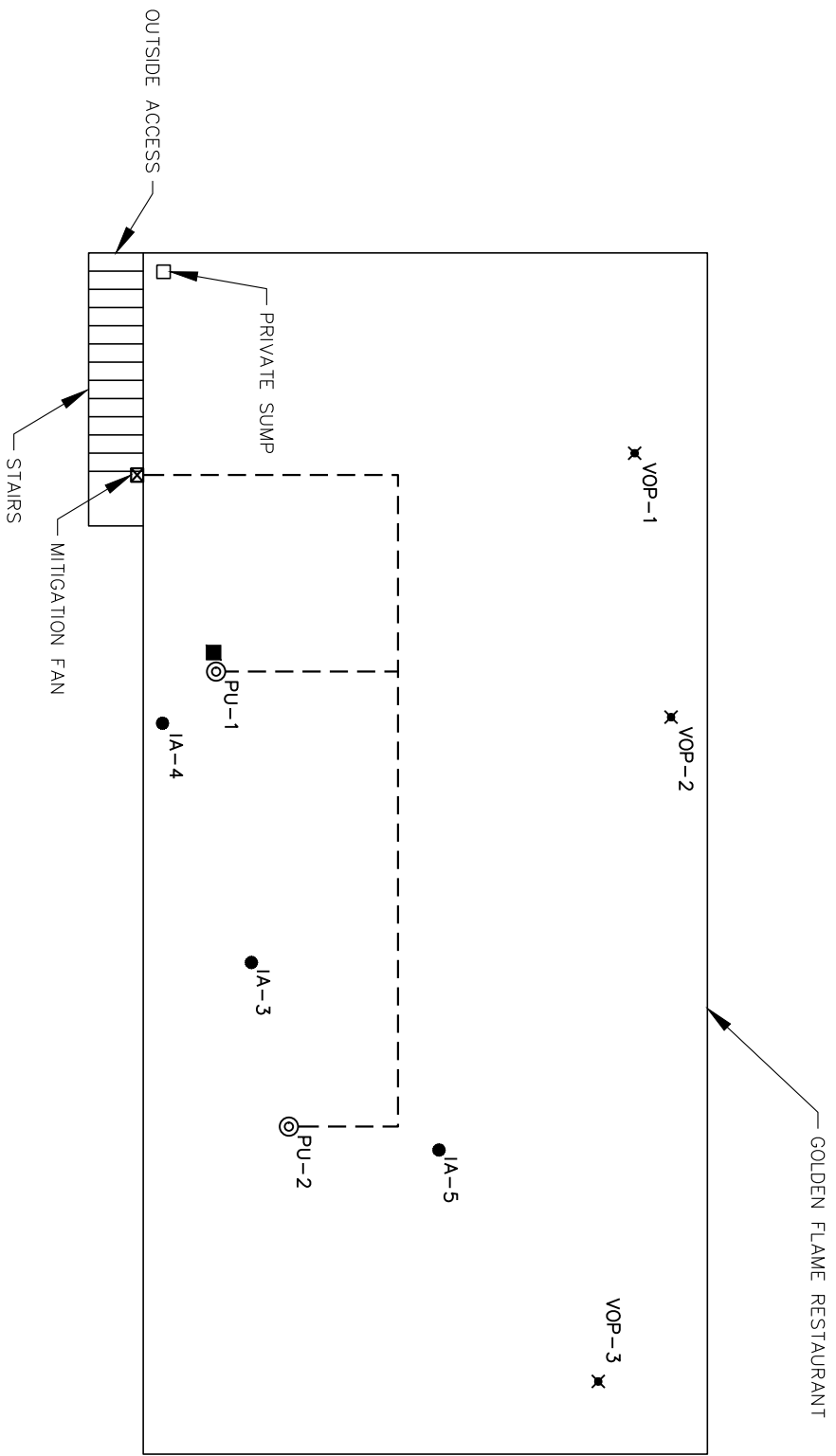
Laboratory Notes/Qualifiers:

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

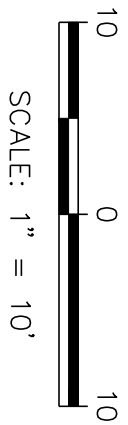
Created by:	<u>LMH</u>	Date:	<u>12/20/2019</u>
Last Rev by:	<u>LMH</u>	Date:	<u>2/19/2020</u>
Checked by:	<u>AJR</u>	Date:	<u>2/20/2020</u>
Proj Mgr QA/QC:	<u>REL</u>	Date:	<u>9/8/2020</u>



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Figure 1
Vapor Mitigation System



- LEGEND
- INDOOR AMBIENT AIR TESTING LOCATION
 - ⊙ VAPOR PICK-UP POINT
 - ⊗ VACUUM OBSERVATION POINT
 - VACUUM MANOMETER
 - - - 3" DIA. PVC MITIGATION PIPE



 <p>WISCONSIN DEPARTMENT OF NATURAL RESOURCES 2984 SHAWANO AVENUE GREEN BAY, WI 54313</p>	<p>SITE</p> <p>SUSIE'S RESTAURANT-LGU-WIDOT 1020 SOUTH 26TH STREET MANITOWOC, WISCONSIN</p>	<p>VAPOR MITIGATION SYSTEM GOLDEN FLAME RESTAURANT 2604 CUSTER STREET, MANITOWOC, WISCONSIN</p>	PROJECT NO. 25219179.00	DRAWN BY: KP	 <p>2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830</p>	FIGURE
			DRAWN: 01/30/2020	CHECKED BY: REL		1
REVISED: 09/08/2020	APPROVED BY: REL 09/08/2020	ENGINEER				

Attachment A

Photos

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 1: Excavation through floor slab at Pickup Point 1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 2: Excavation through floor slab at Pickup Point 2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 3: Seal and piping at Pickup Point 1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 4: Manometer and system alarm at Pickup Point 1.

**Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)**

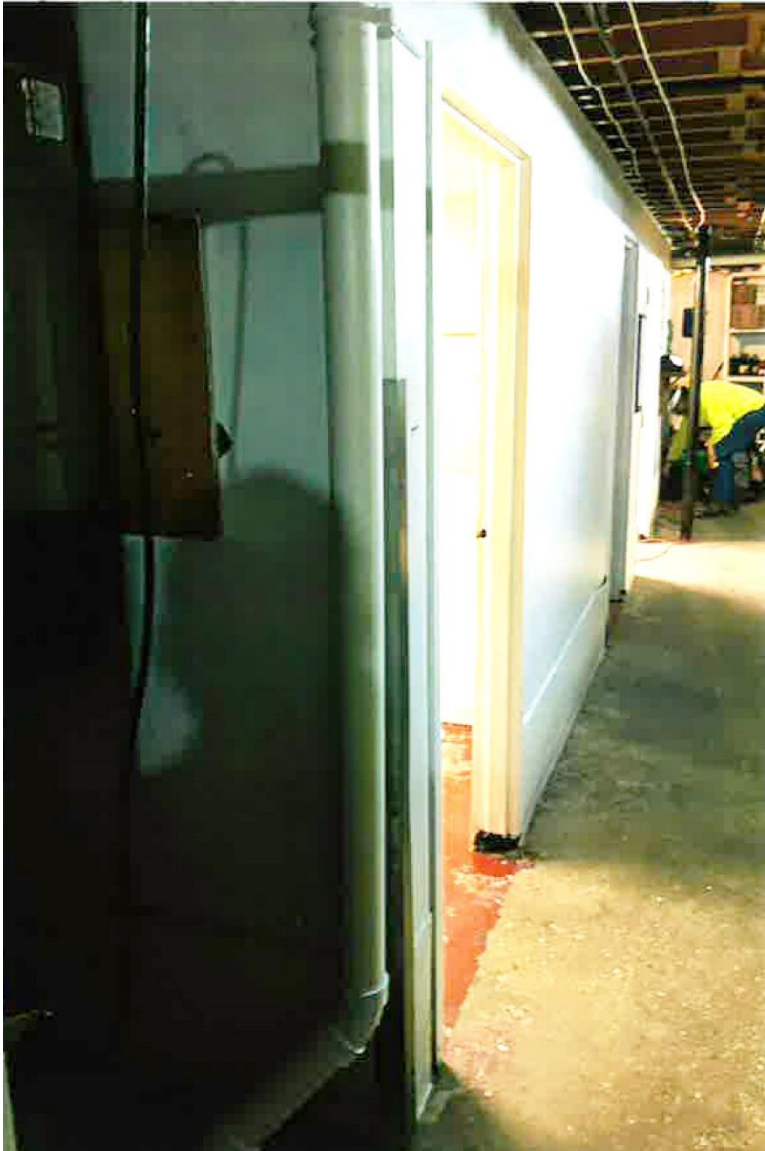


Photo 5: Pickup Point 2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 6: Piping run from Pickup Point 2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 7: Piping run from Pickup Point 1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 8: Sealed sump with ice machine and sump pump discharge lines.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)

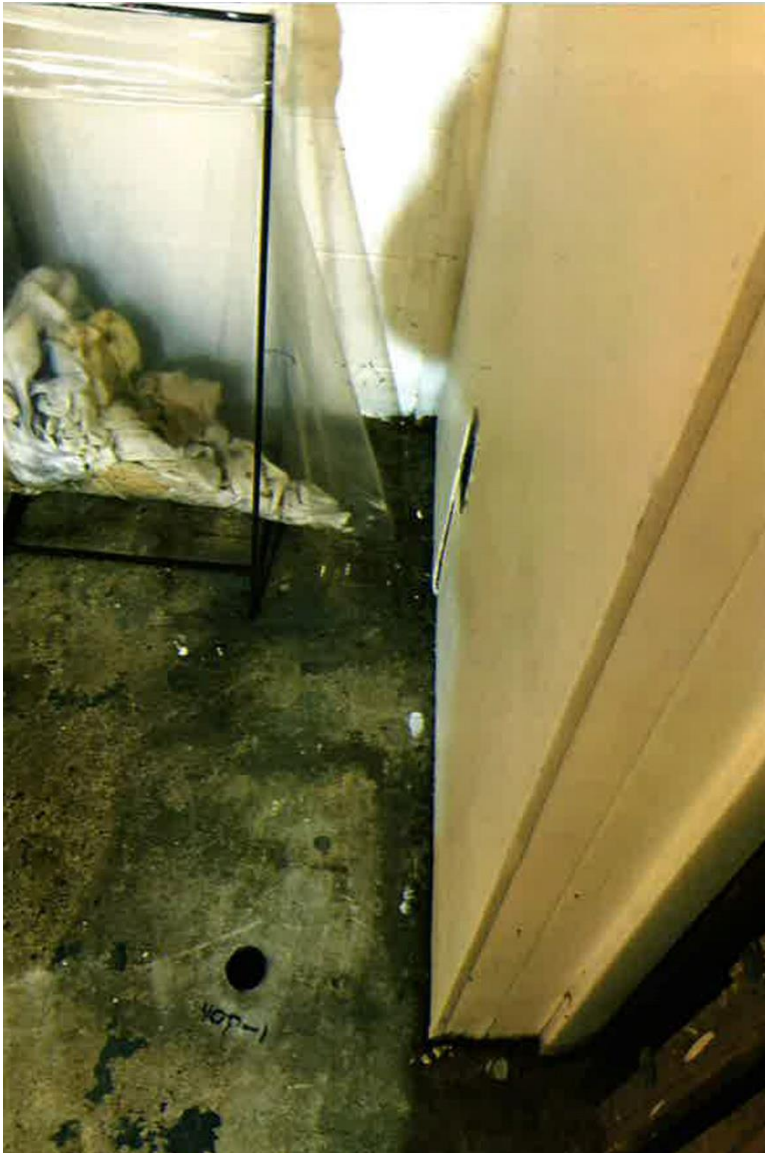


Photo 9: Sub-slab vacuum observation point VOP-1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 10: Sub-slab vacuum observation point VOP-2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 11: Sub-slab vacuum observation point VOP-3.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 12: Sub-slab vacuum in inches of water at VOP-1 following system startup.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 13: Sub-slab vacuum at VOP-2 following system startup.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 14: Sub-slab vacuum at VOP-3 following system startup.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 15: Vapor mitigation system fan and exhaust.

Attachment B
Acura Post-Mitigation Report



Soil Vapor & Radon Mitigation Services
Anthony G. Hendricks P.E.

October 10, 2019

Post Mitigation Report

Project: Golden Flame Restaurant
2604 Custer St.
Manitowoc, WI 54220
(920) 682-0880

Project Summary

Acura Services LLC installed a vapor mitigation systems (VMS) in the Golden Flame Restaurant October 3 and 4th 2019. Based on a pre bid meeting on site with the project manager Sarah Krueger of the Wisconsin DNR a decision was made to stay off the sub slab drainage system. Observations made of the sump indicated that the inlet pipes were frequently submerged making that system unlikely to provide effective sub slab communication. At the start of construction on October 3 communication testing was performed between the two proposed locations for pickup points. Communication testing indicated strong communication between the two points. A minus -0.062 inches WC was recorded in the communication testing.

The pickup points were opened and developed. The pickup points were connected with piping and the fan mounted outside. Discharge piping was run and the system was started up.

A new submersible sump pump was installed and the sump was sealed.

Vapor observation points were installed by SCS on October 3, 2019. These points were used to evaluate sub-slab vacuum distribution. After startup readings were taken with a micro manometer. All the readings demonstrated very strong negative numbers indicating that depressurization was achieved under the basement floor.

Soil Gas Pickup Point(s) (See drawing for approximate locations.)

