

CONSTRUCTION COMPLETION REPORT
SUB-SLAB DEPRESSURIZATION SYSTEM INSTALLATION
STEUBEN COUNTY VETERANS MEMORIAL, INC
7230 STATE ROUTE 54 NORTH
BATH, STEUBEN COUNTY, NEW YORK
BCP SITE #C851044

by
Haley & Aldrich of New York
Rochester, New York

for
New York State Department of Environmental Conservation
Avon, New York

File No. 0128683-025
January 2023



Executive Summary

Haley & Aldrich of New York (Haley & Aldrich) has prepared this Construction Completion Report (CCR) to document the implementation of the Interim Remedial Measure (IRM), Sub-slab Depressurization System (SSDS) installation at the Steuben County Veterans Memorial (VFW or VFW Property), Inc located at 7230 State Route 54, Bath, New York.

The IRM was completed in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved IRM Work Plan (Haley & Aldrich 2022). Construction and start-up of the SSDS was completed in October 2022, and the construction was in substantial conformance with the approved IRM Work Plan. Post-installation SSDS monitoring, and performance testing was conducted in November 2022 in accordance with the IRM Work Plan, and the requirements indicated in the 9 August 2022 NYSDEC approval letter. A summary of the construction activities and the results of the post-installation monitoring are summarized within this CCR.

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2	Indoor and Ambient Air Sampling Locations

1. Introduction

The current Site owner, Yort, Inc., and the former owner (Philips North America LLC, formerly Philips Electronics North America Corporation – hereafter collectively referenced as Philips) have entered into a Brownfield Cleanup Agreement with the New York State Department of Environmental Conservation (NYSDEC) and are currently conducting Remedial Investigation (RI) activities at the former Philips Lighting facility located at 7265 State Route 54 in Bath, New York, Site #C851044. The RI is being conducted accordance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP) and Supplemental RIWPS to evaluate the environmental conditions at the Site.

1.1 BACKGROUND

As part of the RI studies, vapor intrusion (VI) sampling was conducted at several off-site properties that were adjacent to the former Philips Lighting facility, including soil vapor and indoor air sampling completed at the Steuben County Veterans Memorial (VFW) building located at 7230 State Route 54 in Bath, New York; sampling of the VFW was conducted in April 2021 and June 2021. The April 2021 VFW VI sampling included collecting sub-slab (soil) vapor samples from beneath the lower-level slab-on-grade floor and an indoor air (IA) sample within the lower-level area of the VFW building; the June 2021 VI sampling consisted of collecting an IA sample in the lower-level area of the VFW building to confirm the initial sampling results. The VI and IA samples collected in April and June 2021 from the VFW contained Trichloroethene (TCE), a volatile organic compound (VOC) at concentrations that exceeded New York State Department of Health (NYSDOH) soil vapor intrusion screening criteria¹ for Matrix A compounds. Based on the results, the NYSDEC screening matrix indicated that mitigation of the VI risks in the lower-level area of the VFW would be recommended.

VI mitigation typically involves an engineering control to reduce the pressure differential between the building and the soils beneath the building slab; Sub-Slab Depressurization (SSDS) systems are often used to address VI issues and use fans or blowers to develop a negative pressure (e.g. vacuum) beneath the building. To evaluate SSDS design parameters within the lower-level of the VFW, a pressure field extension (PFE) diagnostic testing program was conducted in February 2022. The results of the PFE diagnostic testing were used to design the SSDS as summarized in the SSD IRM Work Plan (Haley & Aldrich 2022).

1.2 INTERIM REMEDIAL MEASURE OBJECTIVES

The objective of the VFW SSDS installation is to mitigate the potential for VOC vapors that may accumulate beneath the building from entering into the indoor air space at unacceptable levels (aka NYSDOH VI screening criteria). This objective is achieved by creating sufficient negative pressure differential between the interior space of the lower-level of the building and the subsurface beneath the existing floor slab to reduce the potential for transport of vapor-phase contaminants into the building. The typical SSDS includes a series of sub-slab soil vapor collection (suction) pits that can induce sufficient negative vacuum beneath the building and then transfer the subsurface vapor via interconnected piping for discharge to the atmosphere on the exterior of the building.

¹ New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH vapor intrusion guidance), Soil Vapor/Indoor Air Matrices A and B, May 2017.

2. Interim Remedial Measure Activities

2.1 SUB-SLAB DEPRESSURIZATION SYSTEM INSTALLATION

The installed SSDS consists of a total of seven (7) suction pits, with interconnecting piping, that is routed to a one-quarter (1/4) horsepower Fantech Model Rn4EC-4 fan, that is located on the exterior on the north wall of the existing VFW building. The location of the fan and the piping routing were confirmed in the field during the design phase and the installation process was completed to accommodate existing equipment, piping, and ductwork within the VFW, as well as allowing access to the SSDS for operations, maintenance, and monitoring purposes. The fan vapor discharge is located so that it is a minimum of 10-feet above the roof surface and at least 25-feet away from any roof or sidewall openings, or intakes associated with the existing heating, ventilation, and air conditioning systems. Vacuum gauges (manometers) or vacuum measuring points were installed on the vertical piping at each suction pit to provide a means to observe and collect operational data. A total of five (5) sub-slab vacuum monitoring points (VMPs) were also installed to permit the collection of SSDS sub-slab vacuum readings during operations; the VMPs either utilized existing points that had previously been installed as part of the PFE testing activities or supplemental VPMs were installed during the SSDS installation. The permanent VMPs were completed with Vapor Pin[®] vacuum sampling points, and the remaining unused temporary VMPs were sealed with epoxy. An audible alarm was installed on the system and the alarm is set to activate on a loss of SSDS vacuum. The alarm device is located in the upper-level of the VFW building, which is routinely occupied when the building is open. The SSDS was installed by Mitigation Tech² and Pelham Electric in accordance with typical applicable industry standards. Refer to Figure 1 for an as-built layout of the installed SSD system.

2.2 SSDS START UP

The SSDS was started on 3 October 2022 and has been operating continuously since that time. Table I presents a summary of the observed vacuum readings collected during start-up of the SSDS in October 2022, and a system check that was completed in November 2022 during post-installation indoor and ambient air sampling. The operating vacuum readings from the suction pits ranged from 0.8 to 2.0 inches water column (in. W.C.). The VMP readings ranged from 0.027 to 0.066 in. W.C., which are well above the target minimum differential pressure (depressurization) between the indoor building space and sub-slab of 0.004 in. W.C.

2.3 POST-INSTALLATION AIR SAMPLING

Two (2) post-SSDS installation IA samples (one primary, one duplicate) and one ambient air (AA) sample were collected on 18 November 2022 to evaluate SSDS efficiency; the IA and AA sampling locations are shown on Figure 2. Samples were collected while the SSDS was operating and in conjunction with the collection of sub-slab vacuum readings from the VMPs. The building heating system was operational during the sampling event. The outdoor ambient air temperatures during the sampling event ranged between 30-38 degrees Fahrenheit (°F) and there was no precipitation observed prior to or during the sampling. All samples were collected in dedicated laboratory-supplied “individually-certified clean” stainless-steel 6-liter SUMMA canisters over an approximate 8-hour sampling interval. Samples were submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method TO-15 in accordance with the approved work plan. Refer to Appendix A for the laboratory analytical report.

² NEHA NRPP ID certification number 100722.

During the sampling event, an inventory of the chemicals stored within the lower-level area was conducted. Items observed to be present in the VFW included multiple household cleaners, air fresheners, lubricants, degreasers, paints/lacquers, insect sprays, and various building supplies. A summary of the chemical inventory is provided in Appendix B.

A summary of the air sampling results is provided in Table II and based on these results the following observations were noted:

- The TCE levels detected in the primary and duplicate IA samples ranged from 0.163 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 0.149 $\mu\text{g}/\text{m}^3$. The results of the post-startup sampling are over an order of magnitude less than the concentrations of TCE detected in the April 2021 and June 2021 sampling events, which contained TCE between from 2.83 $\mu\text{g}/\text{m}^3$ to 2.95 $\mu\text{g}/\text{m}^3$ respectively. The post startup sampling results are also below the NYSDOH Matrix A (2017) screening criteria for TCE of 1 $\mu\text{g}/\text{m}^3$, indicating that the SSDS is operating effectively and is controlling the VI potential at the VFW building.
- The concentration of carbon tetrachloride in the ambient (outdoor) air sample was similar or higher than the indoor air samples. This suggests that the detection of carbon tetrachloride is likely a background condition in the local area and is indicative of ambient air conditions. Carbon tetrachloride was detected in the ambient air sample and indoor air samples during the initial April and June 2021 samples at similar levels, and this compound has been observed and noted in other air sampling events that have been conducted at the Philips Site.

2.4 WASTE MANAGEMENT

Two (2) five-gallon containers of excavated sub-base materials (gravels) and concrete floor debris were generated during the installation of the suction pits and vacuum monitoring points. This solid waste was taken to the main former Philips Lighting facility and consolidated with other materials on-site which were managed and disposed of at the Steuben County Landfill as construction debris on 4 October 2022.

3. Governing Documents and Regulatory Activities

3.1 HEALTH & SAFETY PLAN

The installation of the SSDS was conducted in accordance with the Haley & Aldrich Site-Specific Health and Safety Plan (HASP) for the VFW related VI work, and the IRM Work Plan approved by the NYSDEC on August 9, 2022.

3.2 QUALITY ASSURANCE/QUALITY CONTROL

Post-SSDS installation indoor and ambient air samples were collected as part of the IRM and the samples were analyzed at a New York State Department of Health (NYSDOH) ELAP certified laboratory for analysis of VOCs via EPA Method TO-15. The air sampling results were reported in NYSDEC Analytical Services Protocol (ASP) Category B format data deliverables. The results presented in the laboratory report were found to be compliant with the data quality objectives for the project and have been considered during the validation to be usable. A copy of the Data Usability Summary Report (DUSR) prepared by Haley & Aldrich is provided in Appendix C.

