

# Site Investigation Status Report Reedsburg Cleaners Reedsburg, Sauk County, Wisconsin

WDNR ERP Case #: 02-57-001682

June 19, 2024

Prepared for:



**Wisconsin Department of Natural Resources**  
625 E. County Road Y, Suite 700  
Oshkosh, WI 54901

Prepared by:



**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103



June 19, 2024

Wisconsin Department of Natural Resources  
Remediation & Redevelopment Program / Environmental Management Division  
Jennifer Borski  
625 E. County Road Y, Suite 700  
Oshkosh, WI 54901-9731  
[jennifer.borski@wisconsin.gov](mailto:jennifer.borski@wisconsin.gov)

Re: **Site Investigation Status Report**  
Reedsburg Cleaners  
349 E. Main Street  
Reedsburg, Wisconsin  
WDNR ERP Case #: 02-57-001682

Dear Jennifer,

Bay West LLC (Bay West) is pleased to provide this Site Investigation Status Report (Report) for the Reedsburg Cleaners located at 349 East Main Street in Reedsburg, Sauk County, Wisconsin ("Site"). The sampling was completed at the request of Wisconsin Department of Natural Resources (WDNR) through the Vapor Intrusion Zone Contract (VIZC). The purpose of the vapor intrusion investigation activities were to evaluate for the presence of volatile organic compounds (VOCs) in the soil gas at properties near the Site and within the sewer utility right-of-way located at Locust Street. Bay West completed the work in accordance with our Proposal for Vapor Intrusion Investigation dated May 2, 2023, and guidance by Mr. Rob Hoverman, PG.

The results of the vapor intrusion investigation identified low levels of VOCs in the sub-slab vapors and sewer vapors at concentrations below the WDNR residential and/or commercial vapor risk screening levels. As such, no further action is warranted. This Report documents the vapor intrusion sampling activities conducted by Bay West in accordance with Chapter NR 716 of the Wisconsin Administrative Code (Wis. Adm. Code).

Should you have any questions or comments, please feel free to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tarek Aboueid'.

Tarek Aboueid  
Environmental Professional  
[taboueid@baywest.com](mailto:taboueid@baywest.com)

A handwritten signature in black ink, appearing to read 'Jason Kunze'.

Jason Kunze  
Senior Project Manager  
[jkunze@baywest.com](mailto:jkunze@baywest.com)

A handwritten signature in black ink, appearing to read 'Rick Van Allen'.

Rick Van Allen, PG (1460-13)  
Shared Services Group Leader  
[rickv@baywest.com](mailto:rickv@baywest.com)

## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Interested Parties .....	1
1.3 Site Information .....	1
1.4 Site Background .....	2
<b>2.0 OBJECTIVE AND SCOPE OF WORK .....</b>	<b>3</b>
<b>3.0 VAPOR INTRUSION SAMPLING ACTIVITIES.....</b>	<b>4</b>
3.1 Mobilization.....	4
3.2 Sub-Slab Vapor Sampling Activities .....	5
3.3 Indoor/Outdoor Air Sampling .....	6
3.4 Sewer Vapor Screening and Sampling Activities .....	7
<b>4.0 VAPOR SAMPLING RESULTS.....</b>	<b>9</b>
4.1 120 N Locust .....	9
Sub-slab vapor.....	9
Indoor air.....	9
4.2 125 N Locust .....	9
Sub-slab vapor.....	9
Indoor air.....	9
Outdoor air.....	10
4.3 335 E Main Street.....	10
Sub-slab vapor.....	10
Indoor air and sump.....	10
Outdoor air.....	10
4.4 Sewer Vapor Sampling Results.....	10
<b>5.0 SUMMARY AND CONCLUSIONS .....</b>	<b>11</b>

### List of Tables

Table 1A	120 N Locust St Sub-slab Vapor and Indoor Air Analytical Results
Table 1B	125 N Locust St Sub-slab Vapor and Indoor Air Analytical Results
Table 1C	335 E Main St Sub-slab Vapor and Indoor Air Analytical Results
Table 1R	Sewer Gas Analytical Results

### List of Figures

Figure 1	Site Location Map
Figure 2	Site Map
Figure 2A	Site Map of 120 N Locust St Analytical Results
Figure 2B	Site Map of 125 N Locust St Analytical Results
Figure 2C	Site Map of 335 E Main St Analytical Results
Figure 2R	Sanitary Sewer Analytical Results

### List of Appendices

Appendix A	Building Surveys and Photolog
Appendix B	Field Forms
Appendix C	Laboratory Analytical Reports

## Acronyms

µg/m <sup>3</sup> .....	micrograms per cubic meter
AST .....	above-ground storage tank
Bay West.....	Bay West LLC
bgs .....	below ground surface
BRRTS.....	Bureau for Remediation and Redevelopment Tracking System
DCE .....	dichloroethene
EPA.....	United States Environmental Protection Agency
Pa.....	pascals
PCE.....	tetrachloroethene
PID .....	photoionization detector
ppm .....	parts per million
PSI .....	property sample identifier
PSG .....	permanent soil gas
RL .....	reporting limit
ROW .....	right of way
SAP .....	Sampling and Analysis Plan
SOP .....	Standard Operating Procedure
SSGSL.....	sanitary sewer gas screening level
SSHP .....	site-specific Safety and Health Plan
TCE .....	trichloroethene
UST .....	underground storage tank
VAL .....	vapor action level
VISL .....	Vapor Intrusion Screening Level
VIZC.....	Vapor Intrusion Zone Contact
VOCs .....	volatile organic compounds
VRSL.....	vapor risk screening level
WDNR.....	Wisconsin Department of Natural Resources
Wis. Adm. Code ..	Wisconsin Administrative Code



## EXECUTIVE SUMMARY

Bay West LLC (Bay West) is pleased to provide this Site Investigation Status Report (Report) for the Reedsburg Cleaners located at 349 East Main Street in Reedsburg, Wisconsin (Site). The Site includes three properties (335 E Main Street, 120 N Locust Street, 125 N Locust Street), and two sanitary sewer manholes located in the Locust Street right-of-way.

The purpose of the vapor intrusion sampling activities were to (1) evaluate for the presence of volatile organic compounds (VOCs) in the soil gas beneath the existing floor surfaces of the residences and the commercial building immediately adjacent to the source building, (2) determine if there is a risk of vapor intrusion related to tetrachloroethene (PCE) from the former Reedsburg Cleaners, and (3) determine if disposal of PCE into the sanitary sewer has resulted in concentrations of contaminant vapors sufficiently high in the sanitary sewer conduit to pose a risk of vapor intrusion to occupants of buildings served by the sanitary sewer.

In order to complete vapor intrusion sampling activities, Bay West coordinated access at the following properties:

- 120 N Locust Street, a residential property – property sample identifier (PSI) A;
- 125 N Locust Street, a residential property – PSI B;
- 335 E Main Street, a commercial property – PSI C; and
- Two sanitary sewer manholes utility located in the Locust Street right of way – PSI R;

Bay West completed the vapor intrusion building surveys; and collected passive sub-slab and indoor/outdoor air samples for laboratory analysis for VOCs by the TO-17 Method.

The results of the vapor intrusion sampling activities identified low levels of VOCs in the sub-slab vapors and sewer vapors at concentrations below the Wisconsin Department of Natural Resources (WDNR) residential and commercial vapor risk screening levels.

Based on the results of the recent vapor data, the vapor intrusion sampling activities requested by the WDNR have been completed. Based on current WDNR guidance, Bay West does not recommend further vapor intrusion investigation at these properties and the sanitary sewers with respect to potential risk from chlorinated VOCs. Additional work at Reedsburg Cleaners may be required to meet the NR 700 Rule Series requirements for site closure.