Holes were opened in the concrete and gravel was found underneath. Four to six inches of material was moved from each hole. Below that the gravel was saturated with water. (It had rained heavily the night before and the sump was continually running.) The pickup points were covered with flat sump lids caulked and screwed down. A 3 by 4 hub was installed on each lid to connect the piping.

Pickup Point One: Designated PU-1 is approximately 23 feet from the North basement wall and 4 feet from the West basement wall.



Soil Vapor & Radon Mitigation Services

Anthony G. Hendricks P.E.

Pickup Point Two: Designated PU-2 is approximately 18 feet from the South basement wall and 8 feet from the West basement wall.

Mitigation System

Three (3) inch schedule 40 PVC was run up from each pickup point connected with a tee and run out of the building on the west side above the basement access door. The fan was mounted on an upturned elbow then piping run to above the eave for final discharge.

Connecting Piping

All pipe used to connect the pickup points to each other and ultimately to the fan is three inch schedule 40 PVC. A slope of approximately one quarter inch per foot was maintained between pickup points to allow condensation to drain. The fan was installed outside the building on the west side. The fan was mounted on an upturned elbow. Final discharge was run vertically to a least a foot above eave height.

Fan(s) Description

The fan is specially designed & fabricated for use in mitigation systems. The fan installed is an AMG Eagle; 160 watts, 1.37 amps max., 3150 rpm, capable of pulling 4.0 inches of W.C.

A manometer was installed on the riser pipe of PU 1. After startup the manometer read 1.4 inches of water column. Based on the fan curve and allowing for piping losses the fan is moving approximately 50 cfm..

Sealing Description

No sealing issues were observed on the basement floor.

Electrical

Electrical connection was made to the fan(s) with an on/off switch for servicing the fan. The electric was run through conduit to an electric panel. In the panel the circuit breaker is marked as mitigation fan.

Manometer(s)

A U-tube manometer to indicate operation was installed on the riser pipe on PU 1. A label with startup information and contact information was installed beside each manometer.



Soil Vapor & Radon Mitigation Services
Anthony G. Hendricks P.E.

System Alarm

A low pressure system alarm was mounted on the wall near PU-1 and connected to the vertical piping. An audible alarm goes off if the vacuum in the system drops to 0.25 inches water column or below.

Testing To Validate Performance

Three sub-slab vacuum observation points were installed by SCS (VOP-1, VOP-2, and VOP-3). These were used to take depressurization readings. (See drawing for approximate locations.)

VOP-1 Read minus - 0.258 inches WC. Is located about 11 feet from the back wall (north wall) and 4 feet off the east wall.

VOP-2 Read minus -0.225 inches WC. Is located about 41 feet from the front wall (south wall) and 2 feet from the east wall.

VOP-3 Read minus -0.350 inches WC. Is located about 4 feet from the front of the building (south wall) and 6 feet from the east wall.

Warranty

The fan comes with a manufacture's warranty for five years from date of startup. The startup date was written on a sticker affixed to the riser pipe along with installer, installer's phone number and initial inches of W.C.

Conclusion

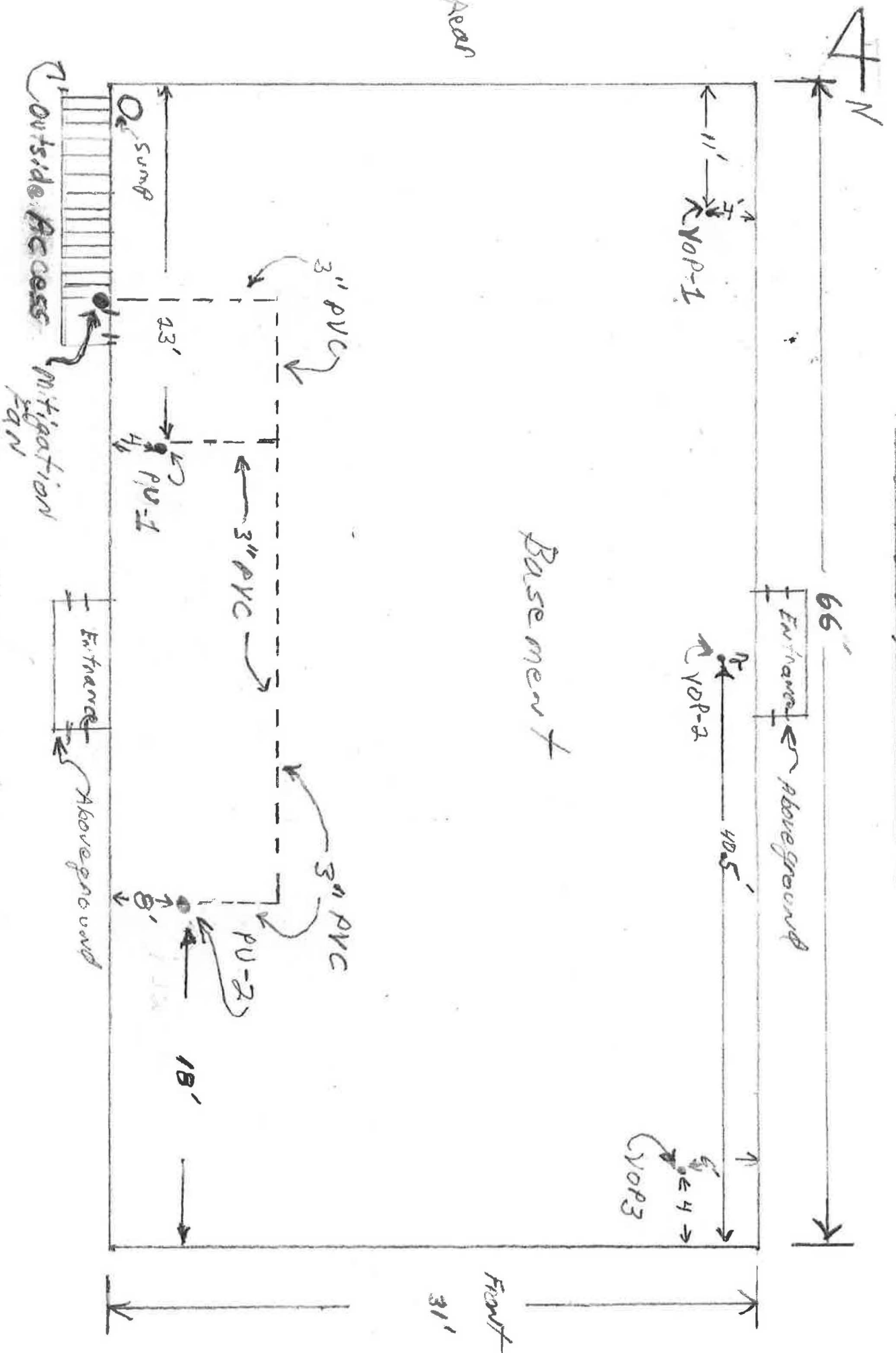
The final depressurization testing indicates that the sub slab mitigation system installed has successfully depressurized beneath the basement floor of the Golden Flame Restaurant.

Report Prepared by;

Anthony G. Hendricks P.E / Owner

Cc; Rob Langdon, SCS Engineers


Golden Flame Restaurant
Manassas, VA



Drawn By A. S. 7/4
10/9/19

Mitigation System
By Acuna Services LLC

Not to Scale



Attachment C
Laboratory Reports

December 16, 2019

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

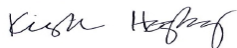
RE: Project: 25219179 Susie's Restaurant
Pace Project No.: 10501881

Dear Rob Langdon:

Enclosed are the analytical results for sample(s) received by the laboratory on December 06, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



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

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: 25219179 Susie's Restaurant

Pace Project No.: 10501881

Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01	Minnesota Dept of Ag Certification #: via MN 027-053-137
Alabama Certification #: 40770	Minnesota Petrofund Certification #: 1240
Alaska Contaminated Sites Certification #: 17-009	Mississippi Certification #: MN00064
Alaska DW Certification #: MN00064	Missouri Certification #: 10100
Arizona Certification #: AZ0014	Montana Certification #: CERT0092
Arkansas DW Certification #: MN00064	Nebraska Certification #: NE-OS-18-06
Arkansas WW Certification #: 88-0680	Nevada Certification #: MN00064
California Certification #: 2929	New Hampshire Certification #: 2081
CNMI Saipan Certification #: MP0003	New Jersey Certification #: MN002
Colorado Certification #: MN00064	New York Certification #: 11647
Connecticut Certification #: PH-0256	North Carolina DW Certification #: 27700
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137	North Carolina WW Certification #: 530
Florida Certification #: E87605	North Dakota Certification #: R-036
Georgia Certification #: 959	Ohio DW Certification #: 41244
Guam EPA Certification #: MN00064	Ohio VAP Certification #: CL101
Hawaii Certification #: MN00064	Oklahoma Certification #: 9507
Idaho Certification #: MN00064	Oregon Primary Certification #: MN300001
Illinois Certification #: 200011	Oregon Secondary Certification #: MN200001
Indiana Certification #: C-MN-01	Pennsylvania Certification #: 68-00563
Iowa Certification #: 368	Puerto Rico Certification #: MN00064
Kansas Certification #: E-10167	South Carolina Certification #:74003001
Kentucky DW Certification #: 90062	Tennessee Certification #: TN02818
Kentucky WW Certification #: 90062	Texas Certification #: T104704192
Louisiana DEQ Certification #: 03086	Utah Certification #: MN00064
Louisiana DW Certification #: MN00064	Vermont Certification #: VT-027053137
Maine Certification #: MN00064	Virginia Certification #: 460163
Maryland Certification #: 322	Washington Certification #: C486
Massachusetts Certification #: M-MN064	West Virginia DEP Certification #: 382
Massachusetts DWP Certification #: via MN 027-053-137	West Virginia DW Certification #: 9952 C
Michigan Certification #: 9909	Wisconsin Certification #: 999407970
Minnesota Certification #: 027-053-137	Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25219179 Susie's Restaurant
Pace Project No.: 10501881

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10501881001	MH 7-149	Air	12/03/19 10:24	12/06/19 13:30
10501881002	MH 7-142	Air	12/03/19 10:54	12/06/19 13:30
10501881003	MH 7-139	Air	12/03/19 11:13	12/06/19 13:30
10501881004	MH 7-143	Air	12/03/19 11:45	12/06/19 13:30
10501881005	MH 7-146	Air	12/03/19 12:17	12/06/19 13:30
10501881006	IA-1 2614 Custer bsmt.	Air	12/03/19 13:50	12/06/19 13:30
10501881007	IA-2 2614 Custer LR	Air	12/03/19 08:42	12/06/19 13:30
10501881008	IA-3 Golden Flame bsmt.	Air	12/03/19 14:40	12/06/19 13:30
10501881009	IA-4 Golden Flame Mens	Air	12/03/19 14:22	12/06/19 13:30
10501881010	IA-5 Golden Flame DR	Air	12/03/19 14:34	12/06/19 13:30
10501881011	IA-6 2616 Washington Up	Air	12/03/19 15:21	12/06/19 13:30
10501881012	IA-7 2616 Washington down	Air	12/03/19 15:23	12/06/19 13:30
10501881013	IA-8 1002 26th upstairs	Air	12/03/19 15:46	12/06/19 13:30
10501881014	IA-9 1002 26th down st.	Air	12/03/19 16:32	12/06/19 13:30
10501881015	IA-10 2525 Washington	Air	12/03/19 15:46	12/06/19 13:30
10501881016	Unused Can 0885	Air		12/06/19 13:30
10501881017	Unused Can 0317	Air		12/06/19 13:30
10501881018	VP-9 2525 Washington	Air	12/04/19 10:21	12/06/19 13:30
10501881019	Unused Can 1593	Air		12/06/19 13:30
10501881020	Unused Can 0147	Air		12/06/19 13:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 25219179 Susie's Restaurant

Pace Project No.: 10501881

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10501881001	MH 7-149	TO-15	AFV	5	PASI-M
10501881002	MH 7-142	TO-15	AFV	5	PASI-M
10501881003	MH 7-139	TO-15	AFV	5	PASI-M
10501881004	MH 7-143	TO-15	AFV	5	PASI-M
10501881005	MH 7-146	TO-15	AFV	5	PASI-M
10501881006	IA-1 2614 Custer bsmt.	TO-15	AFV	5	PASI-M
10501881007	IA-2 2614 Custer LR	TO-15	AFV	5	PASI-M
10501881008	IA-3 Golden Flame bsmt.	TO-15	AFV	5	PASI-M
10501881009	IA-4 Golden Flame Mens	TO-15	AFV	5	PASI-M
10501881010	IA-5 Golden Flame DR	TO-15	AFV	5	PASI-M
10501881011	IA-6 2616 Washington Up	TO-15	AFV	5	PASI-M
10501881012	IA-7 2616 Washington down	TO-15	AFV	5	PASI-M
10501881013	IA-8 1002 26th upstairs	TO-15	AFV	5	PASI-M
10501881014	IA-9 1002 26th down st.	TO-15	AFV	5	PASI-M
10501881015	IA-10 2525 Washington	TO-15	AFV	5	PASI-M
10501881018	VP-9 2525 Washington	TO-15	AFV	5	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25219179 Susie's Restaurant

Pace Project No.: 10501881

Sample: MH 7-149									
Lab ID: 10501881001									
Collected: 12/03/19 10:24									
Received: 12/06/19 13:30									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	179	ug/m3	1.6	0.44	2.02		12/11/19 05:05	156-59-2	
trans-1,2-Dichloroethene	38.0	ug/m3	1.6	0.58	2.02		12/11/19 05:05	156-60-5	
Tetrachloroethene	2.3	ug/m3	1.4	0.63	2.02		12/11/19 05:05	127-18-4	
Trichloroethene	371	ug/m3	11.0	5.1	20.2		12/11/19 13:26	79-01-6	
Vinyl chloride	7.7	ug/m3	0.53	0.25	2.02		12/11/19 05:05	75-01-4	