4. Operation, Maintenance and Monitoring Plan

An Operation, Maintenance and Monitoring (OM&M) Plan that describes the ongoing OM&M activities for the SSDS is contained in Appendix D. The OM&M Plan includes photographs of the key components of the installed system and example monitoring data collection forms that will be used for the evaluation of the SSDS performance.

Monitoring of the SSDS will be conducted on a semi-annual basis and will include collecting vacuum readings from the installed suction pits and VMPs, confirmation of fan operation and fan run hours. The SSDS OM&M data and activities will be reviewed annually by a New York State Professional Engineer (NYSPE) to evaluate overall system performance, and a summary letter documenting the operation of the SSDS will be prepared and provided to the NYSDEC.

As referenced in Section 1, Yort, Inc. and Philips are currently conducting RI activities at the Former Philips Lighting facility; therefore, a final Site Management Plan (SMP) is anticipated to be prepared upon future completion of the RI and potentially selected remedies for the Site. It is anticipated that the SMP would incorporate ongoing VFW SSDS OM&M requirements, and that evaluation of the VFW SSDS performance would be conducted as part of future annual Periodic Review Reports for the Site.

5. Engineer's Certification

I, Edmund Quinn Lewis certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Interim Remedial Measure – Sub-Slab Depressurization System Installation was implemented and that all construction activities were completed in substantial conformance with the DER-approved *Interim Remedial Measure Work Plan dated 9 August 2022*.



087372

NYS Professional Engineer #

31 JANUARY 2023

Date

Edmund Quinn Lewis

Signature

It is a violation of New York State Education Law Article 145 for any person, unless he or she is acting under the direction of a licensed Professional Engineer, to alter this item in any way.

References

1. *Work Plan – Supplemental Vapor Intrusion Study, Philips Lighting Company Bath Facility, Bath, New York*, Haley & Aldrich of New York, May 2019.
2. *Notification Letter: Off-Site Vapor Intrusion - Pressure Field Extension Diagnostic Testing - Steuben County Veterans Memorial, Bath, New York*, Haley & Aldrich of New York, February 16, 2022.
3. *Off-site Soil Vapor Interim Data Report – 7230 Route 54 North Property, Former Philips Lighting Facility, Bath, New York*, Haley & Aldrich of New York, May 2022.
4. *Interim Remedial Measure Work Plan – Sub-Slab Depressurization System Installation - Steuben County Veterans Memorial, Inc., Bath, New York*, Haley & Aldrich of New York, May 2022.
5. *Response to NYSDEC Comments – IRM Sub-slab Depressurization System Installation - Steuben County Veterans Memorial (VFW) - 7230 State Route 54, Philips Lighting Company Bath Facility, Bath, New York*, Haley & Aldrich of New York, August 2022.
6. New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH vapor intrusion guidance), Soil Vapor / Indoor Air Matrices A and B, May 2017.

Table I
Operating Data Log Sheet
VFW SSDS: October 2022 - November 2022
Former Philips Lighting Facility, Bath NY

[illegible]

TABLE II
SUMMARY OF ANALYTICAL RESULTS - INDOOR AND AMBIENT AIR
STEBEN COUNTY VETERANS MEMORIAL (VFW), INC.
FORMER PHILIPS LIGHTING FACILITY
BATH, NY

Location Group Location Sample Date Sample Type Sample Name Matrix	AA02		VFW			
	11/18/2022		VFW01-IA		VFW01-IA	
	Primary		11/18/2022		11/18/2022	
	AA02-111822-0906		Primary		Duplicate	
	Ambient Air		VFW01-IA-111822-0840		4248-111822-0001	
Indoor Air				Indoor Air		
Volatile Organic Compounds (ug/m3)						
1,1,2,2-Tetrachloroethane	0.422	U	0.422	U	0.422	U
1,1,2-Trichloroethane	0.366	U	0.366	U	0.366	U
1,1-Dichloroethane	0.254	U	0.254	U	0.254	U
1,2,4-Trichlorobenzene	0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	0.181	U	0.181	U	0.181	U
1,2-Dibromoethane (Ethylene Dibromide)	0.431	U	0.431	U	0.431	U
1,2-Dichlorobenzene	0.378	U	0.378	U	0.378	U
1,2-Dichloroethane	0.244	U	0.244	U	0.244	U
1,2-Dichloropropane	0.282	U	0.282	U	0.282	U
1,2-Dichlorotetrafluoroethane (CFC 114)	0.413	U	0.413	U	0.413	U
1,3,5-Trimethylbenzene	0.332	U	0.332	U	0.332	U
1,3-Butadiene	0.148	U	0.148	U	0.148	U
1,3-Dichlorobenzene	0.377	U	0.377	U	0.377	U
1,4-Dichlorobenzene	0.382	U	0.382	U	0.382	U
1,4-Dioxane	0.29	U	0.29	U	0.29	U
2,2,4-Trimethylpentane	0.169	U	0.169	U	0.169	U
2-Butanone (Methyl Ethyl Ketone)	0.142	U	0.142	U	0.142	U
2-Hexanone (Methyl Butyl Ketone)	0.266	U	0.266	U	0.266	U
4-Ethyltoluene (1-Ethyl-4-Methylbenzene)	0.182	U	0.182	U	0.182	U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	0.173	U	0.173	U	0.173	U
Acetone	3.8	-	19.4	-	18.2	-
Allyl chloride	0.183	U	0.183	U	0.183	U
Benzene	0.156	U	0.156	U	0.156	U
Benzyl Chloride (alpha-Chlorotoluene)	0.25	U	0.25	U	0.25	U
Bromodichloromethane	0.338	U	0.338	U	0.338	U
Bromoform	0.663	U	0.663	U	0.663	U
Bromomethane (Methyl Bromide)	0.3	U	0.3	U	0.3	U
Carbon disulfide	0.174	U	0.174	U	0.174	U
Chlorobenzene	0.287	U	0.287	U	0.287	U
Chloroethane	0.212	U	0.212	U	0.212	U
Chloroform (Trichloromethane)	0.309	U	0.309	U	0.309	U
Chloromethane (Methyl Chloride)	1.16	-	1.12	-	1.14	-
cis-1,3-Dichloropropene	0.186	U	0.186	U	0.186	U
Cyclohexane	0.127	U	0.127	U	0.127	U
Dibromochloromethane	0.523	U	0.523	U	0.523	U
Dichlorodifluoromethane (CFC-12)	2.34	-	3.56	-	3.43	-
Ethanol	1.38	U	157	-	148	-
Ethyl acetate	0.44	U	0.44	U	0.44	U
Ethylbenzene	0.188	U	0.188	U	0.188	U
Hexachlorobutadiene	0.564	U	0.564	U	0.564	U
Hexane	5.85	-	0.128	U	0.128	U
Isopropyl Alcohol (2-Propanol)	1.17	U	19.3	-	18.1	-
m,p-Xylenes	0.395	U	0.395	U	0.395	U
Methyl Tert Butyl Ether (MTBE)	0.189	U	0.189	U	0.189	U
Methylene chloride (Dichloromethane)	0.466	U	0.466	U	1.83	-
N-Heptane	0.193	U	0.193	U	0.193	U
o-Xylene	0.197	U	0.197	U	0.197	U
Styrene	0.185	U	0.185	U	0.185	U
Tert-Butyl Alcohol (tert-Butanol)	0.141	U	0.141	U	0.141	U
Tetrahydrofuran	0.168	U	0.168	U	0.168	U
Toluene	0.196	U	0.196	U	0.196	U
trans-1,2-Dichloroethene	0.255	U	0.255	U	0.255	U
trans-1,3-Dichloropropene	0.198	U	0.198	U	0.198	U
Trichlorofluoromethane (CFC-11)	1.27	-	1.31	-	1.31	-
Trifluorotrichloroethane (Freon 113)	0.503	U	0.503	U	0.503	U
Vinyl Bromide (Bromoethene)	0.313	U	0.313	U	0.313	U

TABLE II
SUMMARY OF ANALYTICAL RESULTS - INDOOR AND AMBIENT AIR
STEBEN COUNTY VETERANS MEMORIAL (VFW), INC.
FORMER PHILIPS LIGHTING FACILITY
BATH , NY

Location Group Location Sample Date Sample Type Sample Name Matrix	AA02		VFW	
	11/18/2022	Primary	VFW01-IA 11/18/2022 Primary	VFW01-IA 11/18/2022 Duplicate
	AA02-111822-0906		VFW01-IA-111822-0840	4248-111822-0001
	Ambient Air		Indoor Air	Indoor Air
Volatile Organic Compounds SIM (ug/m3)				
1,1,1-Trichloroethane	0.045	U	0.045	U
1,1-Dichloroethene	0.033	U	0.033	U
Carbon tetrachloride	0.528	-	0.478	-
cis-1,2-Dichloroethene	0.038	U	0.038	U
Tetrachloroethene	0.053	U	0.163	-
Trichloroethene	0.033	U	0.033	U
Vinyl chloride	0.018	U	0.018	U

Notes:

1. Results in **bold** are detected.

2. Results qualifiers:

U: Not detected above the method detection limit (MDL).