## 1.0 INTRODUCTION

### 1.1 Introduction

On behalf of the Wisconsin Department of Natural Resources (WDNR), Bay West LLC (Bay West) has prepared this Site Investigation Status Report (Report) to present the results of vapor intrusion sampling activities completed at near the Reedsburg Cleaners located at 349 East Main Street in Reedsburg, Sauk County, Wisconsin (Site).

The vapor intrusion sampling activities presented in this Report were completed in accordance with our *Proposal for Vapor Intrusion Investigation* submitted to the WDNR dated May 2, 2023.

### 1.2 Interested Parties

<b>Regulatory Agency (Project Coordinator):</b>	<b>Consultant:</b>
Wisconsin Department of Natural Resources Jennifer Borski Remediation & Redevelopment Program / Environmental Management Division 625 E. County Road Y, Suite 700 Oshkosh, WI 54901-9731 <a href="mailto:jennifer.borski@wisconsin.gov">jennifer.borski@wisconsin.gov</a>	Bay West 5 Empire Drive St. Paul, MN 55103 Contact: Jason Kunze <a href="mailto:jkunze@baywest.com">jkunze@baywest.com</a>

### 1.3 Site Information

Reedsburg Cleaners is identified under the Vapor Intrusion Zone Contract (VIZC) as Site ID #8 for data management purposes. The Site includes the following property sample identifiers (PSIs): Two residential properties 120 N Locust Street (PSI A) and 125 N Locust Street (PSI B); one commercial property 335 E Main Street (PSI C); and a sewer utility located in the Locust Street right of way (ROW; PSI R). See **Figure 1** and **Figure 2** for the locations of the properties. The Site is predominantly flat, with a slight topographic gradient to the southwest towards the Baraboo River, located approximately 2,000 feet southwest of the Site. The surrounding area consists of residential and commercial properties. Specific property details of the Site are described below:

#### 120 N Locust Street (PSI A)

<b>Owner information</b>	<b>Property information</b>
Lee Gnatzig (owner) 608-963-5266 <a href="mailto:LeeGnatzig@gmail.com">LeeGnatzig@gmail.com</a>	<b>Address:</b> 120 N Locust St, Reedsburg, WI 53959 <b>Tax Parcel ID #:</b> 276-0942-00000 <b>Location:</b> Sec. 10, T12N, R4E <b>Acres:</b> 0.07
Harry Ardono (renter) 608-415-2046	<b>Use:</b> Residential <b>Building Information:</b> Two story with basement

#### 125 N Locust Street (PSI B)

<b>Owner information</b>	<b>Property information</b>
Stephanie Hasler 608-415-1395 <a href="mailto:madametrissime@gmail.com">madametrissime@gmail.com</a>	<b>Address:</b> 125 N Locust St, Reedsburg, WI 53959 <b>Tax Parcel ID #:</b> 276-0933-00000 <b>Location:</b> Sec. 10, T12N, R4E <b>Acres:</b> 0.2
Joseph Hasler 608-524-4840 <a href="mailto:JHasler@boardmanclark.com">JHasler@boardmanclark.com</a>	<b>Use:</b> Residential <b>Building Information:</b> Two story with basement

**335 E Main Street (PSI C)**

Owner information	Property information
Reedsburg Real Estate LLC Jamie Phephles 608-963-6923 <a href="mailto:Jamie@grandalliancewi.com">Jamie@grandalliancewi.com</a>	<b>Address:</b> 335 E Main St, Reedsburg, WI 53959 <b>Tax Parcel ID #:</b> 276-0934-00000 <b>Location:</b> Sec. 10, T12N, R4E <b>Acres:</b> 0.06 <b>Use:</b> Commercial <b>Building Information:</b> Single story (slab on grade)

**Property Sample Identifier (PSI R)**

Owner information	Property information
City of Reedsburg c/o Steven Zibell City Engineer/Public Works Director Public Works – City of Reedsburg Wisconsin	<b>Address:</b> Locust St ROW <b>Location:</b> Sec. 10, T12N, R4E

**1.4 Site Background**

The former Reedsburg Cleaners occupied the northwest corner of the intersection with Main Street and Locust Street and operated as a gasoline and service station from approximately 1944 until 1976 when it was converted to a dry cleaning facility. Prior to 1976, three 1,000-gallon leaded gasoline underground storage tanks (USTs) were abandoned in place and filled with sand along the eastern side of the Site. Between 1976 and 1992, one 500-gallon fuel oil UST was removed from the northeast portion of the Site. Tetrachloroethene (PCE) was stored in a 100-gallon above-ground storage tank (AST) along the northern property boundary at the northeast corner of the Site. Reportedly, a release of approximately 10 to 15 gallons of PCE occurred in 1994.

In December 1994, a monitoring well located on the adjacent Spellman Monument petroleum investigation site (403 East Main Street, BRRTS #03-57-001103) contained PCE. Subsequently, the DNR requested Reedsburg Cleaners begin an investigation for the occurrence of chlorinated solvents due to the detection in the off-Site monitoring well. After the initial round of investigation in 1996 that discovered both chlorinated solvents and petroleum, the WDNR also requested Reedsburg Cleaners begin investigation activities for the petroleum release identified with the chlorinated solvents.

Site investigation activities occurred between 1999 and 2017. Seymour Environmental implemented a reductive dechlorination injection between 2009 and 2011. The final round of work conducted in 2017 included installation of a sub-slab vapor mitigation system at the Site building, soil sampling at the extraction point, and groundwater monitoring. The chlorinated solvent site file is available on Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web under BRRTS #02-57-001682 and is the focus of this phase of investigation. The petroleum case, also still open, is tracked as BRRTS #03-57-002801.

## 2.0 OBJECTIVE AND SCOPE OF WORK

The objectives of the vapor intrusion sampling activities were to (1) evaluate for the presence of VOCs in the soil gas beneath the existing floor surfaces, (2) determine if there is a risk of vapor intrusion related to PCE from the former Reedsburg Cleaners, and (3) determine if disposal of PCE into the sanitary sewer has resulted in concentrations of contaminant vapors sufficiently high in the sanitary sewer conduit to pose a risk of vapor intrusion to occupants of buildings served by the sanitary sewer. To assess the vapor intrusion of the Site, Bay West completed the following:

- **Health and Safety** – Developed a site-specific Safety and Health Plan (SSHP) and submitted it to the WDNR prior to the start of the field work.
- **Inventory and Remove Indoor Air Sources** – Inventoried and removed items from the buildings that may contribute VOCs to the indoor air in accordance with *Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin, RR-800*, which lists common background sources. As allowed, Bay West removed items from the building or sample spaces prior to sampling.
- **Building Evaluation** – Performed a building walk-through of each location and completed photographic logs and Vapor Intrusion Building Checklists provided by the WDNR.
- **Sampling Equipment** – Discussed with the WDNR to confirm number of passive-technology samplers, sampler specification, sampler placement, analytical requirements, necessary reporting limits needed, sampling duration, expected concentration if known, and analyte list.
- **Vapor sampling activities** – Collected passive sorbent sub-slab vapor and passive air samples in two to three separate events, from indoor, sump, and outdoor locations at the three PSIs. Passive sub-slab vapor samples were collected in one location within the basement or ground floor of each building. Passive indoor air samples were collected in up to three locations in each building. Passive outdoor samples were collected at one location per event, upwind of the buildings being sampled, with the sampler housed in a protective shelter, exposed for the same duration as the indoor air samples. Additionally, a sump pit/basket was present at PSI-C (commercial building), which Bay West temporarily sealed to allow for collection of a passive air sample within the sump pit. No water was present during collection of the passive vapor sump air sample.
- **Sewer sampling activities** – In one event, collected passive air samples from sanitary sewer manhole locations. Bay West attempted to obtain as-built drawings from the City of Reedsburg to identify where the former Reedsburg Cleaners facility discharges to the sanitary main, however the City of Reedsburg did not have as-built drawings available.
- **Laboratory Analysis** – Submitted samples to Beacon Environmental laboratory for analysis of the following VOCs via United States Environmental Protection Agency (USEPA) method TO-17: PCE, trichloroethene (TCE), cis/trans-1,2-dichloroethene (DCE), and vinyl chloride. The analysis for the sanitary sewer manhole air samples included an extended VOC list provided by Beacon. Laboratory reporting limits (RLs) were compared to residential or small commercial vapor risk screening levels (VRSLs) for sub-slab samples, residential or small commercial vapor action levels (VALs) for indoor, sump, and outdoor air samples, and the sanitary sewer gas screening level (SSGSL) for the sewer main samples.
- **Documentation** – Bay West provided sample results to the WDNR, the property owner, the City of Reedsburg, and tenants, in accordance with Wis. Admin. Code § NR 716.14 using notification templates provided by the WDNR. Additionally, Bay West prepared this Report summarizing the vapor intrusion sampling activities and results.

### 3.0 VAPOR INTRUSION SAMPLING ACTIVITIES

#### 3.1 Mobilization

Bay West conducted the vapor intrusion sampling activities in four events at the Site, detailed as follows:

Event	Date	Address / Location of Sampling Event	Summary of Field Work
<b>Pre-Sampling Event</b>	6/26/2023	120 N Locust St (PSI A) 125 N Locust St (PSI B) 335 E Main Street (PSI C) Locust St ROW (PSI R)	Inventoried and removed items from the buildings that may contribute VOCs to the indoor air. Completed a building walk-through at 120 N Locust St, 125 N Locust St, and 335 E Main Street and completion of Vapor Intrusion Building Checklists and photologs as attached in <b>Appendix A</b> .
<b>Event 1 (non-heating season)</b>	7/18/2023 to 8/1/2023	120 N Locust St (PSI A) 125 N Locust St (PSI B) 335 E Main Street (PSI C) Locust St ROW (PSI R)	<p><b>120 N Locust St:</b> Installed 1 sub-slab vapor point 08A_SSV_01 (basement floor). Set up 3 passive indoor air samplers 08A_IAB_01 (basement), 08A_IA1_02 (first floor), and 08A_IA2_03 (second floor).</p> <p><b>125 N Locust St:</b> Installed 1 sub-slab vapor point 08B_SSV_02 (basement floor). Set up 3 passive indoor air samplers 08B_IAB_04 (basement), 08B_IA1_05 (first floor), and 08B_IA2_06 (second floor).</p> <p><b>335 E Main St:</b> Installed 1 sub-slab vapor point 08C_SSV_03 (main floor). Set up 1 passive indoor air samplers 08C_IA1_07 (main floor). Set up and temporarily sealed 1 passive sump sample 08C_Sump_01 (sump). Set up 1 passive outdoor sample 08C_OA_01 (outdoor).</p> <p><b>Locust St ROW:</b> Set up 2 passive indoor air samplers one within the south manhole (08R_SSG_01) and another in the north manhole (08R_SSG_02) along the Locust Street ROW.</p>
<b>Event 2 (heating season)</b>	12/5/2023 to 12/15/2023	120 N Locust St (PSI A) 125 N Locust St (PSI B) 335 E Main Street (PSI C)	<p><b>120 N Locust St:</b> Installed 1 sub-slab vapor point 08A_SSV_01 (basement floor). Set up 3 passive indoor air samplers 08A_IAB_01 (basement), 08A_IA1_02 (first floor), and 08A_IA2_03 (second floor).</p> <p><b>125 N Locust St:</b> Installed 1 sub-slab vapor point 08B_SSV_02 (basement floor). Set up 3 passive indoor air samplers 08B_IAB_04 (basement), 08B_IA1_05 (first floor), and 08B_IA2_06 (second floor).</p> <p><b>335 E Main St:</b> Installed 1 sub-slab vapor point 08C_SSV_03 (main floor). Set up 1 passive indoor air samplers 08C_IA1_07 (main floor). Set up, temporarily sealed and sampled 1 passive sump sample 08C_Sump_01 (sump). Set up 1 passive outdoor sample 08C_OA_01 (outdoor).</p>
<b>Event 3 (heating season)</b>	3/14/2024 to 3/28/2024	125 N Locust St (PSI B)	<p><b>120 N Locust St:</b> Sealed vapor point.</p> <p><b>125 N Locust St:</b> Installed 1 sub-slab vapor point 08B_SSV_02 (basement floor), set up 3 passive indoor air samplers 08B_IAB_04 (basement), 08B_IA1_05 (first floor), and 08B_IA2_06 (second floor). Set up 1 passive outdoor sample 08B_OA_02 (outdoor). Sealed vapor point.</p> <p><b>335 E Main St:</b> Sealed vapor point.</p>



The Beacon passive soil gas (PSG) and indoor/outdoor/sump air samplers were installed according to the standard operating procedures (SOPs) provided by the supplier/manufacturer. The field investigation activities/procedures were conducted in accordance with our *Proposal for Vapor Intrusion Investigation* submitted to the WDNR dated May 2, 2023. Field forms are located in **Appendix B**.

### 3.2 Sub-Slab Vapor Sampling Activities

During Event 1 activities on July 18, 2023, Bay West drilled sub-slab points using a rotary hammer drill in the concrete slab of the residential basements and main floor of the commercial building. The sub-slab locations included a 1.5-inch diameter hole approximately a half inch into the slab to allow for a flush cap to be placed. Next a 7/8-inch diameter hole was drilled approximately 4 inches into the slab to accommodate the passive sampler. Lastly a 5/8-inch diameter hole was drilled through the remainder of the slab and into the underlying soil. The concrete floor slab at each location was observed to be approximately 5 to 6 inches thick and was underlain by fine sand. The sub-slab sample points were installed as semi-permanent points and were left in place until the completion of the remaining sampling events (Event 2 and Event 3) with removable metal caps with medical-grade silicone tubing seals completed flush with the concrete floor surface. The locations of sub-slab vapor points are presented on **Figure 2A**, **Figure 2B**, and **Figure 2C**.

During each sampling event, the sub-slab point was fitted with a brass pin from which static pressure balance readings could be taken, in order to ensure the fittings were tightened or note if leakage was observed. Static pressure readings were collected at the start of sample placement and the end of sample placement and measured in pascals (pa). No noticeable leaks were observed. Pressure readings are noted at each sample location in the tables below and field forms in **Appendix B**. After the lines appeared to be tight the point was monitored for a 5-minute period and photoionization detector (PID) readings were taken from each point at the beginning and end of each sample location, measure in parts per million (ppm). No exceedances over 10 ppm were identified. PID readings are noted at each sample location in the tables below and field forms and field forms in **Appendix B**.