Sample: MH 7-142									
Lab ID: 10501881002									
Collected: 12/03/19 10:54									
Received: 12/06/19 13:30									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	37.3	ug/m3	1.6	0.44	2.02		12/11/19 05:35	156-59-2	
trans-1,2-Dichloroethene	8.4	ug/m3	1.6	0.58	2.02		12/11/19 05:35	156-60-5	
Tetrachloroethene	43.4	ug/m3	1.4	0.63	2.02		12/11/19 05:35	127-18-4	
Trichloroethene	74.0	ug/m3	1.1	0.51	2.02		12/11/19 05:35	79-01-6	
Vinyl chloride	1.9	ug/m3	0.53	0.25	2.02		12/11/19 05:35	75-01-4	

Sample: MH 7-139									
Lab ID: 10501881003									
Collected: 12/03/19 11:13									
Received: 12/06/19 13:30									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	6.1	ug/m3	1.6	0.44	2.02		12/11/19 06:04	156-59-2	
trans-1,2-Dichloroethene	1.3J	ug/m3	1.6	0.58	2.02		12/11/19 06:04	156-60-5	
Tetrachloroethene	12.9	ug/m3	1.4	0.63	2.02		12/11/19 06:04	127-18-4	
Trichloroethene	7.9	ug/m3	1.1	0.51	2.02		12/11/19 06:04	79-01-6	
Vinyl chloride	<0.25	ug/m3	0.53	0.25	2.02		12/11/19 06:04	75-01-4	

Sample: MH 7-143									
Lab ID: 10501881004									
Collected: 12/03/19 11:45									
Received: 12/06/19 13:30									
Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.41	ug/m3	1.5	0.41	1.87		12/11/19 06:34	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/m3	1.5	0.53	1.87		12/11/19 06:34	156-60-5	
Tetrachloroethene	<0.59	ug/m3	1.3	0.59	1.87		12/11/19 06:34	127-18-4	
Trichloroethene	<0.47	ug/m3	1.0	0.47	1.87		12/11/19 06:34	79-01-6	
Vinyl chloride	<0.24	ug/m3	0.49	0.24	1.87		12/11/19 06:34	75-01-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25219179 Susie's Restaurant
Pace Project No.: 10501881

Sample: MH 7-146 Lab ID: 10501881005 Collected: 12/03/19 12:17 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.42	ug/m3	1.6	0.42	1.94		12/11/19 07:03	156-59-2	
trans-1,2-Dichloroethene	<0.55	ug/m3	1.6	0.55	1.94		12/11/19 07:03	156-60-5	
Tetrachloroethene	41.9	ug/m3	1.3	0.61	1.94		12/11/19 07:03	127-18-4	
Trichloroethene	<0.49	ug/m3	1.1	0.49	1.94		12/11/19 07:03	79-01-6	
Vinyl chloride	<0.24	ug/m3	0.50	0.24	1.94		12/11/19 07:03	75-01-4	

Sample: IA-1 2614 Custer bsmt. Lab ID: 10501881006 Collected: 12/03/19 13:50 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.40	ug/m3	1.5	0.40	1.83		12/11/19 01:07	156-59-2	
trans-1,2-Dichloroethene	<0.52	ug/m3	1.5	0.52	1.83		12/11/19 01:07	156-60-5	
Tetrachloroethene	<0.57	ug/m3	1.3	0.57	1.83		12/11/19 01:07	127-18-4	
Trichloroethene	<0.46	ug/m3	1.0	0.46	1.83		12/11/19 01:07	79-01-6	
Vinyl chloride	<0.23	ug/m3	0.48	0.23	1.83		12/11/19 01:07	75-01-4	

Sample: IA-2 2614 Custer LR Lab ID: 10501881007 Collected: 12/03/19 08:42 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.40	ug/m3	1.5	0.40	1.83		12/10/19 22:08	156-59-2	
trans-1,2-Dichloroethene	<0.52	ug/m3	1.5	0.52	1.83		12/10/19 22:08	156-60-5	
Tetrachloroethene	<0.57	ug/m3	1.3	0.57	1.83		12/10/19 22:08	127-18-4	
Trichloroethene	<0.46	ug/m3	1.0	0.46	1.83		12/10/19 22:08	79-01-6	
Vinyl chloride	<0.23	ug/m3	0.48	0.23	1.83		12/10/19 22:08	75-01-4	

Sample: IA-3 Golden Flame bsmt. Lab ID: 10501881008 Collected: 12/03/19 14:40 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	2.0	ug/m3	1.2	0.33	1.49		12/10/19 23:08	156-59-2	
trans-1,2-Dichloroethene	0.44J	ug/m3	1.2	0.42	1.49		12/10/19 23:08	156-60-5	
Tetrachloroethene	0.98J	ug/m3	1.0	0.47	1.49		12/10/19 23:08	127-18-4	
Trichloroethene	4.1	ug/m3	0.81	0.38	1.49		12/10/19 23:08	79-01-6	
Vinyl chloride	<0.19	ug/m3	0.39	0.19	1.49		12/10/19 23:08	75-01-4	

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ANALYTICAL RESULTS

Project: 25219179 Susie's Restaurant

Pace Project No.: 10501881

Sample: IA-4 Golden Flame Mens Lab ID: 10501881009 Collected: 12/03/19 14:22 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.33	ug/m3	1.2	0.33	1.49		12/11/19 00:07	156-59-2	
trans-1,2-Dichloroethene	<0.42	ug/m3	1.2	0.42	1.49		12/11/19 00:07	156-60-5	
Tetrachloroethene	<0.47	ug/m3	1.0	0.47	1.49		12/11/19 00:07	127-18-4	
Trichloroethene	<0.38	ug/m3	0.81	0.38	1.49		12/11/19 00:07	79-01-6	
Vinyl chloride	<0.19	ug/m3	0.39	0.19	1.49		12/11/19 00:07	75-01-4	

Sample: IA-5 Golden Flame DR Lab ID: 10501881010 Collected: 12/03/19 14:34 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.32	ug/m3	1.2	0.32	1.44		12/11/19 00:37	156-59-2	
trans-1,2-Dichloroethene	<0.41	ug/m3	1.2	0.41	1.44		12/11/19 00:37	156-60-5	
Tetrachloroethene	<0.45	ug/m3	0.99	0.45	1.44		12/11/19 00:37	127-18-4	
Trichloroethene	<0.36	ug/m3	0.79	0.36	1.44		12/11/19 00:37	79-01-6	
Vinyl chloride	<0.18	ug/m3	0.37	0.18	1.44		12/11/19 00:37	75-01-4	

Sample: IA-6 2616 Washington Up Lab ID: 10501881011 Collected: 12/03/19 15:21 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.35	ug/m3	1.3	0.35	1.61		12/11/19 01:36	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.3	0.46	1.61		12/11/19 01:36	156-60-5	
Tetrachloroethene	0.68J	ug/m3	1.1	0.51	1.61		12/11/19 01:36	127-18-4	
Trichloroethene	0.55J	ug/m3	0.88	0.41	1.61		12/11/19 01:36	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.42	0.20	1.61		12/11/19 01:36	75-01-4	

Sample: IA-7 2616 Washington down Lab ID: 10501881012 Collected: 12/03/19 15:23 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.35	ug/m3	1.3	0.35	1.61		12/11/19 02:06	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.3	0.46	1.61		12/11/19 02:06	156-60-5	
Tetrachloroethene	0.61J	ug/m3	1.1	0.51	1.61		12/11/19 02:06	127-18-4	
Trichloroethene	0.66J	ug/m3	0.88	0.41	1.61		12/11/19 02:06	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.42	0.20	1.61		12/11/19 02:06	75-01-4	

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ANALYTICAL RESULTS

Project: 25219179 Susie's Restaurant

Pace Project No.: 10501881

Sample: IA-8 1002 26th upstairs Lab ID: 10501881013 Collected: 12/03/19 15:46 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.32	ug/m3	1.2	0.32	1.44		12/11/19 02:36	156-59-2	
trans-1,2-Dichloroethene	<0.41	ug/m3	1.2	0.41	1.44		12/11/19 02:36	156-60-5	
Tetrachloroethene	<0.45	ug/m3	0.99	0.45	1.44		12/11/19 02:36	127-18-4	
Trichloroethene	<0.36	ug/m3	0.79	0.36	1.44		12/11/19 02:36	79-01-6	
Vinyl chloride	<0.18	ug/m3	0.37	0.18	1.44		12/11/19 02:36	75-01-4	

Sample: IA-9 1002 26th down st. Lab ID: 10501881014 Collected: 12/03/19 16:32 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.32	ug/m3	1.2	0.32	1.44		12/11/19 03:05	156-59-2	
trans-1,2-Dichloroethene	<0.41	ug/m3	1.2	0.41	1.44		12/11/19 03:05	156-60-5	
Tetrachloroethene	<0.45	ug/m3	0.99	0.45	1.44		12/11/19 03:05	127-18-4	
Trichloroethene	<0.36	ug/m3	0.79	0.36	1.44		12/11/19 03:05	79-01-6	
Vinyl chloride	<0.18	ug/m3	0.37	0.18	1.44		12/11/19 03:05	75-01-4	

Sample: IA-10 2525 Washington Lab ID: 10501881015 Collected: 12/03/19 15:46 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.35	ug/m3	1.3	0.35	1.61		12/11/19 03:35	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.3	0.46	1.61		12/11/19 03:35	156-60-5	
Tetrachloroethene	<0.51	ug/m3	1.1	0.51	1.61		12/11/19 03:35	127-18-4	
Trichloroethene	<0.41	ug/m3	0.88	0.41	1.61		12/11/19 03:35	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.42	0.20	1.61		12/11/19 03:35	75-01-4	

Sample: VP-9 2525 Washington Lab ID: 10501881018 Collected: 12/04/19 10:21 Received: 12/06/19 13:30 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
cis-1,2-Dichloroethene	<0.35	ug/m3	1.3	0.35	1.61		12/11/19 04:05	156-59-2	
trans-1,2-Dichloroethene	<0.46	ug/m3	1.3	0.46	1.61		12/11/19 04:05	156-60-5	
Tetrachloroethene	<0.51	ug/m3	1.1	0.51	1.61		12/11/19 04:05	127-18-4	
Trichloroethene	<0.41	ug/m3	0.88	0.41	1.61		12/11/19 04:05	79-01-6	
Vinyl chloride	<0.20	ug/m3	0.42	0.20	1.61		12/11/19 04:05	75-01-4	

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QUALITY CONTROL DATA

Project: 25219179 Susie's Restaurant

Pace Project No.: 10501881

QC Batch: 649172 Analysis Method: TO-15
 QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
 Associated Lab Samples: 10501881001, 10501881002, 10501881003, 10501881004, 10501881005, 10501881006, 10501881007, 10501881008, 10501881009, 10501881010, 10501881011, 10501881012, 10501881013, 10501881014, 10501881015, 10501881018

METHOD BLANK: 3491709 Matrix: Air
 Associated Lab Samples: 10501881001, 10501881002, 10501881003, 10501881004, 10501881005, 10501881006, 10501881007, 10501881008, 10501881009, 10501881010, 10501881011, 10501881012, 10501881013, 10501881014, 10501881015, 10501881018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.22	0.81	12/10/19 15:12	
Tetrachloroethene	ug/m3	<0.31	0.69	12/10/19 15:12	
trans-1,2-Dichloroethene	ug/m3	<0.28	0.81	12/10/19 15:12	
Trichloroethene	ug/m3	<0.25	0.55	12/10/19 15:12	
Vinyl chloride	ug/m3	<0.13	0.26	12/10/19 15:12	

LABORATORY CONTROL SAMPLE: 3491710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	41.9	42.8	102	70-130	
Tetrachloroethene	ug/m3	70.3	69.4	99	70-130	
trans-1,2-Dichloroethene	ug/m3	41.5	41.6	100	70-130	
Trichloroethene	ug/m3	56.3	57.8	103	70-130	
Vinyl chloride	ug/m3	28.1	25.9	92	70-130	

SAMPLE DUPLICATE: 3492715

Parameter	Units	10501881007 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.40	<0.40		25	
Tetrachloroethene	ug/m3	<0.57	<0.57		25	
trans-1,2-Dichloroethene	ug/m3	<0.52	<0.52		25	
Trichloroethene	ug/m3	<0.46	<0.46		25	
Vinyl chloride	ug/m3	<0.23	<0.23		25	

SAMPLE DUPLICATE: 3492716

Parameter	Units	10501881008 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	2.0	2.0	0	25	
Tetrachloroethene	ug/m3	0.98J	0.97J		25	
trans-1,2-Dichloroethene	ug/m3	0.44J	<0.42		25	
Trichloroethene	ug/m3	4.1	4.2	2	25	
Vinyl chloride	ug/m3	<0.19	<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: 25219179 Susie's Restaurant

Pace Project No.: 10501881

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25219179 Susie's Restaurant
Pace Project No.: 10501881

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10501881001	MH 7-149	TO-15	649172		
10501881002	MH 7-142	TO-15	649172		
10501881003	MH 7-139	TO-15	649172		
10501881004	MH 7-143	TO-15	649172		
10501881005	MH 7-146	TO-15	649172		
10501881006	IA-1 2614 Custer bsmt.	TO-15	649172		
10501881007	IA-2 2614 Custer LR	TO-15	649172		
10501881008	IA-3 Golden Flame bsmt.	TO-15	649172		
10501881009	IA-4 Golden Flame Mens	TO-15	649172		
10501881010	IA-5 Golden Flame DR	TO-15	649172		
10501881011	IA-6 2616 Washington Up	TO-15	649172		
10501881012	IA-7 2616 Washington down	TO-15	649172		
10501881013	IA-8 1002 26th upstairs	TO-15	649172		
10501881014	IA-9 1002 26th down st.	TO-15	649172		
10501881015	IA-10 2525 Washington	TO-15	649172		
10501881018	VP-9 2525 Washington	TO-15	649172		