SSD FAN POWER FROM EXISTING 120V ELECTRICAL
SUB-PANEL NO. 2 - CIRCUIT BREAKER NO. 20

SSD FAN AUDIBLE ALARM - ACTIVATED
ON FAN VACUUM LOSS (LOCATED ON
UPPER LEVEL) - RADONAWAY
CHECKPOINT IIA NO. 15094-1D

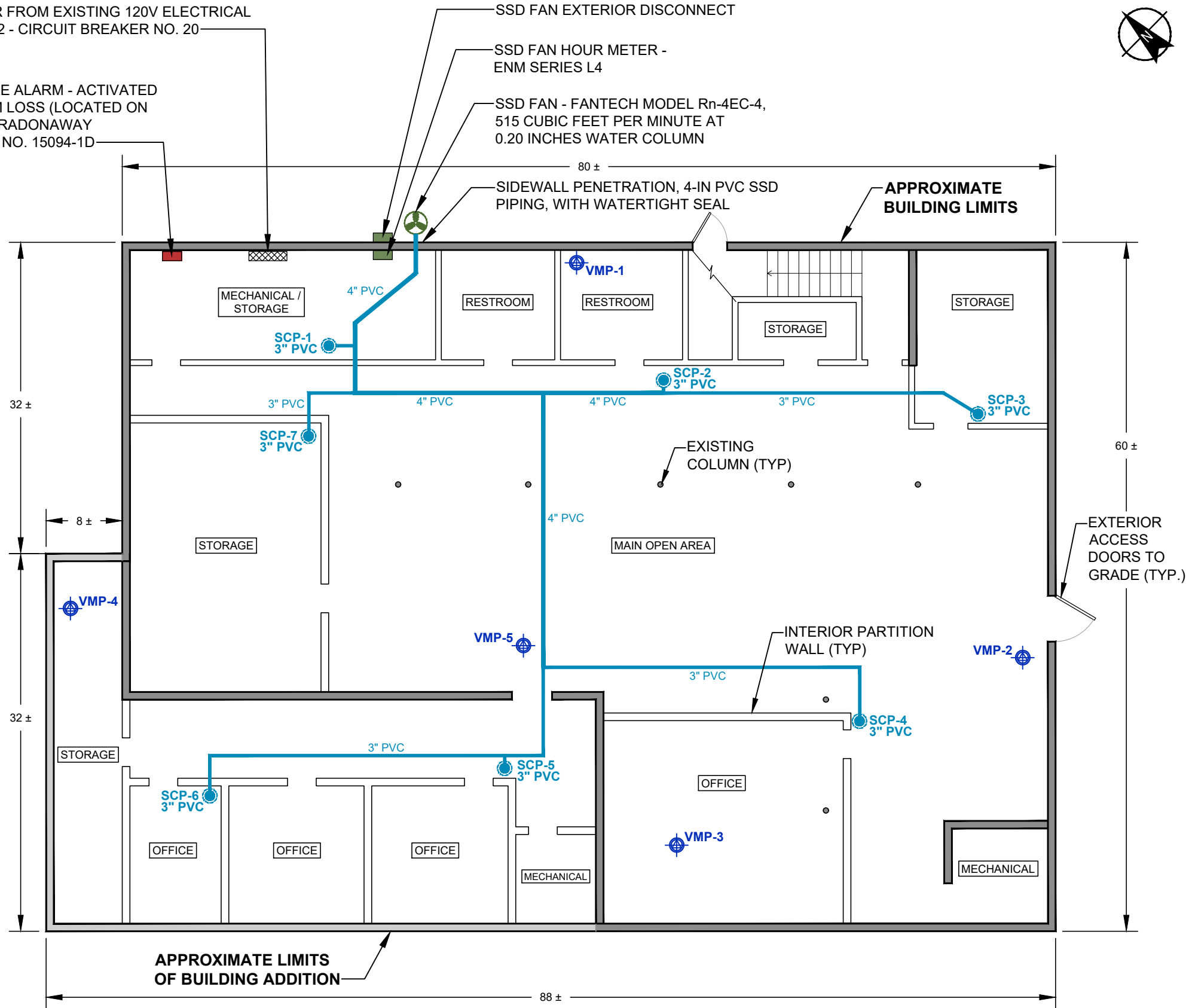
SSD FAN EXTERIOR DISCONNECT

SSD FAN HOUR METER -
ENM SERIES L4

SSD FAN - FANTECH MODEL Rn-4EC-4,
515 CUBIC FEET PER MINUTE AT
0.20 INCHES WATER COLUMN

SIDEWALL PENETRATION, 4-IN PVC SSD
PIPING, WITH WATERTIGHT SEAL

APPROXIMATE
BUILDING LIMITS



LEGEND

- SCP-4**  DESIGNATION, LOCATION AND SIZE OF SUBSLAB
DEPRESSURIZATION SUCTION PIT AND RISER PIPING
- VMP-1**  DESIGNATION AND LOCATION OF SUBSLAB VACUUM
MONITORING POINT
- 3" PVC**  LOCATION OF PVC PIPING - SIZE AS INDICATED
-  SSD FAN LOCATION

NOTES

1. BASE PLAN DIGITIZED FROM DRAWING TITLED "STEBEN
COUNTY MEMORIAL, IN.C. BATH, NY", DATED 24 APRIL 1998 BY
DAVID L. PEARCE, ARCHITECT OF HAMMONDSPORT, NEW
YORK AND SHOULD BE CONSIDERED APPROXIMATE.
2. BUILDING FEATURES INCLUDING INTERIOR PARTITION WALLS
WERE OBSERVED BY HALEY & ALDRICH STAFF DURING
VARIOUS SITE REVIEWS IN 2021 AND 2022 AND HAVE BEEN
PROVIDED FOR REFERENCE ONLY AND SHOULD BE
CONSIDERED APPROXIMATE.
2. ALL HORIZONTAL SSD PIPING FROM THE VERTICAL RISERS
ARE CONNECTING THE SUCTION PITS TO THE FAN LOCATION.
PIPING IS ROUTED IN THE SPACE BETWEEN THE BOTTOM OF
THE 1ST FLOOR JOISTS AND THE DROP CEILING IN THE LOWER
LEVEL AREA.

0 10 20
APPROXIMATE SCALE IN FEET

**HALEY
ALDRICH**

STEBEN COUNTY VETERANS MEMORIAL, INC.
7230 ROUTE 54
BATH, NEW YORK

**SUB-SLAB DEPRESSURIZATION
SYSTEM INSTALLATION - FAN,
SUCTION PITS, AND PIPING LAYOUT
AS-BUILT**

SCALE: AS SHOWN
JANUARY 2023

FIGURE 1

LOWER LEVEL FLOOR PLAN
STEBEN COUNTY VETERANS MEMORIAL HALL



LEGEND

- INDOOR AIR SAMPLE
- AMBIENT AIR SAMPLE
- SITE BOUNDARY
- OFFSITE PROPERTY BOUNDARY

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- PARCEL BOUNDARY DATA SOURCE: STEUBEN COUNTY
- AERIAL IMAGERY SOURCE: NEW YORK STATE, 2012



**HALEY
ALDRICH**

PHILIPS LIGHTING COMPANY
BATH FACILITY
7265 STATE ROUTE 54
BATH, NEW YORK

**OFFSITE INDOOR AND AMBIENT AIR
SAMPLING LOCATIONS**

JANUARY 2023

FIGURE 2

APPENDIX A

Laboratory Analytical Report



ANALYTICAL REPORT

Lab Number:	L2271803
Client:	Haley & Aldrich 200 Town Centre Drive Suite 2 Rochester, NY 14623-4264
ATTN:	Titania Ng
Phone:	(617) 886-7400
Project Name:	BATH PHILIPS LIGHTING GW SAMPL
Project Number:	0127981-028
Report Date:	12/23/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2271803-01	AA02-111822	AIR	BATH, NY	11/18/22 16:20	11/18/22
L2271803-02	VFW01-111822	AIR	BATH, NY	11/18/22 16:15	11/18/22
L2271803-03	4248-111822	AIR	BATH, NY	11/18/22 00:00	11/18/22
L2271803-04	UNUSED_CAN1813	AIR	BATH, NY		11/18/22

Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

Case Narrative (continued)

Report Submission

The sample results were originally reported in L2265515.

Volatile Organics in Air

Canisters were released from the laboratory on November 11, 2022. The canister certification results are provided as an addendum.

Volatile Organics in Air

The WG1726195-3 LCS recovery for bromoform (133%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

Volatile Organics in Air by SIM

The WG1726196-3 LCS recovery for bromoform (144%), styrene (137%), 1,3-dichlorobenzene (134%) and 1,4-dichlorobenzene (143%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Jennifer Jerome

Title: Technical Director/Representative

Date: 12/23/22

AIR

Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-01
 Client ID: AA02-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:20
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 11/23/22 18:26
 Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.474	0.200	--	2.34	0.989	--		1
Chloromethane	0.561	0.200	--	1.16	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	1.60	1.00	--	3.80	2.38	--		1
Trichlorofluoromethane	0.226	0.200	--	1.27	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22**SAMPLE RESULTS**

Lab ID: L2271803-01

Date Collected: 11/18/22 16:20

Client ID: AA02-111822

Date Received: 11/18/22

Sample Location: BATH, NY

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	1.66	0.200	--	5.85	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-01
 Client ID: AA02-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:20
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	90		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	90		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-01
 Client ID: AA02-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:20
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 11/23/22 18:26
 Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.084	0.020	--	0.528	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	89		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-02
 Client ID: VFW01-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:15
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 11/23/22 19:05
 Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.720	0.200	--	3.56	0.989	--		1
Chloromethane	0.544	0.200	--	1.12	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	83.3	5.00	--	157	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	8.17	1.00	--	19.4	2.38	--		1
Trichlorofluoromethane	0.233	0.200	--	1.31	1.12	--		1
Isopropanol	7.85	0.500	--	19.3	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22**SAMPLE RESULTS**

Lab ID: L2271803-02
 Client ID: VFW01-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:15
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-02
 Client ID: VFW01-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:15
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	92		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-02
 Client ID: VFW01-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 16:15
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 11/23/22 19:05
 Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.076	0.020	--	0.478	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.024	0.020	--	0.163	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	91		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-03
 Client ID: 4248-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 00:00
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 11/23/22 20:23
 Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.693	0.200	--	3.43	0.989	--		1
Chloromethane	0.553	0.200	--	1.14	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	78.7	5.00	--	148	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	7.67	1.00	--	18.2	2.38	--		1
Trichlorofluoromethane	0.234	0.200	--	1.31	1.12	--		1
Isopropanol	7.35	0.500	--	18.1	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	0.528	0.500	--	1.83	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22**SAMPLE RESULTS**