After the PID and pressure readings were taken, the brass pin was removed, and PSG air samplers were placed securely into the sub-slab point and sealed with a brass cap with medical grade silicone. The Beacon PSG air sampler utilizes a passive sorbent tube filled with activated charcoal for air sampling. Air samples collected on the sorbent tube are extracted using a carbon disulfide solvent and analyzed via gas chromatography coupled with mass spectrometry for the detection and quantification of target VOCs via EPA method TO-17 including PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride. At each event, Beacon PSG air samplers were left in place for 14 days for sample collection. Following completion of all sampling events, Bay West sealed the vapor points with neat cement. A summary of the sub-slab vapor sampling with respect to each building is provided below:

**120 N Locust St** – Collection of two PSG air samples at this location: one during the non-heating season between July 18, 2023, and August 1, 2023 (Event 1), and a second during the heating season between December 5, 2023, and December 19, 2023 (Event 2). Based on the results of the first two rounds which did not identify VOCs at concentrations above their applicable screening criteria a third event was not requested under direction of the WDNR.

- 08A\_SSV\_01 in the basement concrete floor

Sample ID and Date	Start Pressure Reading (Pa)	End Pressure Reading (Pa)	Start PID Reading (ppm):	End PID Reading (ppm):
08A_SSV_01_20230801	0.6	0.6	5.0	7.8
08A_SSV_01_20231219	0.6	0.0	1.6	2.1

**125 N Locust St** – Collection of three PSG air samples at this location: one during the non-heating season between July 18, 2023, and August 1, 2023 (Event 1), a second during the heating season between December 5, 2023, and December 19, 2023 (Event 2). Based on the results of the two events, a third event was conducted between March 14, 2024, and March 28, 2024 (Event 3) to confirm the results.

- 08B\_SSV\_02 in the basement concrete floor.

Sample ID and Date	Start Pressure Reading (Pa)	End Pressure Reading (Pa)	Start PID Reading (ppm):	End PID Reading (ppm):
08B_SSV_02_20230801	0.0	0.3	3.3	4.6
08B_SSV_02_20231219	0.2	0.0	3.1	0.6
08B_SSV_02_20240328	-0.9	0.1	8.0	0.6

**335 E Main St** – Collection of two PSG air samples at this location: one during the non-heating season between July 18, 2023, and August 1, 2023 (Event 1), and a second during the heating season between December 5, 2023, and December 19, 2023 (Event 2). Because the property was a commercial building only two rounds were planned.

- 08C\_SSV\_03 on the main floor concrete slab.

Sample ID and Date	Start Pressure Reading (Pa)	End Pressure Reading (Pa)	Start PID Reading (ppm):	End PID Reading (ppm):
08C_SSV_03_20230801	-1.0	-0.4	6.6	5.4
08C_SSV_03_20231219	1.9	0.0	2.0	2.5

### 3.3 Indoor/Outdoor Air Sampling

The passive Beacon indoor/outdoor air samplers were suspended with a string according to the standard operating procedures (SOPs) provided by Beacon. Samplers were placed in a suitable location within residences or the commercial building allowing for ample airflow, and chosen to represent the monitoring target locations. Indoor air and an associated outdoor air sample were collected from the breathing zone (approximately 4–5 feet above the floor surface). During each event, the Beacon samplers were left in place for 14 days for sample collection. The locations of indoor/outdoor air are presented on **Figure 2A**, **Figure 2B**, and **Figure 2C**.

A summary of the indoor/outdoor air sampling is provided below:

**120 N Locust St** – Collection of six passive indoor air samples at the three locations listed below: three during the non-heating season between July 18, 2023, and August 1, 2023 (Event 1), and three during the heating season between December 5, 2023, and December 19, 2023 (Event 2). Based on the results of the first two rounds which did not identify VOCs at concentrations above their applicable screening criteria a third event was not requested under direction of the WDNR.

- 08A\_IAB\_01 in the basement.
- 08A\_IA1\_02 on the first floor.
- 08A\_IA2\_03 on the 2nd floor.

Passive Vapor air sample and date	Start PID Reading (ppm):	End PID Reading (ppm):
08A_IAB_01_20230801	0.0	0.9
08A_IAB_01_20231219	0.0	0.1
08A_IA1_02_20230801	0.0	0.3
08A_IA1_02_20231219	0.1	0.1
08A_IA2_03_20230801	0.0	0.2
08A_IA2_03_20231219	0.1	0.1

**125 N Locust St** – Collection of nine passive indoor air samples and one passive outdoor air sample at the four locations listed below: three during the non-heating season between July 18, 2023, and August 1, 2023 (Event 1), three during the heating season between December 5, 2023, and December 19, 2023 (Event 2), three to confirm the results of the prior two events between March 14, 2024, and March 28, 2024 (Event 3), and one outdoor air sample collected adjacent to the residential dwelling (Event 3). Based on the results of the two events, a third event was conducted between March 14, 2024, and March 28, 2024 (Event 3) to confirm the results

- 08B\_IAB\_04 in the basement.
- 08B\_IA1\_05 on the first floor.
- 08B\_IA2\_06 on the 2nd floor.
- 08B\_OA\_02 outside as an outdoor air sample.

Passive Vapor air sample and date	Start PID Reading (ppm):	End PID Reading (ppm):
08B_IAB_04_20230801	0.0	0.0
08B_IAB_04_20231219	0.0	0.0
08B_IAB_04_20240328	1.2	0.1
08B_IA1_05_20230801	0.0	0.0
08B_IA1_05_20231219	0.0	0.1
08B_IA1_05_20240328	1.2	0.2
08B_IA2_06_20230801	0.0	0.0
08B_IA2_06_20231219	0.0	0.6
08B_IA2_06_20240328	3.7	0.3
08B_OA2_01_20240328	0.0	0.0

**335 E Main St** – Collection of four passive indoor air/sump samples and two passive outdoor air samples at the three locations listed below: three during the non-heating season between July 18, 2023, and August 1, 2023 (Event 1), and three during the heating season between December 5, 2023, and December 19, 2023 (Event 2). Additionally, during the collection of the sump basket air sample, Bay West temporarily sealed the sump and placed a passive air sampler within. No water was present during collection of the passive vapor sump samples. Because the property was a commercial building only two rounds were planned.

- 08C\_IA1\_07 in the basement.
- 08C\_Sump\_01 within the sump basket on the main floor.
- 08C\_OA\_01 outside as an outdoor air sample.

Passive Vapor air sample and date	Start PID Reading (ppm):	End PID Reading (ppm):
08C_IA1_07_20230801	0.0	0.2
08C_IA1_07_20231219	0.0	0.0
08C_Sump_01_20230801	0.0	0.0
08C_Sump_01_20231219	0.0	0.0
08C_OA_01_20230801	0.0	0.0
08C_OA1_01_20231219	0.0	0.0

### 3.4 Sewer Vapor Screening and Sampling Activities

Bay West conducted a sewer manhole investigation and determined the locations of the accessible manholes within Locust Street to sample. To assess the potential that select VOCs could be migrating to and entering the sewer utility located within Locust Street, Bay West followed



the sampling protocol presented in the November 2018 Report titled *Sewers and Utility Tunnels as Preferential Pathways for Volatile Organic Compound Migration into Buildings: Risk Factors and Investigation Protocol* prepared by the Department of Defense Environmental Security Technology Certification Program, dated November 2018.

Two manholes located directly east of the Site, close to the intersection of Locust Street, were identified for sampling. The Beacon passive air samplers were left in place for 14 days for sample collection. The locations of the sewer access covers are shown on **Figure 2**.

A summary of the sewer vapor air sampling is provided below.

- 08R\_SSG\_01 was accessed at the southern manhole within Locust Street ROW.
  - The depth to water in this sewer line was 19 feet below ground surface (bgs). A passive vapor air sampler was hung as close to 1 foot above the liquid elevation as possible near the center of the manhole. Initial PID readings collected during the deployment of the Beacon sampler were observed to be 0.0 ppm near the top and 0.0 ppm near the bottom of the manhole.
- 08R\_SSG\_02 was accessed at the northern manhole within Locust Street ROW.
  - The depth to the top of the water in the second manhole was 18.75 feet bgs. A passive vapor air sampler was hung as close to 1 foot above the liquid elevation as possible near the center of the manhole. Initial PID readings collected during the deployment of the Beacon sampler were observed to be 0.0 ppm near the top and 1.9 ppm near the bottom.