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WO#: 10501881



10501881

R: CHAIN-OF-CUSTODY / Analytical Request Document

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

48291

Page: 1 of 2

Section A

Required Client Information:

Section B

Required Project Information:

Invoice Information:

Company: SCS Engineers	Report To: Robert Langdon	Attention: Robert Langdon
Address: 2830 Dairy Drive Madison WI 53718	Copy To:	Company Name: SCS Engineers
Email To: rlangdon@scseng.com	Purchase Order No.:	Address: 2830 Dairy Drive, Madison WI
Phone: 608-216-7329 Fax: 608-224-2839	Project Name: Susie's Restaurant	Pace Quote Reference:
Requested Due Date/TAT:	Project Number: 25219179	Pace Project Manager/Sales Rep.
		Pace Profile #:

Program	
<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 checked="" type="checkbox"/> Dry Clean <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Location of Sampling by State: WI	Reporting Units ug/m ³ _____ PPBV _____ PPMV _____ Other _____
Report Level: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> Other	

ITEM #	Section D Required Client Information		COLLECTED				Canister Pressure (Initial Field - In Hg)	Canister Pressure (Final Field - In Hg)	Summa Can Number	Flow Control Number	Method:									
	AIR SAMPLE ID		COMPOSITE START		COMPOSITE - END/GRAB						PM10	3c - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated		
	Sample IDs MUST BE UNIQUE		DATE	TIME	DATE	TIME														
	MEDIA CODE	PID Reading (Client only)	DATE	TIME	DATE	TIME														
1	MH 7-149	ILC 23	12/3/19	10:49	12/3/19	10:24	29	7	2496	1177									✓	601
2	MH 7-142	ILC 0	12/3/19	10:49	12/3/19	10:54	28	6	1016	2822									✓	602
3	MH 7-139	ILC 0	12/3/19	11:08	12/3/19	11:23	29	7	3283	0708									✓	603
4	MH 7-143	ILC 0	12/3/19	11:40	12/3/19	11:45	29	5	2575	1698									✓	604
5	MH 7-146	ILC 0	12/3/19	12:12	12/3/19	12:17	28	6	2237	1823									✓	605
6	IA-1 2614 Custer bsmt.	GLC 0	12/2/19	13:47	12/3/19	13:50	30	10	0291	0260									✓	606
7	IA-2 2614 Custer LR	GLC -	12/2/19	13:49	12/3/19	8:42	20	0	0803	1350									✓	607
8	IA-3 Golden Flame bsmt.	GLC 0	12/3/19	6:38	12/3/19	14:40	28	4	2710	1986									✓	608
9	IA-4 Golden Flame Mens	GLC 0	12/3/19	6:20	12/3/19	14:22	30	3	2298	1254									✓	609
10	IA-5 Golden Flame DR	GLC 0	12/3/19	6:33	12/3/19	14:34	30	3	3550	1850									✓	610
11	IA-6 2616 Washington up	GLC 0	12/3/19	7:50	12/3/19	15:21	28	4	3565	1794									✓	611
12	IA-7 2616 Washington down	GLC 0	12/3/19	7:52	12/3/19	15:23	26	2	1208	1868									✓	612

Comments: Ambient air at IA-6 and IA-7 had elevated PM10 readings in the 200-400 ppm range initially, 0-16 ppb when shut off

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
Eric Oelkers / SCS	12/4/19	15:00	Wj... Pace	12/6/19	13:30	-	Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
PRINT Name of SAMPLER:	Eric Oelkers				
SIGNATURE of SAMPLER:	Eric Oelkers				
	DATE Signed (MM/DD/YY)				
	12/4/2019				

ORIGINAL



Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.19

Document Revised: 14Oct2019
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: SCS Engineering

Project #: _____

WO# : 10501881
PM: KNH Due Date: 12/13/19
CLIENT: SCS Engineer

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

Tracking Number: 1083 0282 5268/5857/5835/5824/5846

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

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

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

Temp should be above freezing to 6°C Correction Factor: _____ Date & Initials of Person Examining Contents: WJD 12/9/19

Type of ice Received Blue Wet None

Comments:

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

Gauge # 10AIR26 10AIR34 10AIR35 4097

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
MH 7-149	2496	1177	-5	+10	IA-4	2298	1254	-3	+5
MH 7-142	1016	2822	-5	+10	IA-5	3550	1850	-2	+5
MH 7-139	3283	0708	-5	+10	IA-6	3565	1794	-5	+5
MH 7-143	2575	1698	-3	+10	IA-7	1208	1868	-5	+5
MH 7-146	2237	1823	-4	+10	IA-8	3612	1790	-2	+5
IA-1	0291	0260	-8	+5	IA-9	3341	1789	-2	+5
IA-2	0803	1350	-8	+5	IA-10	2675	1679	-5	+5
IA-3	2710	1986	-3	+5	Unused can	0885	0227	0	-

CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Kirsten Hopfer Date: 12/9/2019

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



Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.19

Document Revised: 14Oct2019
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: _____ **Project #:** _____

Courier: FedEx UPS USPS Client
 Pace SpeeDee Commercial See Exception

Tracking Number: _____

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

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

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

Temp should be above freezing to 6°C **Correction Factor:** _____ **Date & Initials of Person Examining Contents:** _____

Type of ice Received Blue Wet None

Comments:

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

Gauge # 10AIR26 10AIR34 10AIR35 4097

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
Unused Can	0317	0829	-29	-					
VP-9	0121	1865	-5	+5					
Unused can	1593	1644	-28	-					
Unused can	0147	1213	-29	-					

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** Yes No

Person Contacted: _____ **Date/Time:** _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** _____

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)

August 07, 2020

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

RE: Project: 25219179.00 Susie's Restaurant
Pace Project No.: 10526973

Dear Rob Langdon:

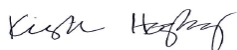
Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,



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

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25219179.00 Susie's Restaurant

Pace Project No.: 10526973

Pace Analytical Services - Minneapolis MN

A2LA Certification #: 2926.01	Minnesota Petrofund Certification #: 1240
Alabama Certification #: 40770	Mississippi Certification #: MN00064
Alaska Contaminated Sites Certification #: 17-009	Missouri Certification #: 10100
Alaska DW Certification #: MN00064	Montana Certification #: CERT0092
Arizona Certification #: AZ0014	Nebraska Certification #: NE-OS-18-06
Arkansas DW Certification #: MN00064	Nevada Certification #: MN00064
Arkansas WW Certification #: 88-0680	New Hampshire Certification #: 2081
California Certification #: 2929	New Jersey Certification #: MN002
CNMI Saipan Certification #: MP0003	New York Certification #: 11647
Colorado Certification #: MN00064	North Carolina DW Certification #: 27700
Connecticut Certification #: PH-0256	North Carolina WW Certification #: 530
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137	North Dakota Certification #: R-036
Florida Certification #: E87605	Ohio DW Certification #: 41244
Georgia Certification #: 959	Ohio VAP Certification #: CL101
Guam EPA Certification #: MN00064	Oklahoma Certification #: 9507
Hawaii Certification #: MN00064	Oregon Primary Certification #: MN300001
Idaho Certification #: MN00064	Oregon Secondary Certification #: MN200001
Illinois Certification #: 200011	Pennsylvania Certification #: 68-00563
Indiana Certification #: C-MN-01	Puerto Rico Certification #: MN00064
Iowa Certification #: 368	South Carolina Certification #: 74003001
Kansas Certification #: E-10167	Tennessee Certification #: TN02818
Kentucky DW Certification #: 90062	Texas Certification #: T104704192
Kentucky WW Certification #: 90062	Utah Certification #: MN00064
Louisiana DEQ Certification #: 03086	Vermont Certification #: VT-027053137
Louisiana DW Certification #: MN00064	Virginia Certification #: 460163
Maine Certification #: MN00064	Washington Certification #: C486
Maryland Certification #: 322	West Virginia DEP Certification #: 382
Massachusetts DWP Certification #: via MN 027-053-137	West Virginia DW Certification #: 9952 C
Michigan Certification #: 9909	Wisconsin Certification #: 999407970
Minnesota Certification #: 027-053-137	Wyoming UST Certification #: via A2LA 2926.01
Minnesota Dept of Ag Certification #: via MN 027-053-137	

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25219179.00 Susie's Restaurant
Pace Project No.: 10526973

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10526973001	MH 7-162	Air	07/29/20 11:06	07/31/20 11:00
10526973002	MH 7-150	Air	07/29/20 10:47	07/31/20 11:00
10526973003	MH 7-149	Air	07/29/20 11:30	07/31/20 11:00
10526973004	MH 7-179	Air	07/29/20 11:57	07/31/20 11:00
10526973005	MH 7-159	Air	07/29/20 12:21	07/31/20 11:00
10526973006	Unused Can #1084	Air	07/29/20 00:00	07/31/20 11:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 25219179.00 Susie's Restaurant
Pace Project No.: 10526973

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10526973001	MH 7-162	TO-15	MJL	5	PASI-M
10526973002	MH 7-150	TO-15	AFV	5	PASI-M
10526973003	MH 7-149	TO-15	AFV	5	PASI-M
10526973004	MH 7-179	TO-15	MJL	5	PASI-M
10526973005	MH 7-159	TO-15	MJL	5	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 25219179.00 Susie's Restaurant

Pace Project No.: 10526973

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10526973001	MH 7-162					
TO-15	Tetrachloroethene	1.2	ug/m3	1.1	08/04/20 15:29	
10526973002	MH 7-150					
TO-15	cis-1,2-Dichloroethene	1.3J	ug/m3	1.5	08/04/20 05:30	
TO-15	trans-1,2-Dichloroethene	0.34J	ug/m3	1.5	08/04/20 05:30	
TO-15	Trichloroethene	2.9	ug/m3	1.0	08/04/20 05:30	
10526973003	MH 7-149					
TO-15	cis-1,2-Dichloroethene	44.6	ug/m3	1.4	08/04/20 06:05	
TO-15	trans-1,2-Dichloroethene	7.9	ug/m3	1.4	08/04/20 06:05	
TO-15	Tetrachloroethene	3.9	ug/m3	1.2	08/04/20 06:05	
TO-15	Trichloroethene	51.7	ug/m3	0.96	08/04/20 06:05	
TO-15	Vinyl chloride	0.87	ug/m3	0.46	08/04/20 06:05	
10526973004	MH 7-179					
TO-15	Tetrachloroethene	1.8	ug/m3	1.2	08/04/20 15:02	
TO-15	Trichloroethene	0.58J	ug/m3	0.93	08/04/20 15:02	
10526973005	MH 7-159					
TO-15	cis-1,2-Dichloroethene	0.62J	ug/m3	1.4	08/04/20 14:36	
TO-15	trans-1,2-Dichloroethene	0.75J	ug/m3	1.4	08/04/20 14:36	
TO-15	Tetrachloroethene	0.57J	ug/m3	1.2	08/04/20 14:36	
TO-15	Trichloroethene	5.5	ug/m3	0.92	08/04/20 14:36	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25219179.00 Susie's Restaurant
Pace Project No.: 10526973

Sample: MH 7-162 Lab ID: 10526973001 Collected: 07/29/20 11:06 Received: 07/31/20 11:00 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	<0.26	ug/m3	1.3	0.26	1.61		08/04/20 15:29	156-59-2	
trans-1,2-Dichloroethene	<0.27	ug/m3	1.3	0.27	1.61		08/04/20 15:29	156-60-5	
Tetrachloroethene	1.2	ug/m3	1.1	0.46	1.61		08/04/20 15:29	127-18-4	
Trichloroethene	<0.28	ug/m3	0.88	0.28	1.61		08/04/20 15:29	79-01-6	
Vinyl chloride	<0.16	ug/m3	0.42	0.16	1.61		08/04/20 15:29	75-01-4	

Sample: MH 7-150 Lab ID: 10526973002 Collected: 07/29/20 10:47 Received: 07/31/20 11:00 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	1.3J	ug/m3	1.5	0.29	1.83		08/04/20 05:30	156-59-2	
trans-1,2-Dichloroethene	0.34J	ug/m3	1.5	0.31	1.83		08/04/20 05:30	156-60-5	
Tetrachloroethene	<0.52	ug/m3	1.3	0.52	1.83		08/04/20 05:30	127-18-4	
Trichloroethene	2.9	ug/m3	1.0	0.32	1.83		08/04/20 05:30	79-01-6	
Vinyl chloride	<0.18	ug/m3	0.48	0.18	1.83		08/04/20 05:30	75-01-4	

Sample: MH 7-149 Lab ID: 10526973003 Collected: 07/29/20 11:30 Received: 07/31/20 11:00 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	44.6	ug/m3	1.4	0.28	1.75		08/04/20 06:05	156-59-2	
trans-1,2-Dichloroethene	7.9	ug/m3	1.4	0.29	1.75		08/04/20 06:05	156-60-5	
Tetrachloroethene	3.9	ug/m3	1.2	0.50	1.75		08/04/20 06:05	127-18-4	
Trichloroethene	51.7	ug/m3	0.96	0.31	1.75		08/04/20 06:05	79-01-6	
Vinyl chloride	0.87	ug/m3	0.46	0.18	1.75		08/04/20 06:05	75-01-4	