Lab ID: L2271803-03

Date Collected: 11/18/22 00:00

Client ID: 4248-111822

Date Received: 11/18/22

Sample Location: BATH, NY

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-03
 Client ID: 4248-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 00:00
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	92		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271803-03
 Client ID: 4248-111822
 Sample Location: BATH, NY

Date Collected: 11/18/22 00:00
 Date Received: 11/18/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 11/23/22 20:23
 Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.082	0.020	--	0.516	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.022	0.020	--	0.149	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	92		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 11/23/22 15:42

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1726195-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 11/23/22 15:42

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1726195-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 11/23/22 15:42

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1726195-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 11/23/22 16:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1726196-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1



Lab Control Sample Analysis

Batch Quality Control

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Lab Number: L2271803

Project Number: 0127981-028

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1726195-3								
Dichlorodifluoromethane	89		-		70-130	-		
Chloromethane	96		-		70-130	-		
Freon-114	92		-		70-130	-		
Vinyl chloride	87		-		70-130	-		
1,3-Butadiene	96		-		70-130	-		
Bromomethane	87		-		70-130	-		
Chloroethane	90		-		70-130	-		
Ethanol	76		-		40-160	-		
Vinyl bromide	98		-		70-130	-		
Acetone	113		-		40-160	-		
Trichlorofluoromethane	94		-		70-130	-		
Isopropanol	107		-		40-160	-		
1,1-Dichloroethene	95		-		70-130	-		
Tertiary butyl Alcohol	87		-		70-130	-		
Methylene chloride	100		-		70-130	-		
3-Chloropropene	110		-		70-130	-		
Carbon disulfide	100		-		70-130	-		
Freon-113	101		-		70-130	-		
trans-1,2-Dichloroethene	94		-		70-130	-		
1,1-Dichloroethane	97		-		70-130	-		
Methyl tert butyl ether	95		-		70-130	-		
2-Butanone	99		-		70-130	-		
cis-1,2-Dichloroethene	99		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Lab Number: L2271803

Project Number: 0127981-028

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1726195-3								
Ethyl Acetate	96		-		70-130	-		
Chloroform	99		-		70-130	-		
Tetrahydrofuran	98		-		70-130	-		
1,2-Dichloroethane	92		-		70-130	-		
n-Hexane	95		-		70-130	-		
1,1,1-Trichloroethane	100		-		70-130	-		
Benzene	94		-		70-130	-		
Carbon tetrachloride	107		-		70-130	-		
Cyclohexane	96		-		70-130	-		
1,2-Dichloropropane	99		-		70-130	-		
Bromodichloromethane	102		-		70-130	-		
1,4-Dioxane	98		-		70-130	-		
Trichloroethene	100		-		70-130	-		
2,2,4-Trimethylpentane	98		-		70-130	-		
Heptane	110		-		70-130	-		
cis-1,3-Dichloropropene	113		-		70-130	-		
4-Methyl-2-pentanone	110		-		70-130	-		
trans-1,3-Dichloropropene	98		-		70-130	-		
1,1,2-Trichloroethane	105		-		70-130	-		
Toluene	100		-		70-130	-		
2-Hexanone	120		-		70-130	-		
Dibromochloromethane	123		-		70-130	-		
1,2-Dibromoethane	116		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Lab Number: L2271803

Project Number: 0127981-028

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1726195-3								
Tetrachloroethene	110		-		70-130	-		
Chlorobenzene	110		-		70-130	-		
Ethylbenzene	116		-		70-130	-		
p/m-Xylene	118		-		70-130	-		
Bromoform	133	Q	-		70-130	-		
Styrene	127		-		70-130	-		
1,1,2,2-Tetrachloroethane	113		-		70-130	-		
o-Xylene	119		-		70-130	-		
4-Ethyltoluene	123		-		70-130	-		
1,3,5-Trimethylbenzene	117		-		70-130	-		
1,2,4-Trimethylbenzene	109		-		70-130	-		
Benzyl chloride	125		-		70-130	-		
1,3-Dichlorobenzene	130		-		70-130	-		
1,4-Dichlorobenzene	130		-		70-130	-		
1,2-Dichlorobenzene	120		-		70-130	-		
1,2,4-Trichlorobenzene	106		-		70-130	-		
Hexachlorobutadiene	108		-		70-130	-		

Lab Control Sample Analysis Batch Quality Control

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Lab Number: L2271803

Project Number: 0127981-028

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1726196-3								
Vinyl chloride	88		-		70-130	-		25
1,1-Dichloroethene	99		-		70-130	-		25
cis-1,2-Dichloroethene	101		-		70-130	-		25
1,1,1-Trichloroethane	103		-		70-130	-		25
Carbon tetrachloride	105		-		70-130	-		25
Trichloroethene	102		-		70-130	-		25
Tetrachloroethene	108		-		70-130	-		25

Lab Duplicate Analysis Batch Quality Control

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Project Number: 0127981-028

Lab Number: L2271803

Report Date: 12/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726195-5 QC Sample: L2271803-03 Client ID: 4248-111822						
Dichlorodifluoromethane	0.693	0.720	ppbV	4		25
Chloromethane	0.553	0.549	ppbV	1		25
Freon-114	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	78.7	79.4	ppbV	1		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	7.67	7.78	ppbV	1		25
Trichlorofluoromethane	0.234	0.240	ppbV	3		25
Isopropanol	7.35	7.50	ppbV	2		25
Tertiary butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	0.528	0.539	ppbV	2		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
2-Butanone	ND	ND	ppbV	NC		25
Ethyl Acetate	ND	ND	ppbV	NC		25

Lab Duplicate Analysis Batch Quality Control

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Project Number: 0127981-028

Lab Number: L2271803

Report Date: 12/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726195-5 QC Sample: L2271803-03 Client ID: 4248-111822						
Chloroform	ND	ND	ppbV	NC		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	ND	ND	ppbV	NC		25
Benzene	ND	ND	ppbV	NC		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	ND	ND	ppbV	NC		25
2-Hexanone	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25

Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2271803
Report Date: 12/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726195-5 QC Sample: L2271803-03 Client ID: 4248-111822						
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Project Number: 0127981-028

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2271803

Report Date: 12/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726196-5 QC Sample: L2271803-03 Client ID: 4248-111822						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Carbon tetrachloride	0.082	0.082	ppbV	0		25
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	0.022	0.024	ppbV	9		25

Project Name: BATH PHILIPS LIGHTING GW SAMPL

Serial_No:12232210:33
Lab Number: L2271803

Project Number: 0127981-028

Report Date: 12/23/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2271803-01	AA02-111822	0478	Flow 5	11/11/22	404417		-	-	-	Pass	10.0	8.1	21
L2271803-01	AA02-111822	1963	6.0L Can	11/11/22	404417	L2261992-03	Pass	-28.6	-9.8	-	-	-	-
L2271803-02	VFW01-111822	01044	Flow 5	11/11/22	404417		-	-	-	Pass	10.0	9.7	3
L2271803-02	VFW01-111822	3013	6.0L Can	11/11/22	404417	L2261992-03	Pass	-28.6	-8.5	-	-	-	-
L2271803-03	4248-111822	0918	Flow 4	11/11/22	404417		-	-	-	Pass	10.0	11.0	10
L2271803-03	4248-111822	1544	6.0L Can	11/11/22	404417	L2261992-04	Pass	-28.5	-7.8	-	-	-	-
L2271803-04	UNUSED_CAN1813	0082	Flow 5	11/11/22	404417		-	-	-	Pass	10.0	9.8	2
L2271803-04	UNUSED_CAN1813	1813	6.0L Can	11/11/22	404417	L2261992-03	Pass	-28.7	-30.0	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 11/07/22 19:13
Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2261992**Project Number:** CANISTER QC BAT**Report Date:** 12/23/22**Air Canister Certification Results**

Lab ID: L2261992-03

Date Collected: 11/03/22 20:00

Client ID: CAN 651 SHELF 31

Date Received: 11/04/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	94		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 11/07/22 19:13
Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-03
Client ID: CAN 651 SHELF 31
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	95		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-04
Client ID: CAN 3357 SHELF 32
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 11/07/22 19:52
Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-04
Client ID: CAN 3357 SHELF 32
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-04
Client ID: CAN 3357 SHELF 32
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-04
Client ID: CAN 3357 SHELF 32
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2261992**Project Number:** CANISTER QC BAT**Report Date:** 12/23/22**Air Canister Certification Results**

Lab ID: L2261992-04

Date Collected: 11/03/22 20:00

Client ID: CAN 3357 SHELF 32

Date Received: 11/04/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	101		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	94		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-04
Client ID: CAN 3357 SHELF 32
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 11/07/22 19:52
Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2261992
Report Date: 12/23/22

Air Canister Certification Results

Lab ID: L2261992-04
Client ID: CAN 3357 SHELF 32
Sample Location:

Date Collected: 11/03/22 20:00
Date Received: 11/04/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2261992**Project Number:** CANISTER QC BAT**Report Date:** 12/23/22**Air Canister Certification Results**

Lab ID: L2261992-04

Date Collected: 11/03/22 20:00

Client ID: CAN 3357 SHELF 32

Date Received: 11/04/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	105		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	96		60-140



Project Name: BATH PHILIPS LIGHTING GW SAMPL**Lab Number:** L2271803**Project Number:** 0127981-028**Report Date:** 12/23/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

N/A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2271803-01A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2271803-02A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2271803-03A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2271803-04A	Canister - 6 Liter	N/A	NA			Y	Absent		CLEAN-FEE()

Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: BATH PHILIPS LIGHTING GW SAMPL
Project Number: 0127981-028

Lab Number: L2271803
Report Date: 12/23/22

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2271803 kb 12/21/22

AIR ANALYSIS CHAIN OF CUSTODY		Page 1 of 1		Date Rec'd in Lab <u>11/19/22</u>		ALPHA Job # <u>L2271803</u>																																																																																																																																																																														
Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288 Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288		Project Information		Report Information - Data Deliverables		Billing Information																																																																																																																																																																														
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APPENDIX B