Based on the results of the first round which did not identify chlorinated VOCs at concentrations above their applicable screening criteria a second event was not requested under direction of the WDNR.

## 4.0 VAPOR SAMPLING RESULTS

Bay West compared the PSG vapor and indoor/sump/outdoor air vapor laboratory analytical results to applicable WDNR screening criteria.

- VRSL – From WDNR [Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. RR-0136](#). (August 2023).
  - Sub-slab vapor residential VRSL.
  - Sub-slab vapor small commercial VRSL.
- VAL – From WDNR [Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. RR-0136](#). (August 2023).
  - Indoor air residential VAL.
  - Indoor air small commercial VAL.
- Sanitary Sewer Gas Screening Level (SSGSL) – From WDNR [Guidance for Documenting the Investigation of Human-made Preferential Pathways Including Utility Corridors. RR-649](#). (June 2021).

**Table 1A**, **Table 1B**, **Table 1C**, and **Table 1R** present the analytical results and the laboratory analytical report and chain-of-custody form are provided in **Appendix C**.

### 4.1 120 N Locust

#### Sub-slab vapor

The results from both sampling events indicated no analyzed VOCs were detected at concentrations above their respective reporting limits (RLs) or sub-slab vapor residential VRSLs (see **Table 1A**).

#### Indoor air

The results from both sampling events indicated no analyzed VOCs were detected at concentrations above their respective RLs or indoor air residential VALs (see **Table 1A**).

### 4.2 125 N Locust

#### Sub-slab vapor

The sub-slab sample analysis as part of the three sampling events detected PCE in 08B\_SSV\_02 at concentrations of 5.17 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) (Event 1), 3.14  $\mu\text{g}/\text{m}^3$  (Event 2), and 4.51  $\mu\text{g}/\text{m}^3$  (Event 3), all of which were below the applicable sub-slab vapor residential VRSL screening level of 1,400  $\mu\text{g}/\text{m}^3$ . No other analyzed VOCs were detected above their respective RLs or sub-slab vapor residential VRSL (see **Table 1B**).

#### Indoor air

The indoor air analysis during the last two events (Event 2 and Event 3) detected PCE in two indoor air samples, one in 08B\_IA1\_05 at a concentration of 0.628  $\mu\text{g}/\text{m}^3$  (Event 3), and in 08B\_IA2\_06 at concentrations of 2.44  $\mu\text{g}/\text{m}^3$  (Event 2) and 1.04  $\mu\text{g}/\text{m}^3$  (Event 3) below the applicable indoor air residential VAL screening level of 42  $\mu\text{g}/\text{m}^3$ . No other analyzed VOCs were detected above their respective RLs or indoor air residential VALs (see **Table 1B**).

### Outdoor air

The results from the third event indicated no analyzed VOCs at concentrations above their respective RLs or residential VALs (see **Table 1B**).

## **4.3 335 E Main Street**

### Sub-slab vapor

The sub-slab sample analysis from both sampling events detected PCE in 08C\_SSV\_03 at concentrations of 208  $\mu\text{g}/\text{m}^3$  (Event 1) and 132  $\mu\text{g}/\text{m}^3$  (Event 2), below the applicable sub-slab vapor small commercial VRSL screening level of 5,800  $\mu\text{g}/\text{m}^3$ . TCE also was detected in 08C\_SSV\_03 at concentrations of 16.1  $\mu\text{g}/\text{m}^3$  (Event 1) and 8.75  $\mu\text{g}/\text{m}^3$  (Event 2), below the applicable sub-slab vapor small commercial VRSL screening level of 290  $\mu\text{g}/\text{m}^3$ . No other analyzed VOCs were detected at concentrations above their respective RLs or sub-slab vapor small commercial VRSL (see **Table 1C**).

### Indoor air and sump

The indoor air/sump analysis from both sampling events detected PCE in 08C\_IA1\_07 at concentrations of 4.66  $\mu\text{g}/\text{m}^3$  (Event 1) and 1.47  $\mu\text{g}/\text{m}^3$  (Event 2), and in 08C\_Sump\_01 at concentrations of 4.94  $\mu\text{g}/\text{m}^3$  (Event 1) and 1.49  $\mu\text{g}/\text{m}^3$  (Event 2), which are below the applicable indoor air small commercial VAL of 180  $\mu\text{g}/\text{m}^3$ . No other analyzed VOCs were detected at concentrations above their respective RLs or indoor air small commercial VALs (see **Table 1C**).

### Outdoor air

The results indicated no analyzed VOCs were detected at concentrations above their respective RLs or small commercial VALs (see **Table 1C**).

## **4.4 Sewer Vapor Sampling Results**

The results of the sewer vapor sampling during the single sampling event identified low levels of VOCs in both sanitary sewer samples within the Locust Street ROW. PCE was detected in 08R\_SSG\_01 at a concentration of 1.58  $\mu\text{g}/\text{m}^3$  and in 08R\_SSG\_02 at a concentration of 4.09  $\mu\text{g}/\text{m}^3$ , which are both below the applicable residential SSGSL of 1,400  $\mu\text{g}/\text{m}^3$  and the commercial SSGSL of 5,800  $\mu\text{g}/\text{m}^3$  (see **Table 1R**).

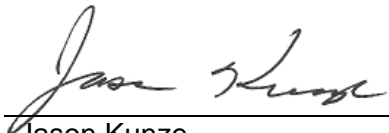
The sewer vapor analysis also detected several constituents including: 1,1,2-trichloro-1,2,2-trifluoroethane, 1,2-dichlorobenzene, benzene, chloroform, methylene chloride, and toluene at concentrations above the RLs. Of these, chloroform detected at 63  $\mu\text{g}/\text{m}^3$  was above the residential SSGSL of 41  $\mu\text{g}/\text{m}^3$  but below the commercial SSGSL of 180  $\mu\text{g}/\text{m}^3$ . The chloroform and other detections appear unrelated to the dry-cleaning activities that took place at Reedsburg Cleaners.

## 5.0 SUMMARY AND CONCLUSIONS

The results of the vapor intrusion sampling activities at the locations identified by the WDNR for investigation under the state's Vapor Intrusion Zone Contract identified low levels of VOCs in sub-slab soil vapor, indoor air, and nearby sanitary sewer manholes at concentrations below the applicable WDNR residential and commercial vapor action levels (VALs), vapor risk screening levels (VRSLs), and sanitary sewer gas screening levels (SSGSLs).

Based on the results of the recent vapor data, the vapor intrusion sampling activities requested by the WDNR have been completed. Based on current WDNR guidance, Bay West does not recommend further vapor intrusion investigation at these properties and the sanitary sewers with respect to potential risk from chlorinated VOCs. Additional work at Reedsburg Cleaners may be required to meet the NR 700 Rule Series requirements for site closure.

I, Jason Kunze, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.