Sample: MH 7-179 Lab ID: 10526973004 Collected: 07/29/20 11:57 Received: 07/31/20 11:00 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	<0.28	ug/m3	1.4	0.28	1.71		08/04/20 15:02	156-59-2	
trans-1,2-Dichloroethene	<0.29	ug/m3	1.4	0.29	1.71		08/04/20 15:02	156-60-5	
Tetrachloroethene	1.8	ug/m3	1.2	0.49	1.71		08/04/20 15:02	127-18-4	
Trichloroethene	0.58J	ug/m3	0.93	0.30	1.71		08/04/20 15:02	79-01-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25219179.00 Susie's Restaurant

Pace Project No.: 10526973

Sample: MH 7-179 **Lab ID: 10526973004** Collected: 07/29/20 11:57 Received: 07/31/20 11:00 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
Vinyl chloride	<0.17	ug/m3	0.44	0.17	1.71		08/04/20 15:02	75-01-4	

Sample: MH 7-159 **Lab ID: 10526973005** Collected: 07/29/20 12:21 Received: 07/31/20 11:00 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	0.62J	ug/m3	1.4	0.27	1.68		08/04/20 14:36	156-59-2	
trans-1,2-Dichloroethene	0.75J	ug/m3	1.4	0.28	1.68		08/04/20 14:36	156-60-5	
Tetrachloroethene	0.57J	ug/m3	1.2	0.48	1.68		08/04/20 14:36	127-18-4	
Trichloroethene	5.5	ug/m3	0.92	0.30	1.68		08/04/20 14:36	79-01-6	
Vinyl chloride	<0.17	ug/m3	0.44	0.17	1.68		08/04/20 14:36	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25219179.00 Susie's Restaurant
Pace Project No.: 10526973

QC Batch: 690501 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10526973002, 10526973003

METHOD BLANK: 3692220 Matrix: Air
Associated Lab Samples: 10526973002, 10526973003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.080	0.40	08/03/20 18:56	
Tetrachloroethene	ug/m3	<0.14	0.34	08/03/20 18:56	
trans-1,2-Dichloroethene	ug/m3	<0.084	0.40	08/03/20 18:56	
Trichloroethene	ug/m3	<0.088	0.27	08/03/20 18:56	
Vinyl chloride	ug/m3	<0.050	0.13	08/03/20 18:56	

LABORATORY CONTROL SAMPLE: 3692221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	41.8	44.6	107	70-132	
Tetrachloroethene	ug/m3	74.9	72.2	96	70-136	
trans-1,2-Dichloroethene	ug/m3	41.9	43.5	104	70-132	
Trichloroethene	ug/m3	56.7	56.3	99	70-132	
Vinyl chloride	ug/m3	28.5	25.8	90	68-141	

SAMPLE DUPLICATE: 3692662

Parameter	Units	10526910001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.22		25	
Tetrachloroethene	ug/m3	ND	0.43J		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.23		25	
Trichloroethene	ug/m3	ND	<0.24		25	
Vinyl chloride	ug/m3	ND	<0.14		25	

SAMPLE DUPLICATE: 3692663

Parameter	Units	10526979001 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.22	<0.22		25	
Tetrachloroethene	ug/m3	1.3	1.3	3	25	
trans-1,2-Dichloroethene	ug/m3	<0.23	<0.23		25	
Trichloroethene	ug/m3	<0.24	<0.24		25	
Vinyl chloride	ug/m3	<0.14	<0.14		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: 25219179.00 Susie's Restaurant

Pace Project No.: 10526973

QC Batch: 690656	Analysis Method: TO-15
QC Batch Method: TO-15	Analysis Description: TO15 MSV AIR Low Level
	Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10526973001, 10526973004, 10526973005

METHOD BLANK: 3692784 Matrix: Air

Associated Lab Samples: 10526973001, 10526973004, 10526973005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.080	0.40	08/04/20 08:54	
Tetrachloroethene	ug/m3	<0.14	0.34	08/04/20 08:54	
trans-1,2-Dichloroethene	ug/m3	0.090J	0.40	08/04/20 08:54	
Trichloroethene	ug/m3	<0.088	0.27	08/04/20 08:54	
Vinyl chloride	ug/m3	<0.050	0.13	08/04/20 08:54	

LABORATORY CONTROL SAMPLE: 3692785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	41.6	41.6	100	70-132	
Tetrachloroethene	ug/m3	71	66.5	94	70-136	
trans-1,2-Dichloroethene	ug/m3	42.2	43.2	102	70-132	
Trichloroethene	ug/m3	56.3	52.7	94	70-132	
Vinyl chloride	ug/m3	26.7	31.6	119	68-141	

SAMPLE DUPLICATE: 3693761

Parameter	Units	10526924003 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.34		25	
Tetrachloroethene	ug/m3	ND	<0.61		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.36		25	
Trichloroethene	ug/m3	ND	<0.37		25	
Vinyl chloride	ug/m3	ND	<0.21		25	

SAMPLE DUPLICATE: 3693762

Parameter	Units	10527077003 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.27		25	
Tetrachloroethene	ug/m3	ND	<0.48		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.28		25	
Trichloroethene	ug/m3	ND	<0.30		25	
Vinyl chloride	ug/m3	ND	<0.17		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: 25219179.00 Susie's Restaurant

Pace Project No.: 10526973

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25219179.00 Susie's Restaurant
Pace Project No.: 10526973

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10526973001	MH 7-162	TO-15	690656		
10526973002	MH 7-150	TO-15	690501		
10526973003	MH 7-149	TO-15	690501		
10526973004	MH 7-179	TO-15	690656		
10526973005	MH 7-159	TO-15	690656		

REPORT OF LABORATORY ANALYSIS

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AIR: CHAIN-OF-CUSTODY / A

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be filled out.

WO#: 10526973



10526973

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	41446	Page: 1 of 1
Company: SCS Engineers	Report To: Robert Langdon	Attention: Same	Program	
Address: 2830 Dairy Dr Madison, WI 53718	Copy To:	Company Name:	<input type="checkbox"/> UST <input type="checkbox"/> Superfund <input type="checkbox"/> Emissions <input type="checkbox"/> Clean Air Act <input type="checkbox"/> Voluntary Clean Up <input type="checkbox"/> Dry Clean <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> Other	
Email To: rlangdon@scsengineers.com	Purchase Order No.:	Address:	Location of Sampling by State: WI	
Phone: 608.232.3945 Fax:	Project Name: Susie's Restaurant	Pace Quote Reference:	Reporting Units ug/m ³ mg/m ³ PPBV <input checked="" type="checkbox"/> PPMV Other	
Requested Due Date/TAT: Standard	Project Number: 25219179.00	Pace Project Manager/Sales Rep:	Report Level: II. III. IV. Other	
		Pace Profile #: 37630		

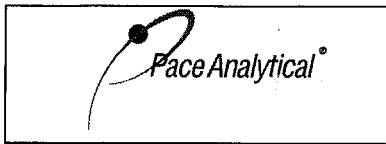
ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes		MEDIA CODE	PID Reading (Client only)	COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method:							Pace Lab ID		
		MEDIA	CODE			COMPOSITE START		COMPOSITE - END/GRAB						PM10	3c - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX		TO-15 Short List Chlorinated	TO-15 Short List (Other)
		Tedlar Bag	TB			DATE	TIME	DATE	TIME														
1	MH 7-162	61C	32	7/29/20	1102	7/29/20	1106	29	5	1214	0905										001		
2	MH 7-150		35		1017		1042	29	10	3617	1561										002		
3	MH 7-149		48		1125		1130	29	6	2826	2837										003		
4	MH 7-179		265		1154		1157	29	5.5	2123	2114										004		
5	MH 7-159 ^{TBL MH 159}		318		1291		1221	29	5	2673	1593										005		
6	Unused can									1084	2836												
7																							
8																							
9																							
10																							
11																							
12																							

Comments: * Analyze for PCB, TCE, Cis 1,2 DCE, Trans 1,2 DCE, and vinyl chloride

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
Robert	7/30	1700	Mary Grace	7/31/20	11:00	-	Y	Y	Y	Y
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Robert Langdon		
SIGNATURE of SAMPLER:	<i>Robert Langdon</i>		
DATE Signed (MM/DD/YY)	7/30/20		
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

ORIGINAL



Document Name:
Sample Condition Upon Receipt (SCUR) - Air

Document No.:
ENV-FRM-MIN4-0113 Rev.00

Document Revised: 24Mar2020
Page 1 of 1

Pace Analytical Services -
Minneapolis

Air Sample Condition Upon Receipt

Client Name: SCS

Project #: **WO# : 10526973**

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

PM: KNH Due Date: 08/07/20
 CLIENT: SCS Engineer

Tracking Number: 1723 2544 3269, 3270

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

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

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

Temp should be above freezing to 6°C Correction Factor: _____ Date & Initials of Person Examining Contents: RG 7/31/20

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used? (Tedlar bags not acceptable container for TO-14, TO-15 or APH)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact? (visual inspection/no leaks when pressurized)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Media: <u>Air Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <u>N</u> (list which samples)
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
Do cans need to be pressurized? (DO NOT PRESSURIZE 3C or ASTM 1946!!!)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13.

Gauge # 10AIR26 10AIR34 10AIR35 4097

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
162	1214	905	-5	+5					
150	3617	1561	-8	u					
149	2826	2837	-7	u					
179	2123	1114	-6.5	u					
159	2673	1593	-6	u					
unused	1084	2836	-30						

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Kirsten Hopewell

Date: 7/31/2020

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, LLC
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers Lab Project Number: 10526973
 Phone: 843.746.8525 Project Name: 25219179.00 Susie's Restaurant
 Lab Sample No: 10526973003 ProjSampleNum: 10526973003 Date Collected: 07/29/20 11:30
 Client Sample ID: MH 7-149 Matrix: Air Date Received: 07/31/20 11:00

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-15							
cis-1,2-Dichloroethene	11.1	ppbv	0.35	1.75	08/04/20 6:05 AFV	156-59-2	
Tetrachloroethene	0.57	ppbv	0.17	1.75	08/04/20 6:05 AFV	127-18-4	
trans-1,2-Dichloroethene	2	ppbv	0.35	1.75	08/04/20 6:05 AFV	156-60-5	
Trichloroethene	9.5	ppbv	0.18	1.75	08/04/20 6:05 AFV	79-01-6	
Vinyl chloride	0.33	ppbv	0.18	1.75	08/04/20 6:05 AFV	75-01-4	

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

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, LLC
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: 10526973
Project Name: 25219179.00 Susie's Restaurant

PARAMETER FOOTNOTES

SUPPLEMENTAL REPORT

Units Conversion Request

Date: 8/6/2020

Page 6

Attachment D
Maintenance Plan

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN

2604 Custer Street, Manitowoc, Wisconsin

January 29, 2021

Property Located at: 2604 Custer Street, Manitowoc, WI 54220

WDNR BRRTS/Activity # 02-36-000516

Legal Description: Lot 2 & ALL OF LOTS 3 & 4 N OF CUSTER ST. BLK J & E 50' OF S 183' OF SE ¼
SE ¼ NE ¼ EXC. CUSTER ST. SECT. 25 T. 19 R. 23

Parcel ID # 052-000-367-040.00

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), 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) Northeast 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 Manitowoc County

Descriptions

System Description, Purpose, and Location

The VMS was constructed by Acura Services, LLC for the 2604 Custer Street building and was started up in October 2019. The VMS was designed to reduce the potential for vapor intrusion by depressurizing the sub-slab in areas where chlorinated volatile organic compounds (CVOCs) were detected in sub-slab vapor at concentrations in excess of WDNR commercial vapor risk screening levels.

The CVOC vapors appear to have originated from a historical release of dry cleaning solvent which may have occurred when a dry cleaning facility was operating at 1020 South 26th Street. 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 includes two vacuum pickup points. Each pickup point was constructed with 3-inch-diameter schedule 40 PVC pipe set in the sub-slab material. The PVC pipes were sealed into the floor to prevent leakage and secured to interior walls and ceiling joists for support. The pickup points were plumbed together to a 3-inch-diameter PVC pipe which was extended through the basement wall and above the roof line of the building.

An AMG Eagle vacuum fan capable of producing up to approximately 4.0 inches of water column (WC) vacuum was mounted to the exterior pipe.

Power was supplied to the fan and tied to a single labeled circuit breaker inside the building. The fan can be turned on and off at the breaker box or with a switch located on the fan.

A manometer was fitted to one of the pickup points (Pickup Point 1) to show vacuum at the pickup point and to check fan operation. An audible alarm was also fitted to Pickup Point 1. The alarm operates on a 120 volt receptacle and alarms when vacuum drops below 0.25 inches WC. At startup the manometer read 1.4 inches WC, which is in the approximate middle of the fan range (0 to 4 inches WC).

The basement sump was sealed to prevent sub-slab vacuum loss.

Additional fan and alarm product details are provided in **Attachment 2**.

System Maintenance

Operation, monitoring, and maintenance of the system by WDNR requires full access to all components by WDNR and/or WDNR's subcontractors. If the VMS alarm sounds, contact the WDNR project manager immediately so that WDNR can arrange for a contractor to assess the system.

Minimal operator control or maintenance is required. There are no service requirements for the fan. The fan status is checked using the manometer mounted to Pickup Point 1 and the audible alarm. If the vacuum drops below 0.25 inches of WC, the alarm will sound until the alarm is turned off. Following an alarm condition, the vacuum fan should be inspected and repaired or replaced as appropriate.