Chemical Inventory

VFW Building Product Inventory
Former Philips Lighting Facility
Bath, New York
File No. 0127981-025
Inventory Conducted: 18 November 2022

Product Name	Quantity
3M Dust Remover	12 oz
BEHR Gloss Enamel Porch & Patio Floor Paint	1 gallon
Chemsearch Lextend	16 oz
Classic 99 Interior Semi-Gloss Latex	3.66 L
Do it Best ant, roach, & spider killer	16 oz
Drano Liquid Drain Cleaner	32 fl oz
D-Stroy Drain Maintainer and Deodorizer	1 qt
Dutch Boy Rust Preventative Enamel	11 oz
Flood CWF-UV Wood Stain	1 gallon
Gentle Fresh Foaming Hand Soap	18.5 oz
Greenlee Cable Cream -Wire Pull Lubricant	1 qt
Home & Garden Insect Killer	15 oz
Hydro Power Spray and Degreaser	1 qt
Kaboom Cleaner	1 qt
Kingsford Charcoal Lighter	64 oz
Kingsford Odorless Charcoal Lighter	2 qt
Kyrlon Interior-Exterior Spray Paint	12oz
Landmark Super Strip Wax Remover	1 gallon
Lime Out Cleaner	1 qt
Liquid Nails Latex Adhesive	10.5 oz
Minwax Wood Finish	32 fl oz
Overall Supply, Inc. Glass-Brite Cleaner	1 qt
Overall Supply, Inc. Spray N'Wipe Cleaner	19 oz
Profile Lemon Crème Furniture Polish & Protector	32 fl oz
Poten Spray & Wipe Power Cleaner & Degreaser	1 qt
Pure Bright Bleach	1 gallon
Sherwin-Williams Shrink Free Spackling	8 fl oz
SNB-130 Super Strength Non-Butyl Degreaser	1 gallon
State All Purpose Spray Cleaner	32 fl oz
State DRI All Purpose Penetrant	20 oz
State Green Genius Heavy Duty Bowl Cleaner	1 L
Super Paint Interior Acrylic Latex	1 gallon
Super Spec Interior Latex Semi Gloss Finish	3.667 L
WD-40 Lubricant and Degreaser	13.5 oz
Weldwood Contact Cement	32 fl oz
White Lithman Grease	14 oz
ZAR ULTRA Polyurethane	11 oz
ZEP House and Siding Cleaner	(2) 1 gallon

APPENDIX C

Data Usability Summary Report

Data Usability Summary Report

Project Name: Philips Lighting – Bath, NY

Project Description: Air Samples

Sample Date(s): 18 November 2022

Analytical Laboratory: Alpha Analytical – Westborough, MA

Validation Performed by: Santa McKenna

Validation Reviewed by: Katherine Miller

Validation Date: 29 November 2022 and 23 December 2022

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the analytical results for Sample Delivery Group (SDG) listed. This DUSR is organized into the following sections:

- 1. Sample Delivery Group Number L2271803**
 - 2. Explanations**
 - 3. Glossary**
 - 4. Abbreviations**
 - 5. Qualifiers**
- References**

This data validation and usability assessment was performed per the guidance and requirements established by the United States Environmental Protection Agency (USEPA) using the following reference materials:

- National Functional Guidelines (NFG) for Organic Data Review.
- Analysis of Volatile Organic Compounds (VOCs) in Air Contained in Canisters by Method TO-15.

Data reported in this sampling event were reported to the laboratory reporting limit (RL). Results found between the MDL and RL are flagged J as estimated.

Sample data were qualified in accordance with the laboratory's standard operating procedures (SOP). The results presented in each laboratory report were found to be compliant with the data quality objectives (DQO) for the project and therefore usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number L2271803

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number L2271803, dated 23 December 2022. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC. Issues noted with sample management are listed below:

- Analytical results were originally reported in L2265515.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Date	Matrix	Methods	Holding Time
VFW01-111822	N	L2271803-01	11/18/2022	IA	VOCs by TO-15-SIM	30 Days
4248-111822	FD	L2271803-02	11/18/2022	IA		
AA02-111822	N	L2271803-03	11/18/2022	AA		

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.3 REPORTING LIMITS AND SAMPLE DILUTIONS

The RLs for the samples within this SDG met or were below the minimum reporting limit (RL) requirements specified by the project specific QAPP.

1.4 SURROGATE RECOVERY COMPLIANCE

[Refer to section E 1.2.](#) The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified quality control (QC) limits.

1.5 LABORATORY CONTROL SAMPLES

[Refer to section E 1.3.](#) Compounds associated with the laboratory control samples (LCS) analyses exhibited recoveries within the specified limits with the following exceptions:

- The laboratory does not report RPDs. As spike concentrations are also not provided, the RPD could not be calculated by the reviewer. Precision was estimated by comparing the recoveries of the LCS and LCSD.

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	TO-15	WG1716010-3	Bromoform	133%	J/None	None, samples are ND

1.6 BLANK SAMPLE ANALYSIS

[Refer to section E 1.5.](#) Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.7 DUPLICATE SAMPLE ANALYSIS

[Refer to section E 1.6.](#) The following sample(s) were used for laboratory duplicate analysis and the RPDs were all below 20 percent (or the absolute difference rule was satisfied if detects were less than 5 times the RL):

Lab Sample Number	Laboratory Duplicate Sample Client ID	Method(s)
L2271803-02	4248-111822	TO-15 SIM

The following sample(s) were used for field duplicate analysis. The RPD comparison for detections in either the parent or duplicate sample(s) is shown below. RPDs were all below 35 percent for air sediment (or the absolute difference rule was satisfied if detects were less than 5 times the RL).

Primary Sample ID	Duplicate Sample ID	Method(s)
VFW01-111822	4248-111822	TO-15 SIM

1.8 PRECISION AND ACCURACY

[Refer to section E 1.7.](#) Some measurement of analytical accuracy and precision was reported for each method with the site samples.

1.9 CLEAN CANISTER CERTIFICATION

The canisters used for the TO-15 SIM sample collection were certified clean by batch can analysis prior to sampling to ensure that no target analytes were present. These analysis sheets were reviewed, and no target analytes were detected in the laboratory-provided canisters.

1.10 LEAK COMPOUND ANALYSIS CHECK

[Refer to section E 1.12.](#) The project specific QAPP requires a leak check compound be used during sampling to assess if a leak occurred while collecting site samples. Helium was used as a leak check and was reported for all samples.

All helium results were ND, indicating a leak did not occur.

1.11 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable as no data was rejected. No qualifiers were applied to any data in this report.

2. Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.2 Surrogate Recovery Compliance
 - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determine the efficiency of the extraction procedure by evaluating the percent recovery (%R) of the compounds.
- E 1.3 Laboratory Control Samples
 - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.5 Blank Sample Analysis
 - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
 - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
 - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The relative percent difference (RPD) or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
- E 1.7 Precision and Accuracy
 - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
 - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%R) of certain spiked compounds. This can be assessed using LCS, blank spike (BS), MS, and/or surrogate recoveries.
- E. 1.12 Leak Check Compound Analysis
 - Helium is commonly used as a gaseous leak check indicator compound. If a shroud is used and the helium concentration in the sample is greater than or equal to 5 percent of the helium concentration in the shroud (usually 1.5 percent) qualify detects “J” and non-detects “UJ.”
 - Isopropyl alcohol (IPA) is commonly used as a liquid leak check indicator compound. If the IPA concentration is greater than or equal to 10 times the reporting limit (RL) for the

target analyte(s), then corrective action is necessary. The RL for trichloroethene for the least diluted sample is used as the "target analyte RL."

3. Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
 - EB Equipment Blank Sample
 - FB Field Blank Sample
 - FD Field Duplicate Sample
 - N Primary Sample
 - TB Trip Blank Sample
- Units:
 - $\mu\text{g/kg}$ microgram per kilogram
 - $\mu\text{g/L}$ microgram per liter
 - $\mu\text{g/m}^3$ microgram per cubic meter
 - mg/kg milligram per kilogram
 - mg/L milligram per liter
 - ppb v/v parts per billion volume/volume
 - pCi/L picocuries per liter
 - pg/g picograms per gram
- Matrices:
 - AA Ambient Air
 - GS Soil Gas
 - GW/WG Groundwater
 - QW Water Quality
 - IA Indoor Air
 - SE Sediment
 - SO Soil
 - WQ Water Quality control matrix
 - WS Surface Water
- Table Footnotes:
 - NA Not applicable
 - ND Non-detect
 - NR Not reported
- Common Symbols:
 - % percent
 - < less than
 - $\leq$ less than or equal to
 - > greater than
 - $\geq$ greater than or equal to
 - = equal
 - $^{\circ}\text{C}$ degrees Celsius
 - $\pm$ plus or minus
 - $\sim$ approximately
 - x times (multiplier)