Jason Kunze  
Environmental Scientist

6-19-2024

Date

## Tables

**Table 1A**  
**Sub-slab Vapor and Indoor Air Analytical Results**

157001460 – Reedsburg Cleaners  
 120 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - A

Location		120 N Locust Street (PSI A)									
Sample ID	Indoor Air VAL	Sub-Slab Vapor	08A_SSV_01_20230801	08A_SSV_01_20231219	08A_IAB_01_20230801	08A_IAB_01_20231219	08A_IA1_02_20230801	08A_IA1_02_20231219	08A_IA2_03_20230801	08A_IA2_03_20231219	
Dates Sampled	Residential	VRSL Residential	7/18/23 to 8/1/23	12/5/23 to 12/19/23	7/18/23 to 8/1/23	12/5/23 to 12/19/2023	7/18/23 to 8/1/23	12/5/23 to 12/19/2023	7/18/23 to 8/1/23	12/5/23 to 12/19/23	
Applicable Action Level			VRSL		VAL		VAL		VAL		
<b>Volatile Organic Compounds (method EPA TO-17)</b>											
cis-1,2-Dichloroethene	156-59-2	42	1400	< 0.935	< 0.936	< 0.928	< 0.929	< 0.929	< 0.929	< 0.929	
Tetrachloroethene (PCE)	127-18-4	42	1400	< 1.21	< 1.21	< 1.20	< 1.20	< 1.20	< 1.20	< 1.20	
trans-1,2-Dichloroethene	156-60-5	42	1400	< 1.13	< 1.13	< 1.12	< 1.12	< 1.12	< 1.12	< 1.12	
Trichloroethene (TCE)	79-01-6	2.1	70	< 1.50	< 1.50	< 1.49	< 1.49	< 1.49	< 1.49	< 1.49	
Vinyl chloride	75-01-4	1.7	56	< 0.612	< 0.613	< 0.607	< 0.608	< 0.608	< 0.608	< 0.608	

**Notes:**

All results are in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

USEPA VISL – United States Environmental Protection Agency Vapor Intrusion Screening Level

WDNR – Wisconsin Department of Natural Resources

VAL – Vapor Action Level. Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels, August 2023 ( <https://widnr.widen.net/s/fvhcivxrf>)

VRSL – Vapor Risk Screening Level. Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels, August 2023 ( <https://widnr.widen.net/s/fvhcivxrf>)

— – No USEPA VISL established

< – Less than the laboratory Reporting Limit (RL)

**Bold – Analyte detected**

Grey – Result exceeds the Residential VAL

Orange – Result exceeds the Residential VRSL

**Table 1B**  
**Sub-slab Vapor and Indoor Air Analytical Results**

157001460 – Reedsburg Cleaners  
 125 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - B

Location				125 N Locust Street (PSI B)												
Sample ID	Indoor Air VAL Residential	Sub-Slab Vapor VRSL Residential		08B_SSV_02_20230801	08B_SSV_02_20231219	08B_SSV_02_20240328	08B_IAB_04_20230801	08B_IAB_04_20231219	08B_IAB_04_20240328	08B_IA1_05_20230801	08B_IA1_05_20231219	08B_IA1_05_20240328	08B_IA2_06_20230801	08B_IA2_06_20231219	08B_IA2_06_20240328	08B_OA_02_20240328
Dates Sampled				7/18/23 to 8/1/23	12/5/23 to 12/19/23	3/14/24 to 3/28/24	7/18/23 to 8/1/23	12/5/23 to 12/19/23	3/14/24 to 3/28/24	7/18/23 to 8/1/23	12/5/23 to 12/19/23	3/14/24 to 3/28/24	7/18/23 to 8/1/23	12/5/23 to 12/19/23	3/14/24 to 3/28/24	3/14/24 to 3/28/24
Applicable Action Level			VRSL	VAL			VAL			VAL			VAL			
<b>Volatile Organic Compounds (method EPA TO-17)</b>																
cis-1,2-Dichloroethene	156-59-2	42	1400	< 0.940	< 0.937	<0.936	< 0.933	< 0.929	<0.465	< 0.933	< 0.929	<0.465	< 0.934	< 0.929	<0.465	<0.481
Tetrachloroethene (PCE)	127-18-4	42	1400	<b>5.17</b>	<b>3.14</b>	<b>4.51</b>	< 1.21	< 1.20	<0.601	< 1.21	< 1.20	<b>0.628 J</b>	< 1.21	<b>2.44</b>	<b>1.04 J</b>	<0.622
trans-1,2-Dichloroethene	156-60-5	42	1400	< 1.13	< 1.13	<1.13	< 1.12	< 1.12	<0.560	< 1.12	< 1.12	<0.560	< 1.12	< 1.12	<0.560	<0.579
Trichloroethene (TCE)	79-01-6	2.1	70	< 1.51	< 1.50	<1.50	< 1.50	< 1.49	<0.746	< 1.50	< 1.49	<0.746	< 1.50	< 1.49	<0.747	<0.772
Vinyl chloride	75-01-4	1.7	56	< 0.615	< 0.613	<0.613	< 0.610	< 0.608	<0.304	< 0.611	< 0.608	<0.304	< 0.611	< 0.608	<0.304	<0.315

**Notes:**

All results are in micrograms per cubic meter (µg/m<sup>3</sup>)

USEPA VISL – United States Environmental Protection Agency Vapor Intrusion Screening Level

WDNR – Wisconsin Department of Natural Resources

VAL – Vapor Action Level. Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels, August 2023 <https://widnr.widen.net/s/fvhcjsxrfs>

VRSL – Vapor Risk Screening Level, Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels, August 2023 <https://widnr.widen.net/s/fvhcjsxrfs>

— – No USEPA VISL established

< – Less than the laboratory Reporting Limit (RL)

**Bold – Analyte detected**

Grey – Result exceeds the Residential VAL

Orange – Result exceeds the Residential VRSL

**Table 1C**  
**Sub-slab Vapor and Indoor Air Analytical Results**

157001460 – Reedsburg Cleaners  
335 E. Main Street, Reedsburg, WI  
Property Sample Identifier (PSI) - C

Location		335 E Main Street (PSI C)									
Sample ID	Indoor Air VAL	Sub-Slab Vapor VRSL	08C_SSV_03_20230801	08C_SSV_03_20231219	08C_IA1_07_20230801	08C_IA1_07_20231219	08C_Sump_01_20230801	08C_Sump_01_20231219	08C_OA_01_20230801	08C_OA_01_20231219	
Dates Sampled	Commercial	Commercial	7/18 to 8/1/2023	12/5 to 12/19/2023	7/18 to 8/1/2023	12/5 to 12/19/2023	7/18 to 8/1/2023	12/5 to 12/19/2023	7/18 to 8/1/2023	12/5 to 12/19/2023	
Applicable Action Level			VRSL		VAL		VAL		VAL		
<b>Volatile Organic Compounds (method EPA TO-17)</b>											
cis-1,2-Dichloroethene	156-59-2	180	5,800	< 0.946	< 0.936	< 0.940	< 0.930	< 0.939	< 0.930	< 0.941	< 0.961
Tetrachloroethene (PCE)	127-18-4	180	5,800	<b>208</b>	<b>132</b>	<b>4.66</b>	<b>1.47</b>	<b>4.94</b>	<b>1.69</b>	< 1.22	< 1.24
trans-1,2-Dichloroethene	156-60-5	180	5,800	< 1.14	< 1.13	< 1.13	< 1.12	< 1.13	< 1.12	< 1.13	< 1.16
Trichloroethene (TCE)	79-01-6	8.8	290	<b>16.1</b>	<b>8.75</b>	< 1.51	< 1.49	< 1.51	< 1.49	< 1.51	< 1.54
Vinyl chloride	75-01-4	28	930	< 0.619	< 0.612	< 0.615	< 0.608	< 0.614	< 0.608	< 0.616	< 0.629

**Notes:**

All results are in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

USEPA VISL – United States Environmental Protection Agency Vapor Intrusion Screening Level

WDNR – Wisconsin Department of Natural Resources

VAL – Vapor Action Level. Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels, August 2023 ( <https://widnr.widen.net/s/fvhcivxrf>)

VRSL – Vapor Risk Screening Level. Guidance: Wisconsin Vapor Quick Look-Up Table - Indoor Air Vapor Action Levels and Vapor Risk Screening Levels, August 2023 ( <https://widnr.widen.net/s/fvhcivxrf>)

— – No USEPA VISL established

< – Less than the laboratory Reporting Limit (RL)

**Bold – Analyte detected**

\* Tan – Result exceeds the Small Commercial VAL

\* Light blue – Result exceeds the Small Commercial VRSL

\* A detection is counted as an exceedance only if the concentration exceeds the applicable action level. For example, if a sub-slab result exceeds a VAL, but not a VRSL, no exceedance shading is applied.