The basement sump and sump pump need to be maintained. The owner is responsible for maintaining the sump pump and supplying power to it. The owner is also responsible for complying with the Low-Impact Discharge Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit and Best Management Practice (BMP) Plan related to the sump purge water discharging to the storm sewer (**Attachment 3**).

The sump lid should be kept sealed to the sump pit, and the floor in the vicinity of the VMS should be maintained as a barrier to prevent vapor intrusion. If the owner has a plumber or others work on the sump it needs to be properly re-sealed. The structural integrity of the floor should be maintained, and any changes or repairs to the floor need to account for keeping the floor as impermeable as when the VMS was installed.

The potential for vapor intrusion of CVOCs should be reevaluated if there are changes to the sump, floor, building HVAC system, 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 4**).

Inspections

The VMS manometer should be inspected monthly as follows:

- Inspect manometer:
 - If manometer vacuum reads zero, check the fan circuit breaker on south wall of service bay area to make sure fan has power.
 - If manometer shows low vacuum (e.g., less than 0.5 inches of WC) check for vacuum leaks in pickup point piping and sump lid and repair as necessary.

- If fan vacuum cannot be rectified contact the WDNR Project Manager.
- Record manometer readings on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 4**).

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

- Inspect alarm:
 - Make sure alarm is plugged into the 120-volt receptacle.
 - Temporarily turn off fan at breaker box. Alarm should sound.
 - If alarm does not sound contact the WDNR Project Manager.
 - Turn fan back on at breaker box.
- Inspect fan exhaust line to prevent clogging of fan exhaust, and remove any accumulated debris.
- Inspect floors and maintain as necessary to prevent vapor migration and vacuum loss.
- Document repairs to the VMS, floors, or HVAC system on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 4**).
- Keep copies of the Vapor Mitigation System Inspection Log at the facility 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 maintenance system on-site.

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 or malfunctioning alarm.
3. Construction or placement of a building or other structure.
4. Changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single- or multiple-family residences, a school, daycare, senior center, hospital, or similar residential exposure settings.
5. Changing the use or occupancy of the property to single-family residential use.

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.

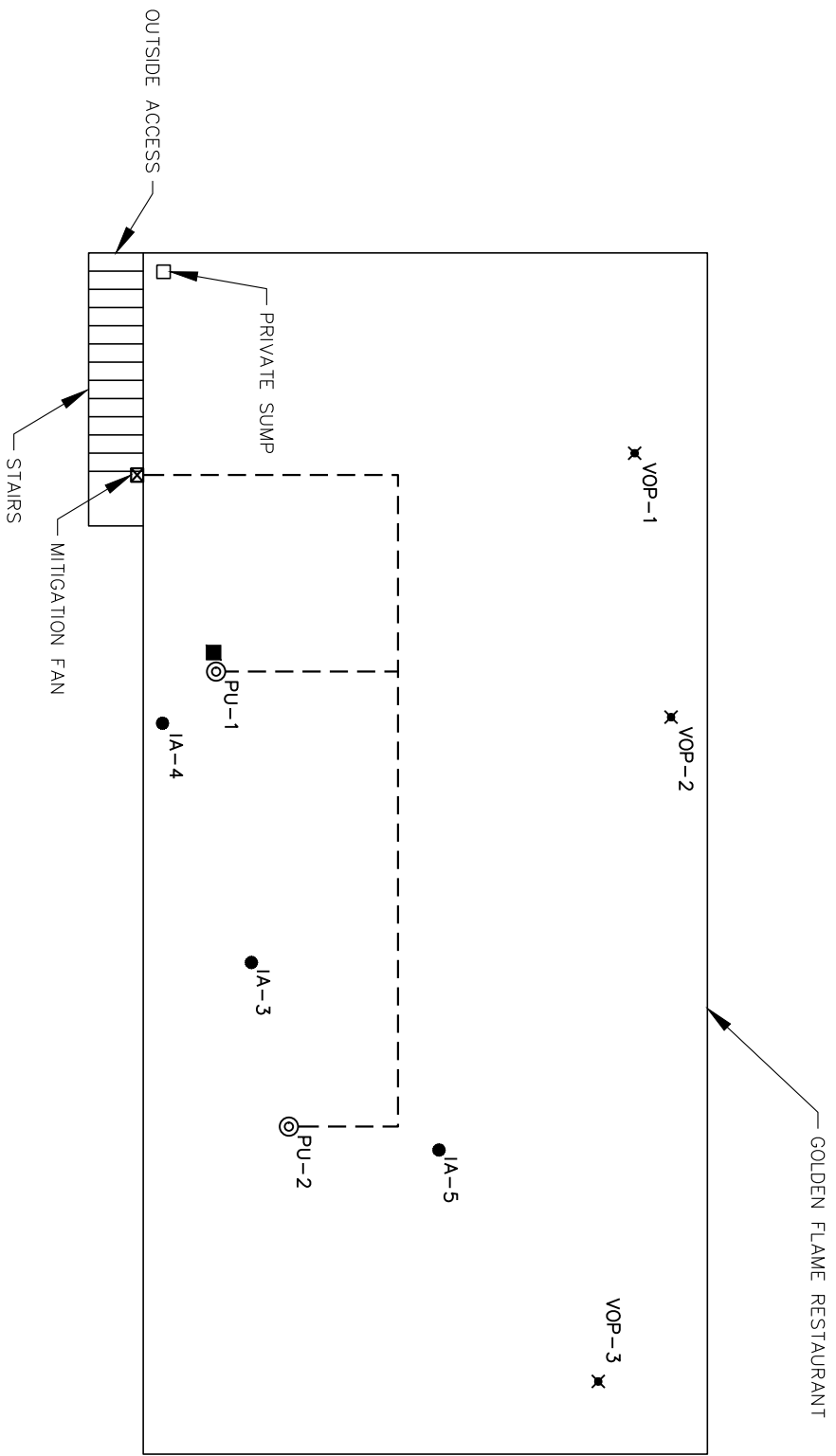
Contact Information

Property Owner: Salvador Velasques
Golden Flame Restaurant
2604 Custer Street
Manitowoc, WI 54220
(920) 905-0883
suemvelasques@hotmail.com

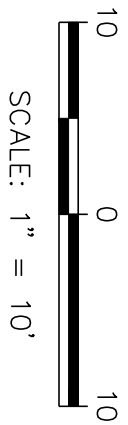
Consultant: Robert Langdon, SCS Engineers
2830 Dairy Drive
Madison, WI 53718
(608) 224-2830
rlangdon@scsengineers.com

WDNR: Sarah Krueger
2984 Shawano Avenue
Green Bay, WI 54313-6727
(920) 510-8277
Sarah.krueger@wisconsin.gov

I:\25219179.00\Deliverables\Interim Action Report\Attachment D_VMS Maintenance Plan\Vapor Mitigation System Maintenance Plan_Revised_2101.docx



- LEGEND
- INDOOR AMBIENT AIR TESTING LOCATION
 - ⊙ VAPOR PICK-UP POINT
 - ⊗ VACUUM OBSERVATION POINT
 - VACUUM MANOMETER
 - - - 3" DIA. PVC MITIGATION PIPE



WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313

SITE
SUSIE'S RESTAURANT-LGU-WIDOT
1020 SOUTH 26TH STREET
MANITOWOC, WISCONSIN

VAPOR MITIGATION SYSTEM
GOLDEN FLAME RESTAURANT
2604 CUSTER STREET, MANITOWOC, WISCONSIN

PROJECT NO.	25219179.00	DRAWN BY:	KP
DRAWN:	01/30/2020	CHECKED BY:	REL
REVISED:	09/08/2020	APPROVED BY:	REL 09/08/2020

ENGINEER	
----------	--

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

FIGURE	1
--------	---

ATTACHMENT 1

Photos

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 1: Excavation through floor slab at Pickup Point 1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 2: Excavation through floor slab at Pickup Point 2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 3: Seal and piping at Pickup Point 1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 4: Manometer and system alarm at Pickup Point 1.

**Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)**

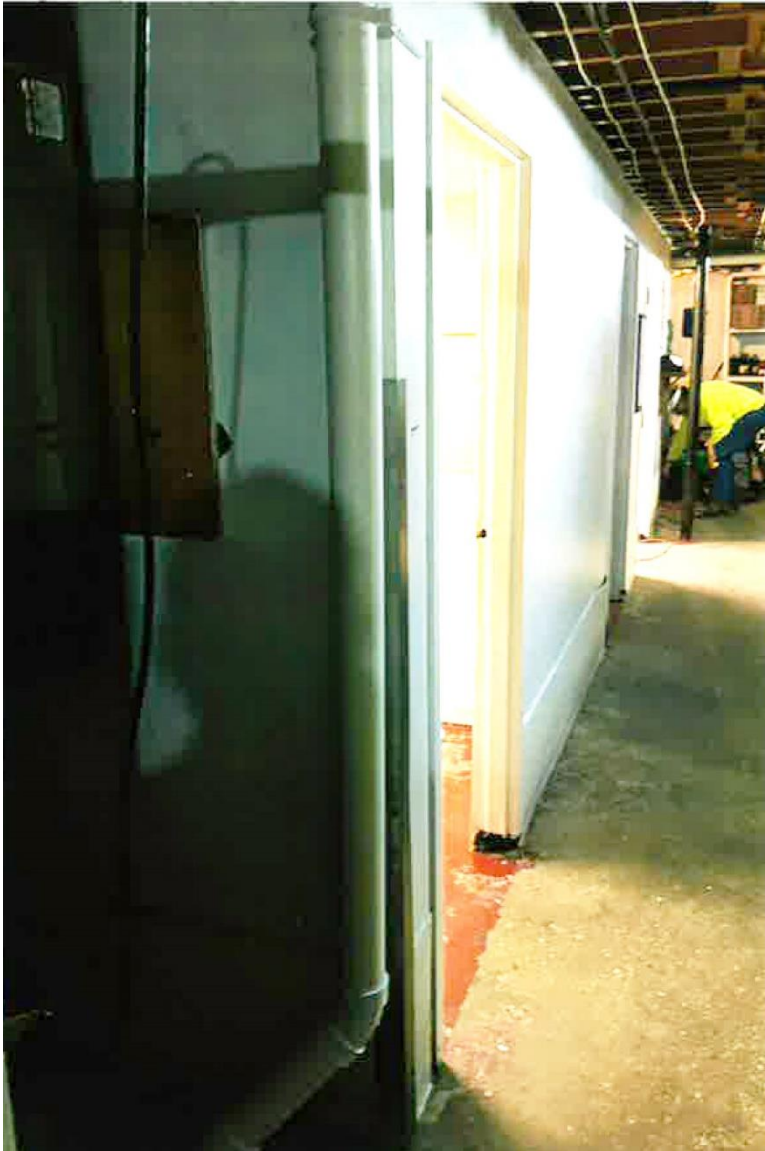


Photo 5: Pickup Point 2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 6: Piping run from Pickup Point 2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 7: Piping run from Pickup Point 1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 8: Sealed sump with ice machine and sump pump discharge lines.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 9: Sub-slab vacuum observation point VOP-1.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 10: Sub-slab vacuum observation point VOP-2.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 11: Sub-slab vacuum observation point VOP-3.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 12: Sub-slab vacuum in inches of water at VOP-1 following system startup.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 13: Sub-slab vacuum at VOP-2 following system startup.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 14: Sub-slab vacuum at VOP-3 following system startup.

Golden Flame Vapor Mitigation System
Manitowoc, WI
SCS Engineers Project #25219179.00 (Susie's Restaurant)



Photo 15: Vapor mitigation system fan and exhaust.

ATTACHMENT 2

Additional Fan and Alarm Product Details

Installation & Wiring Instructions for AMG In-Line Centrifugal Duct Fans



**Model: AMG Spirit, Fury, Legend, Hawk, Maverick,
Prowler, Eagle, Eagle Extreme**



**IMPORTANT NOTE: DO NOT CONNECT THE POWER SUPPLY UNTIL THE FAN IS COMPLETELY INSTALLED.
MAKE SURE THE ELECTRICAL SERVICE TO THE FAN IS LOCKED IN "OFF" POSITION.**

PLEASE READ AND SAVE THESE INSTRUCTIONS:

Warning – To reduce the risk of fire, electric shock or injury to persons, observe the following:

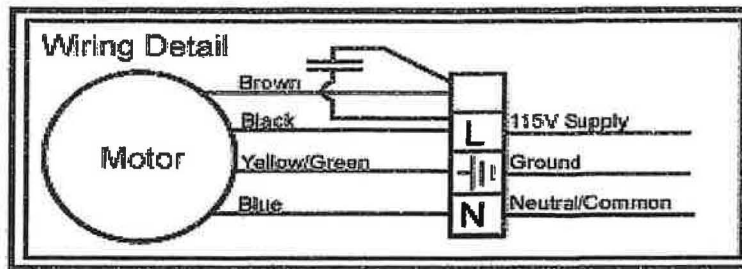
1. This unit is only for use in the manner intended by the manufacturer. If you have any questions contact the manufacturer Festa Manufacturing Enterprises LLC.
2. Installation work and electrical wiring must be done by qualified person'(s) in accordance with all applicable codes and standards, including fire-rated construction.
3. Sufficient air is needed for proper combustion and exhausting of gases through the flue, (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
4. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. Ducted fans must always be vented to the outdoors.
6. These units can be mounted indoors or outdoors.
7. Do not use these fans with solid state speed controllers.
8. The electric motor is protected by an internal overheat device to prevent/minimize motor damage. If the motor stops working, immediate inspection should be carried out by suitably qualified persons.
9. Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
10. Do not use in a window.
11. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
12. Never place a switch where it can be reached from a tub or shower.
13. CAUTION: For General Ventilating Use Only. Do Not use to Exhaust Hazardous Or Explosive Materials and Vapours.
14. CAUTION: This unit has an unguarded impeller. Do Not Use in Locations Readily Accessible To People or Animals.
15. For Canadian Users: Use only with solid state speed control device model KBMC-13BV manufactured by KBElectonics

Installation of FME AMG PATRIOT Radon Fans

The FME AMG PATRIOT Fan can be mounted indoors or outdoors. We suggest that EPA recommendations be used in choosing the fan location. The AMG Fans may be mounted directly onto the piping system or fastened to a supporting structure. When mounting directly onto a vertical piping system, it is the installer's responsibility to make provision to prevent the pipe system sliding into and onto the fan motor and impeller. When installing a system with short duct runs terminating close to the fan i.e. within 60" (1.5m) suitable guards should be incorporated. It is the responsibility of the installer to ensure that all aspects of the system are taken into consideration. Rigid ducting sections should be connected to fan spigots by flexible connectors and clips. The flexible connectors used should be suitable for routine servicing and vibration isolation.