4. Abbreviations

%D	Percent Difference	mg/kg	milligrams per kilogram
%R	Percent Recovery	MS/MSD	Matrix Spike/Matrix Spike Duplicate
%RSD	Percent Relative Standard Deviation	NA	not applicable
%v/v	Percent volume by volume	ND	Non-Detect
µg/L	micrograms per liter	NFG	National Functional Guidelines
2s	2 sigma	NH ₃	Ammonia
4,4-DDT	4 4-dichlorodiphenyltrichloroethane	NYSDEC	New York State Department of Environmental Conservation
Abs Diff	Absolute Difference		
amu	atomic mass unit	PAH	polycyclic aromatic hydrocarbon
BPJ	Best Professional Judgement	PCB	Polychlorinated Biphenyl
BS	Blank Spike	PDS	Post Digestion Spike
CCB	Continuing Calibration Blank	PEM	Performance Evaluation Mixture
CCV	Continuing Calibration Verification	PFAS	Per- and Polyfluoroalkyl Substances
CCVL	Continuing Calibration Verification Low	PFBA	Perfluorobutanoic Acid
		PFD	Perfluorodecalin
COC	Chain of Custody	PFOA	Perfluorooctanoic Acid
COM	Combined Isotope Calculation	PFOS	Perfluorooctane sulfonate
Cr (VI)	Hexavalent Chromium	PFPeA	Perfluoropentanoic Acid
CRI	Collision Reaction Interface	QAPP	Quality Assurance Project Plan
DoD	Department of Defense	QC	Quality Control
DQO	data quality objective	QSM	Quality Systems Manual
DUSR	Data Usability Summary Report	R ²	R-squared value
EMPC	Estimated Maximum Possible Concentration	Ra-226	Radium-226
		Ra-228	Radium-228
FBK	Field Blank Contamination	RESC	Resolution Check Measure
FDP	Field Duplicate	RL	Laboratory Reporting Limit
GC	Gas Chromatograph	RPD	Relative Percent Difference
GC/MS	Gas Chromatography/Mass Spectrometry	RRF	Relative Response Factors
		RT	Retention Time
GPC	Gel Permeation Chromatography	SAP	sampling analysis plan
H ₂	Hydrogen gas	SDG	Sample Delivery Group
HCl	Hydrochloric Acid	SIM	Selected ion monitoring
ICAL	Initial Calibration	SOP	Laboratory Standard Operating Procedures
ICB	Initial Calibration Blank		
ICP/MS	Inductively Coupled Plasma/ Mass Spectrometry	SPE	Solid Phase Extraction
		SVOC	Semi-Volatile Organic Compounds
ICV	Initial Calibration Verification	TIC	Tentatively Identified Compound
ICVL	Initial Calibration Verification Low	TKN	Total Kjeldahl Nitrogen
IPA	Isopropyl Alcohol	TPH	Total Petroleum Hydrocarbon
LC	Laboratory Control	TPU	Total Propagated Uncertainty
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate	amu	atomic mass unit
		USEPA	U.S. Environmental Protection Agency
MBK	Method Blank Contamination	VOC	Volatile Organic Compounds
MDC	Minimum Detectable Concentration	WP	Work Plan
MDL	Laboratory Method Detection Limit		

5. Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:
 - U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or “ND”.
 - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
 - E The compound was quantitated above the calibration range.
 - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
 - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
 - J+ The result is an estimated quantity, but the result may be biased high.
 - J- The result is an estimated quantity, but the result may be biased low.
 - J/UJ as listed in exception tables J applies to detected data and UJ applies to non-detected data as reported by the laboratory.
 - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.
 - NJ The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.
 - R The sample results were rejected as unusable; the compound may or may not be present in the sample.
 - S Result is suspect. See DUSR for details.

References

1. Haley & Aldrich, Inc, 2014. Quality Assurance Project Plan. Former Phillips Lighting Facility. BCP Site # C851044, April.
2. United States Environmental Protection Agency, 2014a. Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15, SOP NO. HW-31, Revision 6. June.
3. United States Environmental Protection Agency, 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-20-005. November.

APPENDIX D

SSDS Operation, Maintenance, and Monitoring Plan

OPERATION, MAINTENANCE AND MONITORING PLAN
SUB-SLAB DEPRESSURIZATION SYSTEM INSTALLATION
STEUBEN COUNTY VETERANS MEMORIAL, INC
7230 STATE ROUTE 54 NORTH
BATH, STEUBEN COUNTY, NEW YORK
BCP SITE #C851044

by
Haley & Aldrich of New York
Rochester, New York

File No. 0128683-025
January 2023



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1. Operation, Maintenance and Monitoring Plan

1.1 INTRODUCTION

As summarized in the Construction Completion Report (CCR), a Sub-Slab Depressurization System (SSDS) system was installed in the lower level of the VFW building to create a negative pressure beneath the building slab to mitigate the potential for soil vapor intrusion. This Operation, Maintenance, and Monitoring (OM&M) Plan describes the measures required to operate, monitor, and maintain the SSDS. This OM&M Plan:

- Includes the required steps to enable individuals unfamiliar with the SSDS to operate, maintain, and monitor the SSDS;
- Includes an operation and maintenance contingency plan; and
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDS is operated and maintained.

A copy of this OM&M Plan will be kept at the VFW site and is anticipated to be a component of the future Site Management Plan (SMP) that will be developed for the Former Philips Lighting facility site.

2. SSDS Operation

2.1 SSDS OPERATION

The SSDS consists of seven (7) suction pits with interconnecting piping routed to a one-quarter (1/4) horsepower Fantech Model Rn4EC-4 fan. Five (5) vacuum monitoring points (VMPs) are installed to allow for the collection of system differential pressure (depressurization) measurements between the sub-slab and indoor building space. The SSDS is designed to maintain a minimum of 0.004 inches of water column (in. W.C.) differential pressure between the sub-slab and building lower-level indoor space as measured in the VMPs. The SSDS contains vacuum gauges (manometers) at each suction pit location that can be observed to evaluate performance, and an audible alarm to indicate a loss of system vacuum that may occur due to a potential operational issue with the fan unit or damage to the conveyance piping. In the event that manual readings collected from the suction pit manometers or VMPs indicate that negative differential pressure is either below design criteria, non-routine maintenance may be required as described in Section 3.2. Baseline measurements and operating data of the SSDS vacuums at the suction pits and VMPs are summarized in Table 1 of the CCR.

The SSDS fan is designed to operate continuously and does not need to be manually turned on or shut down. A 120-volt electrical service to the fan, and an in-line fan hour meter that records the operating hours for the fan unit when energized, is fed from a dedicated circuit breaker (No. 20) in the existing number 2 electrical sub-panel, which is located in the lower-level mechanical room of the building. The electrical service also contains an exterior electrical disconnect that is proximal to the fan unit. Both the breaker and disconnect allow the circuit to the fan and meter to be deenergized for maintenance purposes. Activation of the circuit breaker and disconnect allows for the operation of the fan unit. In the event that there is an electrical outage, the SSDS fan will automatically turn on when the service is restored to the building.

Refer to OM&M Plan Appendix A for manuals and data sheets for equipment, devices, and appurtenance installed for the SSDS, and OM&M Plan Appendix B for a photo log of the SSDS installation.

3. SSDS Performance Monitoring and Maintenance Requirements

System OM&M reports and other information generated during regular operations will be kept on-file at the VFW site. The reports, forms, and other relevant information generated during OM&M of the SSDS will be available upon request to the NYSDEC and submitted as part of the annual SSDS performance evaluation.

3.1 SSDS: ROUTINE MONITORING AND EQUIPMENT MAINTENANCE

Routine system monitoring and maintenance shall be conducted on a semi-annual basis, generally following the schedule below:

- Quarter 1: system check during the heating season
- Quarter 3: system check prior to the upcoming heating season

During routine monitoring, the following activities, at a minimum, shall be conducted:

1. A visual inspection of the SSDS, including the fan, piping, labeling system, and integrity of the existing lower-level concrete floor system;
2. Measuring negative pressure readings from the suction pit manometers, vacuum monitoring points, and recording the fan hour meter;
3. Inspection of the fan exhaust point to verify that new air intakes have not been located nearby; and
4. Testing the audible alarm to verify operational performance.

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSDS has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Deliverables associated with the monitoring of the SSDS are specified later in this Plan.

Preventative maintenance, such as a fan replacement, repairs and/or adjustments shall be made to the system to ensure its continued effectiveness at mitigating potential exposures related to soil vapor intrusion. The need for adjustments, preventative maintenance, or repairs will depend upon observation of system operation over time compared to when system operation was initiated. In addition to the routine OM&M activities described here, representatives of the VFW will be provided with the IRM CCR t which contains this OM&M Plan that explains the system's operation, maintenance and monitoring. Therefore, at any time during the system's operation, representatives of the VFW may check that the system is operating properly. If vacuums are not within their typical operating ranges, equipment is observed to be malfunctioning, or the system is not performing within specification, the VFW representatives can notify the appropriate designated environmental professional via telephone contact so that maintenance can be performed to return the SSDS to normal operations.

3.2 SSDS: NON-ROUTINE EQUIPMENT MAINTENANCE

Non-routine maintenance may be required during the long-term operation of an SSDS. Examples of such situations may include the following:

1. The need to replace the SSDS fan;
2. The building's owners or occupants report that the vacuum gauge indicates the SSDS is not operating properly or the audible SSDS alarm is activated;
3. The SSDS becomes damaged; or
4. The building has undergone renovations that may reduce the effectiveness of the SSDS.

Activities conducted during non-routine maintenance will vary depending upon the reason for the maintenance. In general, non-routine maintenance activities may include assessing the lower-level area for structural or HVAC system changes, or other changes that may affect the performance of the SSDS, such as new combustion appliances or deterioration of the existing lower-level concrete slab. Repairs or adjustments will be made to the system, as appropriate, in order for the system to meet the design requirements.

4. SSDS Operations, Maintenance and Monitoring Reporting Requirements

System OM&M reports and any other information generated during regular operations at the site will be kept on-file at the VFW. The reports, forms, and other relevant information generated will be available upon request to the NYSDEC and submitted as part of the Periodic Review Report. Refer to OM&M Plan Appendix C for the SSDS Operating Data Log Sheet and Maintenance and Monitoring Tracking Sheet.

4.1 ROUTINE OM&M REPORTS

An SSDS Operating Data Log Sheet will be completed during each system monitoring and routine maintenance event and shall include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- System operational data;
- Maintenance activities conducted;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

4.2 NON-ROUTINE OM&M REPORTS

The Maintenance and Monitoring Tracking Sheet will be completed during each system non-routine maintenance event and shall include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

APPENDIX A

Sub Slab Depressurization System Equipment Data Sheets

Rn 4EC-4 Inline Radon Fan

Art. no.: 99923

Version: 120V 1~ 60Hz



- Use for **High Suction, High Airflow** applications
- Equipped with EC Motor
- Speed Control Included
- LDVI™ Couplings Included
- Airtight Housing Guaranteed
- Large Electrical Box
- Zero Leakage

Active radon mitigation systems employ specialized fans to exhaust radioactive radon gas from underneath building structures via a sealed pipe system. These systems are designed to remove radon gas before it migrates into the building envelope.