**Table 1R**  
**Sanitary Sewer Analytical Results**

157001460 – Reedsburg Cleaners  
 Reedsburg, WI  
 Property Sample Identifier (PSI) - R



Location	Sample ID	SSGSL Residential	SSGSL Commercial	South manhole (12.10.4)	North manhole (12.5.4)
				08R_SSG_01_20230801	08R_SSG_02_20230801
Date Sampled				7/18 to 8/1/2023	7/18 to 8/1/2023
Volatile Organic Compounds (method EPA TO-17)					
1,1,1,2-Tetrachloroethane	630-20-6	130	550	< 1.21	< 1.22
1,1,1-Trichloroethane	71-55-6	170000	730000	< 0.474	< 0.475
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	170000	730000	< 0.559	<b>1.54</b>
1,1,2-Trichloroethane	79-00-5	7.0	29	< 1.51	< 1.51
1,1-Dichloroethane	75-34-3	580	2600	< 0.585	< 0.587
1,1-Dichloroethene	75-35-4	7000	29000	< 1.51	< 1.51
1,2,3-Trichlorobenzene	87-61-6	—	—	< 1.28	< 1.28
1,2,3-Trichloropropane	96-18-4	10	44	< 0.663	< 0.665
1,2,4-Trichlorobenzene	120-82-1	70	290	< 1.28	< 1.28
1,2,4-Trimethylbenzene	95-63-6	2100	8800	< 1.50	< 1.50
1,2-Dibromoethane	106-93-4	1.6	6.8	< 1.28	< 1.28
1,2-Dichlorobenzene	95-50-1	7000	29000	< 0.663	<b>8.29</b>
1,2-Dichloroethane	107-06-2	36	160	< 0.888	< 0.890
1,3,5-Trimethylbenzene	108-67-8	2100	8800	< 1.50	< 1.50
1,3-Dichlorobenzene	541-73-1	—	—	< 0.663	< 0.665
1,4-Dichlorobenzene	106-46-7	85	370	< 0.663	< 0.665
1,4-Dioxane	123-91-1	190	820	< 1.21	< 1.22
2-Methylnaphthalene	91-57-6	—	—	< 1.64	< 1.64
Benzene	71-43-2	120	520	<b>5.49</b>	<b>3.08</b>
Carbon tetrachloride	56-23-5	160	680	< 1.16	< 1.16
Chlorobenzene	108-90-7	1700	7300	< 0.585	< 0.587
Chloroform	67-66-3	41	180	<b>18.2</b>	<b>63.0</b>
cis-1,2-Dichloroethene	156-59-2	1400	5800	< 0.938	< 0.941
Ethylbenzene	100-41-4	370	1600	< 1.46	< 1.47
Isopropylbenzene	98-82-8	14000	58000	< 1.50	< 1.50
m- & p-Xylene	179601-23-1	3500	15000	< 1.41	< 1.42
Methyl tert-butyl ether (MTBE)	1634-04-4	3600	16000	< 2.49	< 2.49
Methylene chloride	75-09-2	21000	88000	< 1.42	<b>2.64</b>
Naphthalene	91-20-3	28	120	< 1.55	< 1.56
o-Xylene	95-47-6	3500	15000	< 1.41	< 1.42
Tetrachloroethene (PCE)	127-18-4	1400	5800	<b>1.58</b>	<b>4.09</b>
Toluene	108-88-3	170000	730000	<b>12.1</b>	<b>29.6</b>
trans-1,2-Dichloroethene	156-60-5	1400	5800	< 1.13	< 1.13
Trichloroethene (TCE)	79-01-6	70	290	< 1.51	< 1.51
Vinyl chloride	75-01-4	56	930	< 0.614	< 0.616

**Notes:**

All results are in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

USEPA VISL – United States Environmental Protection Agency Vapor Intrusion Screening Level

WDNR – Wisconsin Department of Natural Resources

SSGSL – Sanitary Sewer Gas Screening Level. Guidance for Documenting the Investigation of Human-made Preferential Pathways Including Utility Corridors, June 2023 (<https://widnr.widnr.net/s/kxtjik5hbq>)

— – No USEPA VISL established

< – Less than the laboratory Reporting Limit (RL)