Fan Configuration-All inline fans can be mounted (1) vertically with terminal box/cover facing up, or (2) horizontally with terminal box drain hole facing down toward the ground.

Electrical Connections



Ensure that the mains supply voltage, frequency, number of phases and power rating comply with the details on the unit rating label (situated internally on inside of box cover). All wiring must be in accordance with local and / or national electrical codes as applicable, or the appropriate standard in your country. The fan must be supplied through a double pole isolating switch having a contact separation of not less than 1/8" (3mm). Wiring to the terminal box should be made in liquid tight flexible conduit to facilitate easy maintenance.

Operational Checks

Ensure all duct connections are tight and leak free.

Check the system vacuum pressure with a manometer; ensure that the vacuum pressure is less than the maximum recommended operating pressure.

Check and verify Radon levels by testing to EPA protocol.

Cleaning and Maintenance

We would recommend that the fan be periodically checked against the listed operational checks to ensure trouble free long lasting operation.

FIVE (5) YEAR WARRANTY

Conditions of Warranty

Festa Manufacturing Enterprises ("FME") warrants that the AMG FANS shall be free from defects in material and workmanship for period of (5) years from the date of purchase by the customer. If within the applicable warranty period the Products prove to be defective by reason of faulty workmanship or materials, FME will undertake to have the defective Product (or any part thereof) replaced at no cost to the customer subject to the following conditions:

1. The Product has been purchased and used solely in accordance with all Environmental Protection Agency ("EPA") standard practices and state and local codes of practice.
2. The Product is returned promptly on being found defective, together with this warranty and proof of date of installation at the customers risk and expense to Festa Manufacturing Enterprises LLC. ("FME") from whom the Product was purchased. All enquiries must be through FME.
3. This warranty shall not apply to any Product failure or defect due to any cause beyond the reasonable control of FME including; damage caused through fire, flood, explosion, accident, misuse, wear and tear, neglect, incorrect adjustment or repair, damage caused through installation, adaptation, modification or use in an improper manner or inconsistent with the technical and/or safety standards required where the Product is used, or to damage occurring during transit to or from the customer.
4. If at any time during the Warranty Period any part or parts of the Product are replaced with a part or parts not supplied or approved by FME, or the Product has been dismantled or repaired by any person not authorized by FME, FME shall have the right to terminate this warranty in whole or in part immediately without further notice.
5. FME's decision on all matters relating to complaints and Products defects and failure (alleged or actual) shall be final. Any Product or defective part, which has been replaced, shall be FME's.
6. FME will offer to customers a Warranty of a full Five Years, from date of purchase, in accordance with the terms listed above.

Festa Manufacturing Enterprises, LLC. 47A Progress Ave. Cranberry Twp., PA 16066
Tel. Toll Free 1(800) 806-7866 Fax 1(724) 772-9062

Model	Min. Ambient Temperature	Max. Ambient Temperature
Maverick	-13°F	167°F
Hawk	-13°F	167°F
Prowler	-13°F	176°F
Legend	-13°F	176°F
Eagle	-13°F	140°F
Fury	-13°F	176°F
Fury II	-13°F	140°F
Spirit	-13°F	113°F



INSTALLATION & OPERATING INSTRUCTIONS
Instruction P/N IN015 Rev E
FOR CHECKPOINT IIa™ P/N 28001-2 & 28001-3
RADON SYSTEM ALARM

**INSTALLATION INSTRUCTIONS
(WALL MOUNTING)**

Select a suitable wall location near a vertical section of the suction pipe. The unit should be mounted about four or five feet above the floor and as close to the suction pipe as possible. Keep in mind that with the plug-in transformer provided, the unit must also be within six feet of a 120V receptacle. **NOTE: The Checkpoint IIa is calibrated for vertical mounting, horizontal mounting will affect switchpoint calibration.**

Drill two 1/4" holes 4" apart horizontally where the unit is to be mounted.

Install the two 1/4" wall anchors provided.

Hang the CHECKPOINT IIa from the two mounting holes located on the mounting bracket. Tighten the mounting screws so the unit fits snugly and securely against the wall.

Drill a 5/16" hole into the side of the vent pipe about 6" higher than the top of the unit.

Insert the vinyl tubing provided about 1" inside the suction pipe.

Cut a suitable length of vinyl tubing and attach it to the pressure switch connector on the CHECKPOINT IIa.

CALIBRATION AND OPERATION.

The CHECKPOINT IIa units are calibrated and sealed at the factory to alarm when the vacuum pressure falls below the factory setting and should not normally require field calibration. Factory Settings are:

28001-2 -.25" WC Vacuum
28001-3 -.10" WC Vacuum

To Verify Operation:

With the exhaust fan off or the pressure tubing disconnected and the CHECKPOINT IIa plugged in, both the red indicator light and the audible alarm should be on.

Turn the fan system on or connect the pressure tubing to the fan piping. The red light and the audible alarm should go off. The green light should come on.

Now turn the fan off. The red light and audible alarm should come on in about two or three seconds and the green light should go out.

WARRANTY INFORMATION

Subject to applicable consumer protection legislation, RadonAway warrants that the CHECKPOINT IIa will be free from defective material and workmanship for a period of (1) year from the date of purchase. Warranty is contingent on installation in accordance with the instructions provided. This warranty does not apply where repairs or alterations have been made or attempted by others; or the unit has been abused or misused. Warranty does not include damage in shipment unless the damage is due to the negligence of RadonAway. All other warranties, expressed or written, are not valid. To make a claim under these limited warranties, you must return the defective item to RadonAway with a copy of the purchase receipt. RadonAway is not responsible for installation or removal cost associated with this warranty. In no case is RadonAway liable beyond the repair or replacement of the defective product FOB RadonAway.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO WARRANTY OF MERCHANTABILITY. ALL OTHER WARRANTIES, EXPRESSED OR WRITTEN, ARE NOT VALID.

For service under these warranties, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping costs to and from factory.



Manufactured by:
RadonAway
Ward Hill, MA
(978)-521-3703

ATTACHMENT 3

Best Management Practice (BMP) Plan
Low-Impact Discharge
WPDES General Permit No. WI-0066575-01-0
Form 3400-240

Notice: The use of this form is optional and does not guarantee Department of Natural Resources (department) approval of the best management practice (BMP) plan. This form is provided for the convenience of the applicant to meet the BMP plan requirements of the Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-0066575-01-0 for low-impact discharges. The WPDES general permit requires applicants to develop and submit a best management practice (BMP) plan to demonstrate compliance with the general permit. Following approval of the BMP plan by the department, the permittee shall operate consistent with the approved BMP plan. Plans must be site-specific. The department may request additional information not included in this form. Personal information collected will be used for administrative purposes and may be provided to requestors to the extent required by Wisconsin Open Records law [ss. 19.31-19.39, Wis. Stats.].

Plan Amendments: Permittees shall notify the department when the BMP plan is amended to determine if the amendment requires department approval.

Please indicate the type of WPDES permit coverage being requested:

- Single Site coverage for temporary discharges
- Single Site coverage for continuous/recurring discharges at a single site
- Statewide coverage for temporary operational discharges

Facility/Project Name: Golden Flame Restuarant	Facility/Project Address: 2604 Custer Street, Manitowoc, WI 54220
Plan Preparer: Sarah Krueger	Date:

BMP Plan Policy Statement and Objectives:

Ensure that sump discharge does not contribute to environmental contamination in the Manitowoc River.

BMP Plan Committee Members

Name	Position
RR Manitowoc County DOT Hydro (Kristina Femal)	Hydrogeologist
Roxanne Chronert	Team Supervisor

BMP Plan Committee Responsibilities:

Ensure that BMP Plan actions are completed in a timely manner, and provide any updates to the BMP plan to DNR wastewater program.

Personnel Contact Information Involved with BMP Plan Implementation

Name	Position	Work Phone #	Cell Phone #
Kristina Femal	Hydrogeologist	(920) 662-5431	
Roxanne Chronert	Team Supervisor	(920) 362-3981	

Please identify potential pollutant sources at the facility site that could release pollutants during discharge below:

Off-site former laundromat with residual soil and groundwater contamination both on and off-site. The sump pit and discharge have been affected by the off-site former facility.

Note: This examination must include all normal operations and ancillary activities including material storage areas, plant site runoff, in-plant transfer, process and material handling areas, loading or unloading operations, spillage or leaks, sludge and waste disposal, or drainage from raw material storage.

Please specify the type and frequency of visual inspections that will be conducted on equipment and facility areas identified as a potential pollutant source at the facility site (attach a facility inspection log):

No equipment/areas within the restaurant are a potential pollutant source.

Please specify the type and frequency of visual inspections that will be conducted on the discharge (attach a discharge inspection log):

The sump, which has been sealed and the discharge point will be visually inspected as part of the operation and maintenance of the Vapor Mitigation System. This inspection will occur on an annual basis or every 5 years depending on the VMS condition.

Note: The visual inspection frequency of the discharge may not be less frequent than monthly.

Please specify any temporary treatment practices that will be implemented in case of any observed indicators of pollution in the permitted discharge:

Spill kit with absorbent pads, however the data does not indicate the presence of free product related to the former dry cleaner.

Please specify or attach a security plan that describes how to prevent accidental or intentional entry to the facility which might result in vandalism, theft, sabotage, or other improper or illegal use of the facility:

No security plan.

Note: The security plan shall cover security in a general fashion and discuss in detail only the practices that focus on preventing environmental releases.

Please specify any good housekeeping practices that will be conducted at the facility site and discharge location to maintain a clean and orderly work environment:

The sump has been sealed within the facility and the seal will be inspected as part of the O&M of the VMS.

Please specify or attach a preventative maintenance plan that describes a method of periodically inspecting, maintaining, and testing BMPs, equipment and systems at the facility and discharge location to uncover conditions that may cause breakdowns or failures.

VMS O&M plan not yet finalized, will be provided to the wastewater program and/or will be part of the RR site file for Susies Restaurant Former (BRRTS #: 02-36-000516).

Note: The preventative maintenance plan as a part of the BMP plan shall evaluate any existing preventative maintenance program and recommend changes, if needed, to address concerns raised from equipment and facility areas identified as a potential pollutant source at the facility site and any results from inspections.

Please specify any measures that will be implemented at the facility to dissipate or slow the energy/velocity of the discharge flow to prevent erosion that may be caused by the discharge:

Not applicable. Discharge is direct to the storm sewer, and being from a small sump pump is unlikely to damage the concrete of the sewer.

Please specify any dechlorination methods that will be utilized to reduce the chlorine concentration in the discharge:

Not applicable.

Note: Dechlorination is only necessary if the source water is from a chlorinated public water supply or if adding chlorine-based compounds to the water and discharging to surface waters or wetlands. If the source water is groundwater from private wells located at the facility and chlorine-based compounds are not added to the water, then dechlorination is not necessary. Moreover, dechlorination is not necessary if the discharge is to a seepage area that infiltrates to groundwater.

Please specify or attach a contingency plan that describes procedures to minimize the discharge duration during system failures (e.g. line breaks, leaks, and overflows) or spills:

Not applicable. System failure will result in the discharge ceasing and discharge will be restored when the sump is repaired.

Note: The general permit does not authorize discharges from any accidental or unplanned release, spill, leak, or overflow to a water of the state.

Please specify the recordkeeping and reporting program for the facility below. The program shall describe the system to keep and maintain records that are relevant to discharge activities and any environmental releases and a system to report actual or potential problems, violations, or noncompliance to appropriate personnel and regulatory agencies.

All records related to the discharge and monitoring will be maintained as part of the site file for Susies Restaurant Former (BRRTS #: 02-36-000516).

Note: The recordkeeping and reporting program shall be consistent with the requirements in Section 8.1 and Section 8.3.5. Records to be kept and maintained shall include the notice of intent, any discharge screening results, information gathered for the BMP plan, the BMP plan, inspection reports, preventative maintenance records, employee training materials, and other relevant information. Records shall be made available for department inspection and submitted to the department upon request.

For discharges from washing activities, please specify how the washing operations will be conducted at the site and specify any BMPs that will be implemented during washing:

Not Applicable.

For statewide operations, please specify how the discharge location for each project site will be identified and screened for impaired waters, wetlands, outstanding resource waters (ORW) and exceptional resource waters (ERW):

Note: The permittee may use the surface water data viewer (<https://dnrm.wi.gov/H5/?Viewer=SWDV>) to identify impaired waters, wetlands, ORWs, and ERWs in the county where the discharge will occur.

For statewide operations, if the proposed discharge will be to a wetland, please specify all practical measures that will be implemented to minimize adverse impacts of the affected wetlands:

Note: Discharges to wetlands are not allowed under the general permit unless the requirements in Section 4.3 of the general permit are met.