As the most powerful model in Fantech's family of Radon Mitigation fans, the **Rn4EC** can create 4.3" of suction while moving 20 cfm, as well as move 490 cfm when operating at only 0.5" of suction. High air flow, high suction.

Rn4EC features an electronically commutated (EC) motor. Inherently efficient and operationally stable at full and reduced speeds, the EC motor arms the radon professional with installation methods not previously practical. Integrated control system allows for "dialling in" the fan speed necessary to achieve either the required sub-slab depressurization or required system air flow rate. For demand-controlled systems, the potentiometer can be removed from the wiring terminal block to accommodate an externally-provided 0-10Vdc speed command.

The **Rn 4-4EC** is constructed with UL certified, UV protected polycarbonate material. The inlet and outlet pieces of the fan's housing are vibration welded for 100% leak-proof housing construction. Totally enclosed motors are designed with extra moisture protection in various radon applications.

Performance certified by **HVI**; safety certified by **UL**.

NOTE:

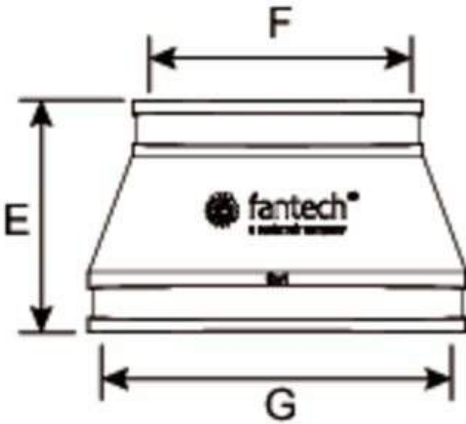
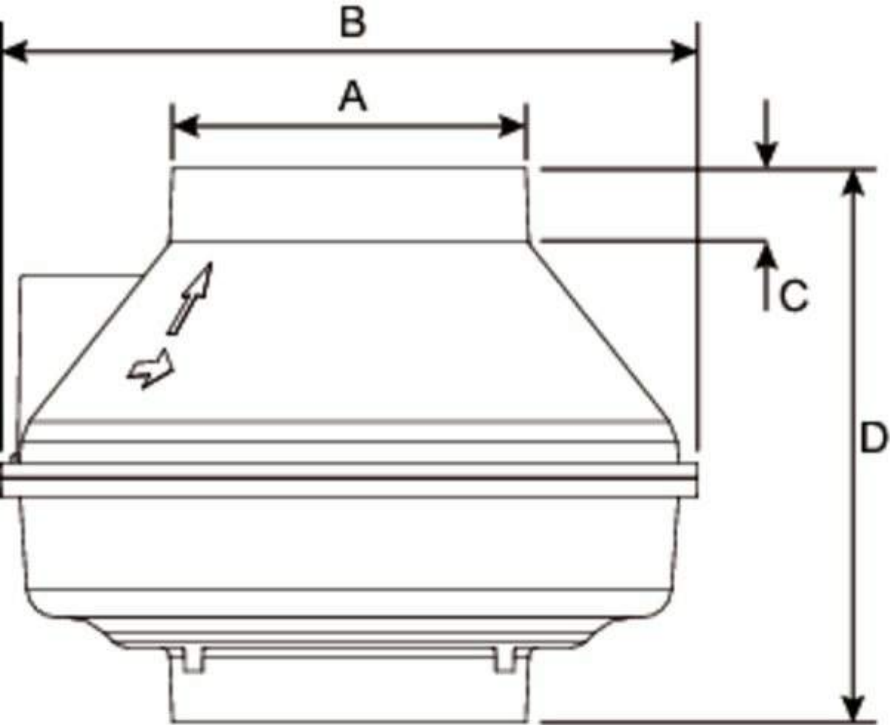
Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims



Technical parameter

Nominal data		
Voltage (Nominal)	120	V
Frequency	60	Hz
Phase(s)	1~	
Input power	169	W
Input current	2.1	A
Impeller speed	4,084	r.p.m.
Air flow	max 555.0	cfm
Temperature of transported air	max 122	°F
Max temperature of transported air, when speed controlled	122	°F
Protection/Classification		
Enclosure class, motor	IP54	
Insulation class	B	
Certificate	HVI, cULus	
Dimensions and weights		
Weight	7.3	lb

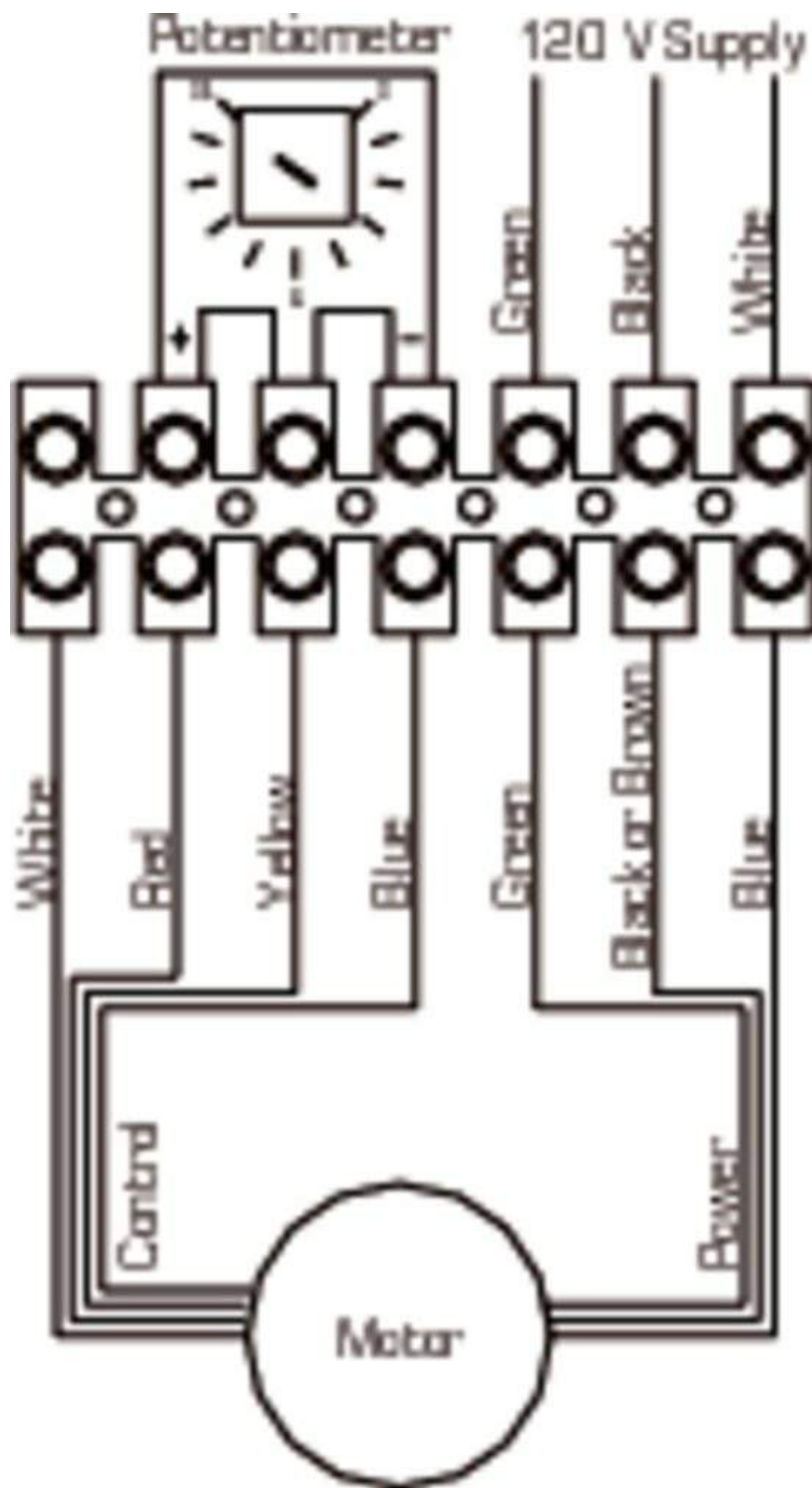
Dimension



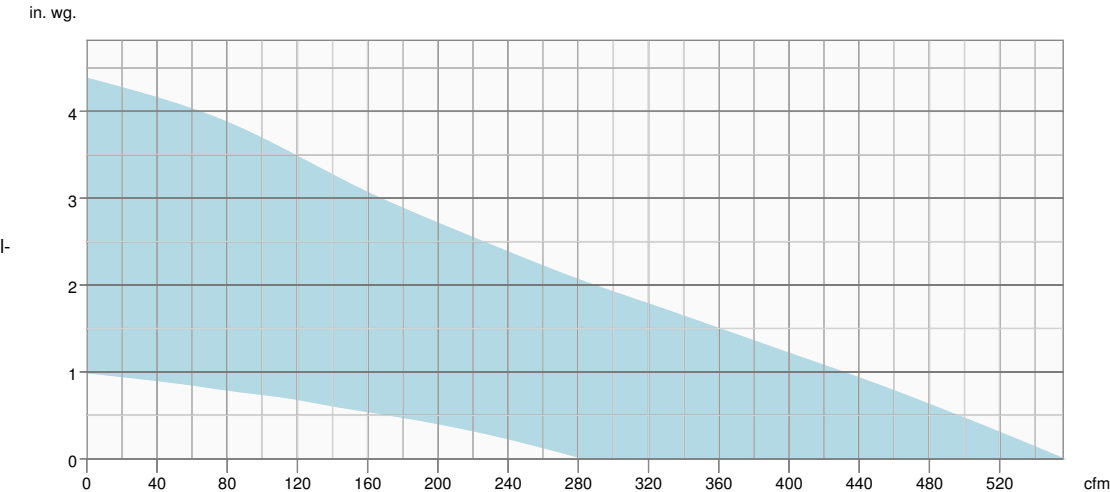
Model	A	B	C	D	E	F	G
Rn4-3	5 7/8 (149)	11 1/2 (292)	1 1/4 (32)	9 1/4 (235)	4 (102)	3 1/2 (89)	6 (152)
Rn4-4	5 7/8 (149)	11 1/2 (292)	1 1/4 (32)	9 1/4 (235)	4 (102)	4 1/2 (114)	6 (152)

Dimensions in inches (mm).