For statewide operations, if the proposed discharge will be to an impaired water, please specify all practical measures that will be implemented to minimize any pollutant of concern (i.e. total suspended solids or phosphorus) that may contribute to the impairment of the water body:

Note: Discharge to an impaired water is not allowed under the general permit unless the discharge does not contain a pollutant in a measurable amount for which the water is identified as impaired.

For statewide operations, if the project will be located near an ORW or ERW, please specify all practical alternative disposal methods that will be implemented to avoid discharge to the ORWs or ERWs (e.g. discharge to groundwater via infiltration):

Note: Discharges to ORWs or ERWs are not allowed under this general permit.

For statewide operations, if the proposed discharge will be to a surface water, please specify all practical measures that will be implemented to minimize adverse impacts of the affected surface water:

For statewide operations, if the proposed discharge will be to a groundwater via seepage, please specify all practical measures that will be implemented to minimize adverse impacts on groundwater quality:

For statewide operations, please specify the method of notifying the department at least seven (7) calendar days prior to discharge to the waters of the state and seven (7) calendar days after discontinuing the discharge to the waters of state.

Note: The agreed upon notification shall include a description of the discharge and discharge location as required in Section 5.14.4 of the general permit.

BMP Plan Review

The BMP plan will be reviewed at least once per year by the BMP plan committee or by the site PM.

The BMP plan committee or site PM will evaluate the need to update or modify the BMP plan and evaluate the effectiveness of the BMP plan in preventing and mitigating releases of pollutants. The BMP plan committee or site PM will notify the department when the BMP plan is modified to determine if the modification requires department approval.

Certification

I certify that this document, to the best of my knowledge and belief, is true, accurate, and complete.



Signature of Plan Preparer

4/20/2020

Date



April 27, 2020

Kristina Femal, RR Manitowoc County DOT Hydro
Wisconsin Department of Natural Resources
2984 Shawano Ave
Green Bay, WI 54313
[sent electronically]

Subject: Coverage under WPDES Permit No. WI-0066575-01-0
Permittee Name: WI DNR BUREAU OF REMEDIATION AND REDEVOLPMENT
Facility Site Name: GOLDEN FLAME RESTAURANT
Facility Site Address: 2604 CUSTER ST, MANITOWOC
Site ID (FIN): 71581

Dear Ms. Femal:

The Wisconsin Department of Natural Resources (hereafter Department) has determined that the Golden Flame Restaurant located at 2604 Custer St, Manitowoc, WI is eligible for coverage under the *Low-Impact Discharge* Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-0066575-01-0. This determination was based on review of a complete General Permit Notice of Intent (NOI) form (Form 3400-241) and Best Management Practice (BMP) Plan submitted by you and received on April 21, 2020. Please download the permit and fact sheet from the Department website at:
<http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>.

The department hereby approves the BMP Plan (From 3400-240) in accordance with Section 6 of the *Low-Impact Discharge* WPDES General Permit No. WI-0066575-01-0.

The discharge is authorized under the *Low-Impact Discharge* WPDES General Permit No. WI-0066575-01-0 in accordance with s. NR 205.08, Wis. Adm. Code, subject to the following conditions:

1. **Coverage Effective Date:** Coverage at your facility will become effective under this general permit on **May 1, 2020** until permit termination. This permit applies only to the discharge activities and sites described in the NOI for the above referenced facility.
2. **Best Management Practice Plan:** The permittee shall operate consistent with the approved BMP plan. A copy of the BMP plan shall be retained by the permittee and this plan shall be made available upon department inspection or submitted to the department upon request. The permittee shall ensure that on-site personnel directly involved with the discharge activities have access to the BMP plan at all times while at the facility and discharge location. Permittees shall notify the department when the BMP plan is amended to determine if the amendment requires department approval.
3. **Visual Inspection Log:** The permittee shall conduct visual inspections of the permitted discharge and record observations of the discharge in a visual inspection log. The permittee shall keep visual inspection logs on file and the logs shall be made available upon department inspection or submitted to the department upon request. The parameters in Section 5.2.1 of the general permit shall be visually inspected and recorded on the discharge.

4. Coverage Termination: If the discharge is discontinued, conveyed to a sanitary sewer system, or covered under an individual WPDES permit, please complete and submit a Notice of Termination (Form 3400-221) available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>.
5. Change of Ownership: If your facility changes ownership in the future, please complete and submit a Transfer of Coverage (Form 3400-222) available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>
6. Change of Authorized Representative: If you plan on changing the authorized representative contact for the project or you want to assign a new person to be a duly authorized representative to submit specific permit documents on your behalf, please fill out a Delegation of Signature Authority (Form 3400-220) available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>.
7. Facility Changes: If there have been or will be any changes in your facility operations that result in new or different wastewater discharges to the waters of the state, please contact the Department and reapply for permit coverage. If reapplication is necessary, please complete a notice of intent (NOI) form for the applicable general permit(s) to verify that your discharge is eligible for that general permit. NOI forms are available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>.
8. Compliance: You are responsible for compliance with the requirements and conditions contained in the general permit. To assure you remain in compliance and avoid any enforcement action, please read the general permit over carefully.

Additional information regarding the Department's legal authority in this matter and your rights of appeal are shown below. If you have any questions regarding any of the permit conditions, monitoring and reporting requirements, or when Department notification is required, please contact me at (920) 662-5145 or Alexis.Peter@wisconsin.gov.

Sincerely,



Alexis Heim Peter
Northeast Regional Wastewater Specialist
Bureau of Water Quality

Cc: Permit File

LEGAL AUTHORITIES AND APPEAL RIGHTS

Section 283.35(1), Wis. Stats., authorizes the Department to issue a general permit applicable to a designated area of the state authorizing discharges from specified categories or classes of point sources located within that area. Upon the request of the owner or operator of a point source, the Department shall withdraw the point source from the coverage of a general permit and issue an individual Wisconsin Pollutant Discharge Elimination System (WPDES) permit for that source in accordance with s. 283.35(2), Wis. Stats. Additionally, the Department may withdraw a point source from the coverage of a general permit and issue an individual WPDES permit if that source meets any of the factors listed in s. 283.35(3), Wis. Stats. Issuance of such an individual permit will provide for a public comment period, and potentially a public informational hearing and/or an adjudicatory hearing. In lieu of general permit withdrawal, the Department may refer any violation of a general permit to the Department of Justice for enforcement under s. 283.91, Wis. Stats., pursuant to s. 283.89, Wis. Stats. In order to remain in compliance and avoid any enforcement action, **please read your permit carefully.**

To challenge the reasonableness of or necessity for any term or condition of an issued, reissued, or modified general permit, s. 283.63, Wis. Stats., and ch. NR 203, Wis. Adm. Code, require that you file a verified petition for review with the Secretary of the Department of Natural Resources within 60 days after notice of the permit decision was issued by the Department. For other permit-related decisions, such as the decision to confer general permit coverage to your facility, that are not reviewable pursuant to s. 283.63, Wis. Stats., it may be possible for permittees or other persons to obtain an administrative review pursuant to s. 227.42, Wis. Stats., and s. NR 2.05(5), Wis. Adm. Code, or a judicial review pursuant to s. 227.52, Wis. Stats. If you choose to pursue one of these options, you should know that Wisconsin Statutes and Administrative Code establish time periods within which requests to review Department decisions must be filed.

ATTACHMENT 4

Continuing Obligations Inspection and Maintenance Log

Notice: In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. 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.].

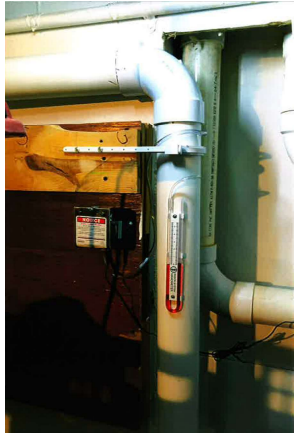
Directions: This form was developed to provide the results of a site inspection of a vapor related continuing obligation, typically a vapor mitigation system. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. The closure 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: Susie's Restaurant

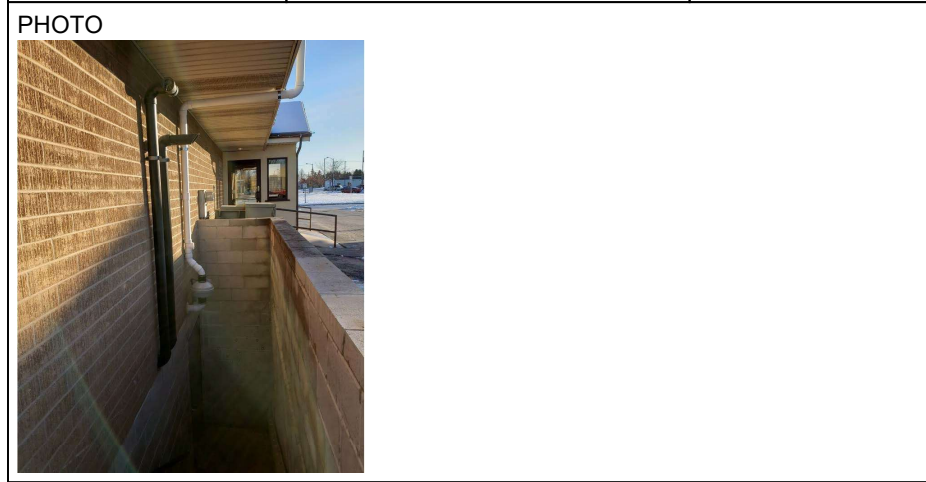
BRRTS No. 02-36-000516

Date of Inspection: _____

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

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
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> <p>The manometer and vacuum alarm are located on Pickup Point No. 1 at the north end of the Golden Flame Restaurant basement. When the system was started up in October 2019 the manometer read 1.4 inches of water column (WC). The fan is capable of pulling up to approximately 4 inches of WC vacuum. The system should be inspected for leaks or other issues if the vacuum falls below approximately 0.5 inches WC.</p>	


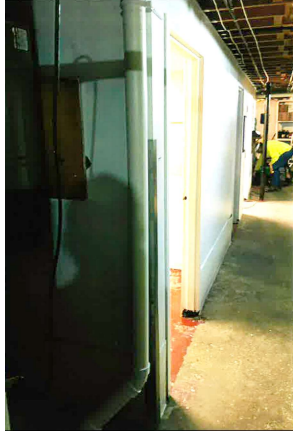
SYSTEM COMPONENT		WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME	WHAT DOES IT DO?			WHAT TO FIX?
Fan	<p>Fan creates a vacuum and lowers pressure below foundation.</p> <p>The fan also removes soil gases from below foundation for discharge to atmosphere.</p>	<p>Fan Operation</p> <p>Fan Location</p> <p>Motor 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>The fan is an AMG Eagle radon fan.</p>



NOTES: (Identify specific building and location description:)

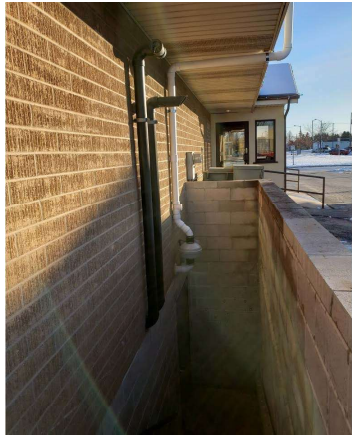
Not Applicable

The fan is located on the exterior of the Golden Flame Restaurant building near the northwest corner of the building.

SYSTEM COMPONENT		WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME	WHAT DOES IT DO?			WHAT TO FIX?
Suction Drop Point w/ Vent Pipe		Suction Point Seal Vent Pipe Condition	Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.	Suction point seal 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 mitigation professional to verify effectiveness, which includes pressure readings.
PHOTO 		NOTES: (Identify specific building and location description:) <input type="checkbox"/> Not Applicable Pickup Point No. 1 is located in the north end of the Golden Flame Restaurant basement.		
Sealed Sump w/Vent Pipe		Suction Point Seal Vent Pipe Seal Condition	Seal is airtight to floor. Vent pipe is connected to the sump cover and is not cracked.	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.
PHOTO 		NOTES: (Identify specific building and location description:) <input type="checkbox"/> Not Applicable Pickup Point No. 2 is located in the south end of th Golden Flame Restaurant basement.		

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				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:)

Not Applicable

The outdoor vent pipe is located on the exterior of the Golden Flame Restaurant building near the northwest corner of the building.

Foundation Floor	Foundation is a barrier that minimizes soil gas entry into building, and helps fan to work efficiently.	Foundation Condition Foundation Footprint	No penetrating cracks or holes in foundation. Check if there have been alterations or additions to building or footprint.	Seal cracks or other penetrations as you would to prevent water from entering. If building floor plan has changed, notify DNR and contact a mitigation professional to evaluate if modifications to the vapor mitigation system are necessary.
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PHOTO




NOTES: (Identify specific building and location description:)

Not Applicable

The Golden Flame Restaurant basement floor shall be maintained.

SYSTEM COMPONENT				DATE:
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> <input type="checkbox"/> Not Applicable	
			Sub-slab Vacuum Observation Point No. 1 located in northeast corner of Golden Flame Restaurant basement.	
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> <input type="checkbox"/> Not Applicable	
			Sub-slab Vacuum Observation Point No. 2 located in northeast corner of Golden Flame Restaurant basement in wash/storage room.	

SYSTEM COMPONENT				DATE:
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 Port Condition	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. Port is sealed and capped when not in use.	Repair or replace the seal and cover as needed. 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>Sub-slab Vacuum Observation Point No. 3 located in southeast corner of Golden Flame Restaurant basement.</p>	