Wiring



Performance curve



Self Powered LCD Counter/Timer L3/L4 Series



**L3 7 DIGIT COUNTER
L4 6 DIGIT HOUR METER**

Features

- High reliability
- Low cost and small size
- Low operating current
- Wide operating voltage
- Lithium battery (Non-replaceable)
- Display always on
- 100% sealed (IP68)
- High shock and vibration specs.
- Polarity insensitive L3/L4--A model
- Silent operating, no moving parts
- Wide voltage range covering most AC/DC applications
- Free contact application when power not available
- Solid state electronics
- Quartz Crystal
- Made in the U.S.A.

ENM's Series L3/L4 AC/DC or Free contact is offered as a pulse counter or hour meter. It features an 7 digit LCD display with self-powered CMOS circuit. These units are powered by an internal lithium battery. The totalizing counter or hour meter can be with and without external electronic reset. The total running count or time is displayed at all times. The meter is 100% epoxy encapsulated and protected from shock and vibration to keep out the harshest environments plus provide years of service. This instrument is ideal for any application that requires reliable count or time keeping for service maintenance schedules in a small space.

Specifications

Capacity:	99999.9 (Hour Meter displays) 99999.99 (Hours and 1/100) 99999.59 (Hours/Minutes) 999.59.59 (Hours/Minutes/seconds) 9999999 (Counter Display) Automatic recycle to zero.
Character Height:	Large 7-digits 7mm (Counter) Large 6-digits 7mm standard (Hour Meter)
Operating Voltage:	L3/L4--A model 5-250 AC/DC L3/L4--B model (free contact) no input voltage is required
Operating Current:	L3/L4--A model 5V = 0.05mA, 250V = 3mA L3/L4--B Model Free Contact (no current)
Count Speed:	12Hz for L3 standard model higher or lower speed count is available
Operating Temperature:	Standard -30°C to +71°C (-22 F to + 159 F)
Humidity:	95% SAE J1378
Vibration Resistance:	SAE J1378
Accuracy:	Better than +/-0.01% for the L4 model Hour Meter
Protected From:	L3/L4--A model Alternator load dump, inductive switching
Mounting Configuration:	See reverse side for detail

HOUR METER (AC/DC INPUT)	L4XA
HOUR METER (FREE CONTACT)	L4XB
COUNTER (AC/DC INPUT)	L3XA
COUNTER (FREE CONTACT)	L3XB

NOTE: REPLACE "X" IN P/N FOR THE CASE STYLE

© ENM Co.



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.

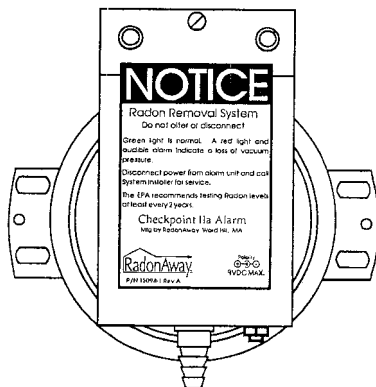
Now turn the fan off. The red light and audible alarm should come on in about two or three seconds and the green light should go out.

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



Standard Operating Procedure Installation and Extraction of the Vapor Pin®

Updated September 9, 2016

Scope:

This standard operating procedure describes the installation and extraction of the VAPOR PIN® for use in sub-slab soil-gas sampling.

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the VAPOR PIN® for the collection of sub-slab soil-gas samples or pressure readings.

Equipment Needed:

- Assembled VAPOR PIN® [VAPOR PIN® and silicone sleeve(Figure 1)]; Because of sharp edges, gloves are recommended for sleeve installation;
- Hammer drill;
- 5/8-inch (16mm) diameter hammer bit (hole must be 5/8-inch (16mm) diameter to ensure seal. It is recommended that you use the drill guide). (Hilti™ TE-YX 5/8" x 22" (400 mm) #00206514 or equivalent);
- 1½-inch (38mm) diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch (19mm) diameter bottle brush;
- Wet/Dry vacuum with HEPA filter (optional);
- VAPOR PIN® installation/extraction tool;
- Dead blow hammer;
- VAPOR PIN® flush mount cover, if desired;
- VAPOR PIN® drilling guide, if desired;

- VAPOR PIN® protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel for repairing the hole following the extraction of the VAPOR PIN®.



Figure 1. Assembled VAPOR PIN®

Installation Procedure:

- 1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.
- 2) Set up wet/dry vacuum to collect drill cuttings.
- 3) If a flush mount installation is required, drill a 1½-inch (38mm) diameter hole at least 1¾-inches (45mm) into the slab. Use of a VAPOR PIN® drilling guide is recommended.
- 4) Drill a 5/8-inch (16mm) diameter hole through the slab and approximately 1-inch (25mm) into the underlying soil to form a void. Hole must be 5/8-inch (16mm) in diameter to ensure seal. It is recommended that you use the drill guide.

VAPOR PIN® protected under US Patent # 8,220,347 B2, US 9,291,531 B2 and other patents pending

- 5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.
- 6) Place the lower end of VAPOR PIN® assembly into the drilled hole. Place the small hole located in the handle of the installation/extraction tool over the vapor pin to protect the barb fitting, and tap the vapor pin into place using a dead blow hammer (Figure 2). Make sure the installation/extraction tool is aligned parallel to the vapor pin to avoid damaging the barb fitting.



Figure 2. Installing the VAPOR PIN®

During installation, the silicone sleeve will form a slight bulge between the slab and the VAPOR PIN® shoulder. Place the protective cap on VAPOR PIN® to prevent vapor loss prior to sampling (Figure 3).



Figure 3. Installed VAPOR PIN®

- 7) For flush mount installations, cover the vapor pin with a flush mount cover, using either the plastic cover or the optional stainless-steel Secure Cover (Figure 4).



Figure 4. Secure Cover Installed

- 8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to re-equilibrate prior to sampling.
- 9) Remove protective cap and connect sample tubing to the barb fitting of the VAPOR PIN®. This connection can be made using a short piece of Tygon™ tubing to join the VAPOR PIN® with the Nylaflo tubing (Figure 5). Put the

Nylaflow tubing as close to the VAPOR PIN® as possible to minimize contact between soil gas and Tygon™ tubing.



Figure 5. VAPOR PIN® sample connection

- 10) Conduct leak tests in accordance with applicable guidance. If the method of leak testing is not specified, an alternative can be the use of a water dam and vacuum pump, as described in SOP Leak Testing the VAPOR PIN® via Mechanical Means (Figure 6). For flush-mount installations, distilled water can be poured directly into the 1 1/2 inch (38mm) hole.



Figure 6. Water dam used for leak detection

- 11) Collect sub-slab soil gas sample or pressure reading. When finished, replace the protective cap and flush mount cover

until the next event. If the sampling is complete, extract the VAPOR PIN®.

Extraction Procedure:

- 1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the VAPOR PIN® (Figure 7). Turn the tool clockwise continuously, don't stop turning, the VAPOR PIN® will feed into the bottom of the installation/extraction tool and will extract from the hole like a wine cork, DO NOT PULL.

- 2) Fill the void with hydraulic cement and smooth with a trowel or putty knife.



Figure 7. Removing the VAPOR PIN®

- Prior to reuse, remove the silicone sleeve and protective cap and discard. Decontaminate the VAPOR PIN® in a hot water and Alconox® wash, then heat in an oven to a temperature of 265° F (130° C) for 15 to 30 minutes. For both steps, STAINLESS – 1/2 hour, BRASS 8 minutes
- 3) Replacement parts and supplies are available online.

APPENDIX B

Sub Slab Depressurization System Installation Photo Log

SSDS Installation
Steuben County Veterans (VFW) Memorial, Inc.
Former Philips Lighting Facility, Bath, New York
File No. 0128683-025
Date Photographs Taken: 4 and 18 October 2022



Photo 1: SSDS Fan Unit



Photo 2: Typical SSDS Suction Pit and Riser

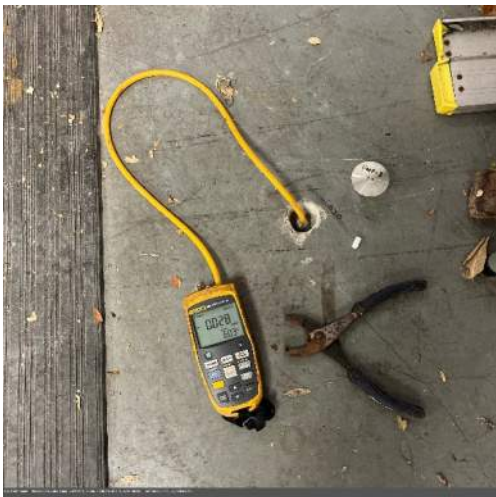


Photo 3: Typical SSDS Vacuum Monitoring Point



Photo 4: SSDS Fan Hour Meter

APPENDIX C

Sub Slab Depressurization System OM&M Forms

Operating Data Log Sheet

VFW SSDS

Former Philips Lighting Facility, Bath NY

	SSDS Fan	SSDS Suction Pits (inches water column)							SSDS Vacuum Monitoring Points (inches water column)					
Date/ Time	Hour Meter Reading	SCP-1	SCP-2	SCP-3	SCP-4	SCP-5	SCP-6	SCP-7	VMP-1	VMP-2	VMP-3	VMP-4	VMP-5	COMMENTS

Notes/ Observations

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