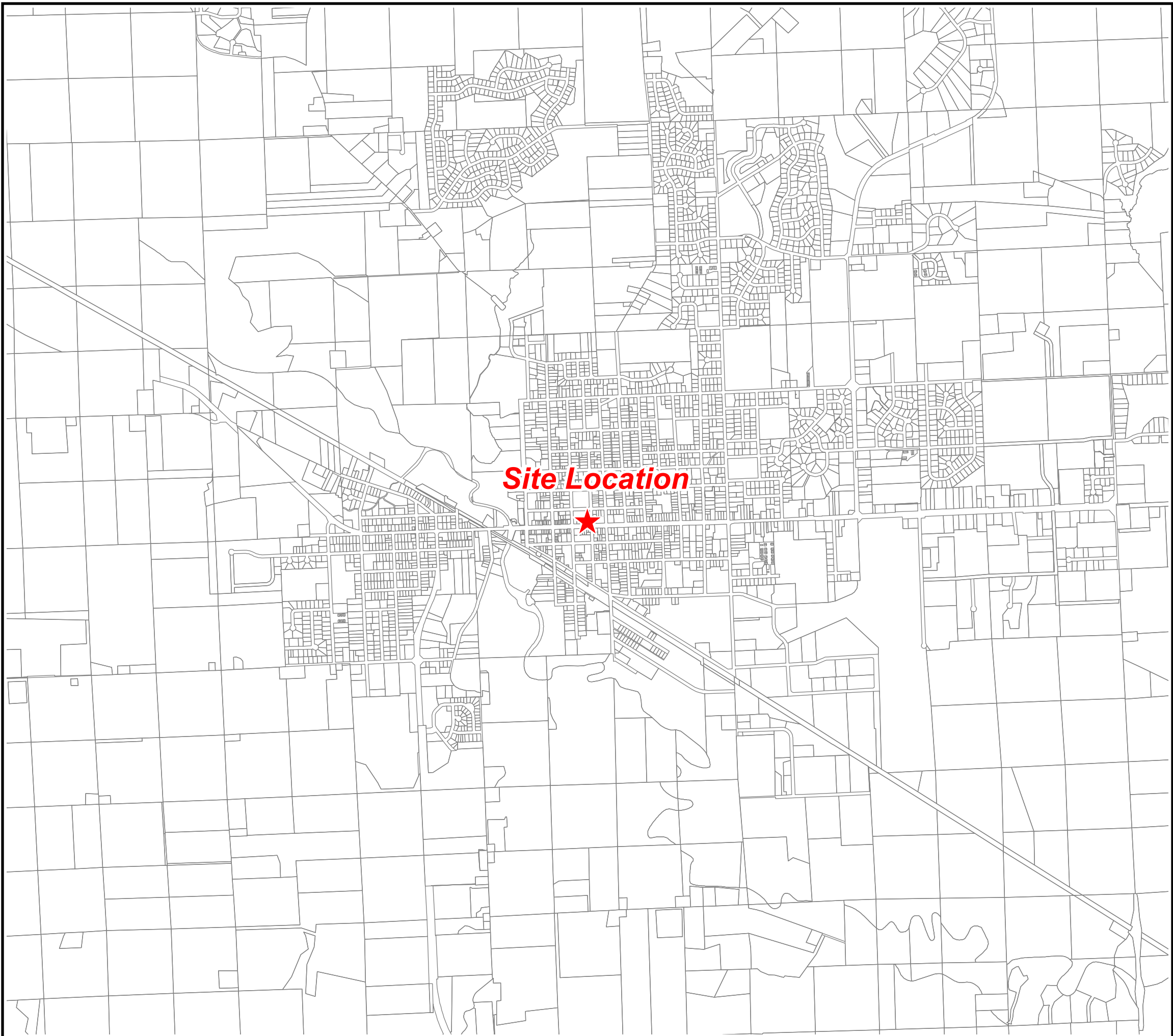
**Bold – Analyte detected**

Orange – Result exceeds the Residential SSGSL

Light blue – Result exceeds the Small Commercial SSGSL

## Figures

Y:\Clients\WISCONSIN\_DEPT\_OF\_NATURAL\_RESOURCES\Reedsburg\_Cleaners\Projects\J230382\001\_Vapor\_Intrusion\001\_Vapor\_Intrusion.aprx

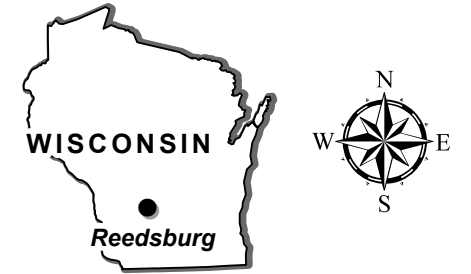


# Figure 1

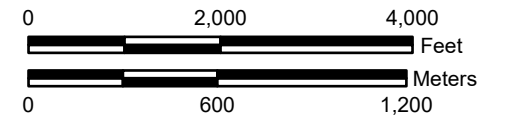
## Site Location Map

**Reedsburg Cleaners**  
**WDNR ERP Case #: 02-57-001682**

349 E Main Street  
Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15 N, Meters  
Basemap: ESRI USA Topo Maps WMS



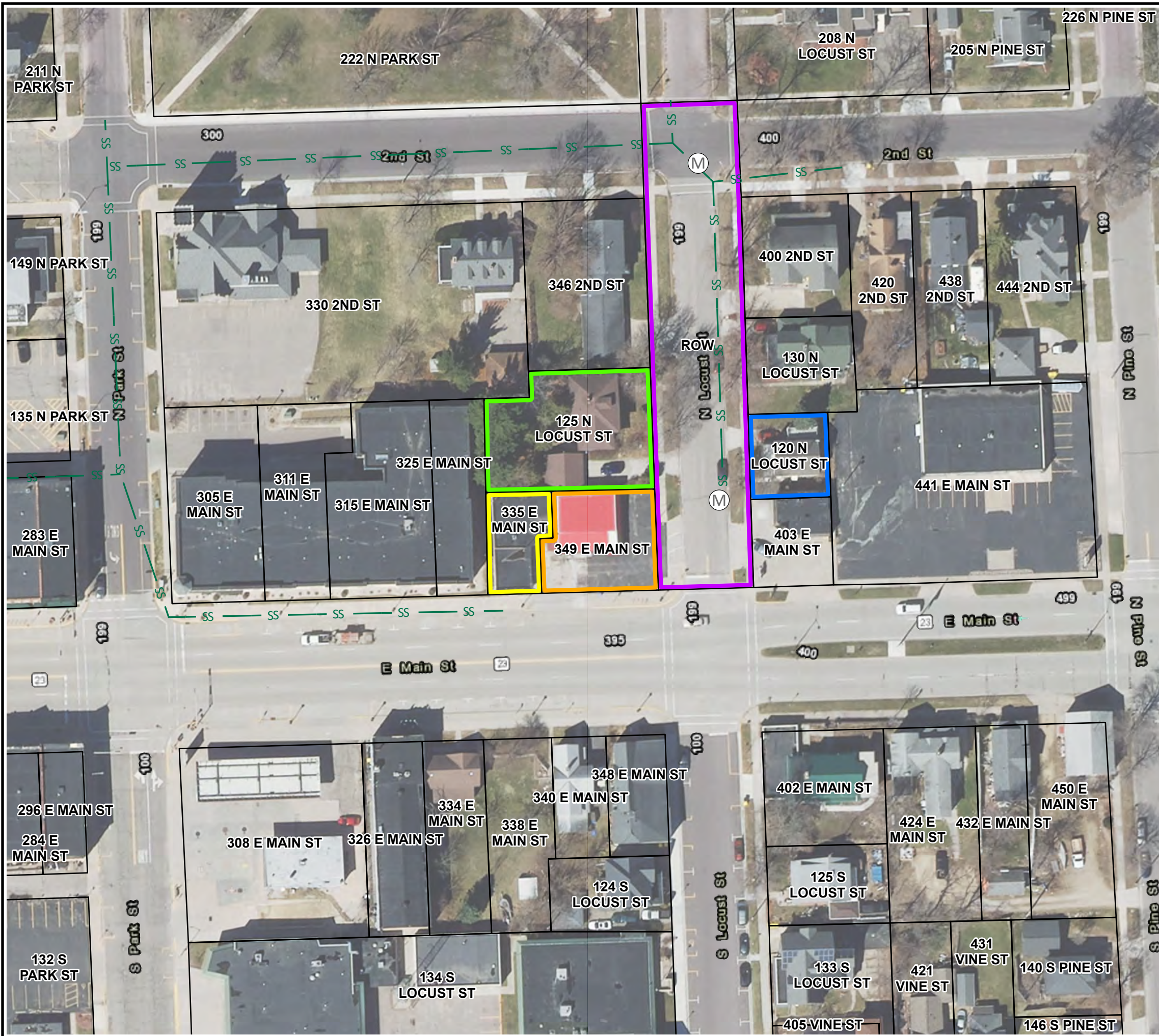
1:24,000

★ Site Location





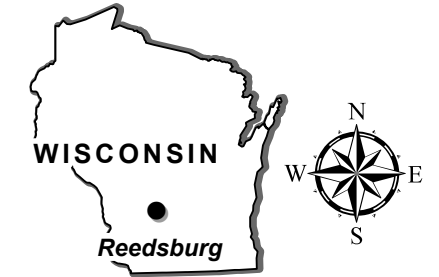
Y:\Clients\WISCONSIN\_DEPT\_OF\_NATURAL\_RESOURCES\Reedsburg\_Cleaners\Projects\J230382\001\_Vapor\_Intrusion\001\_Vapor\_Intrusion.aprx



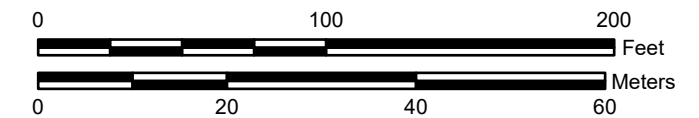
## Figure 2 Site Map

Reedsburg Cleaners  
WDNR ERP Case #: 02-57-001682

Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15N, Meters  
Basemap: WI DNR Aerial Imagery WMS, 10/14/2022

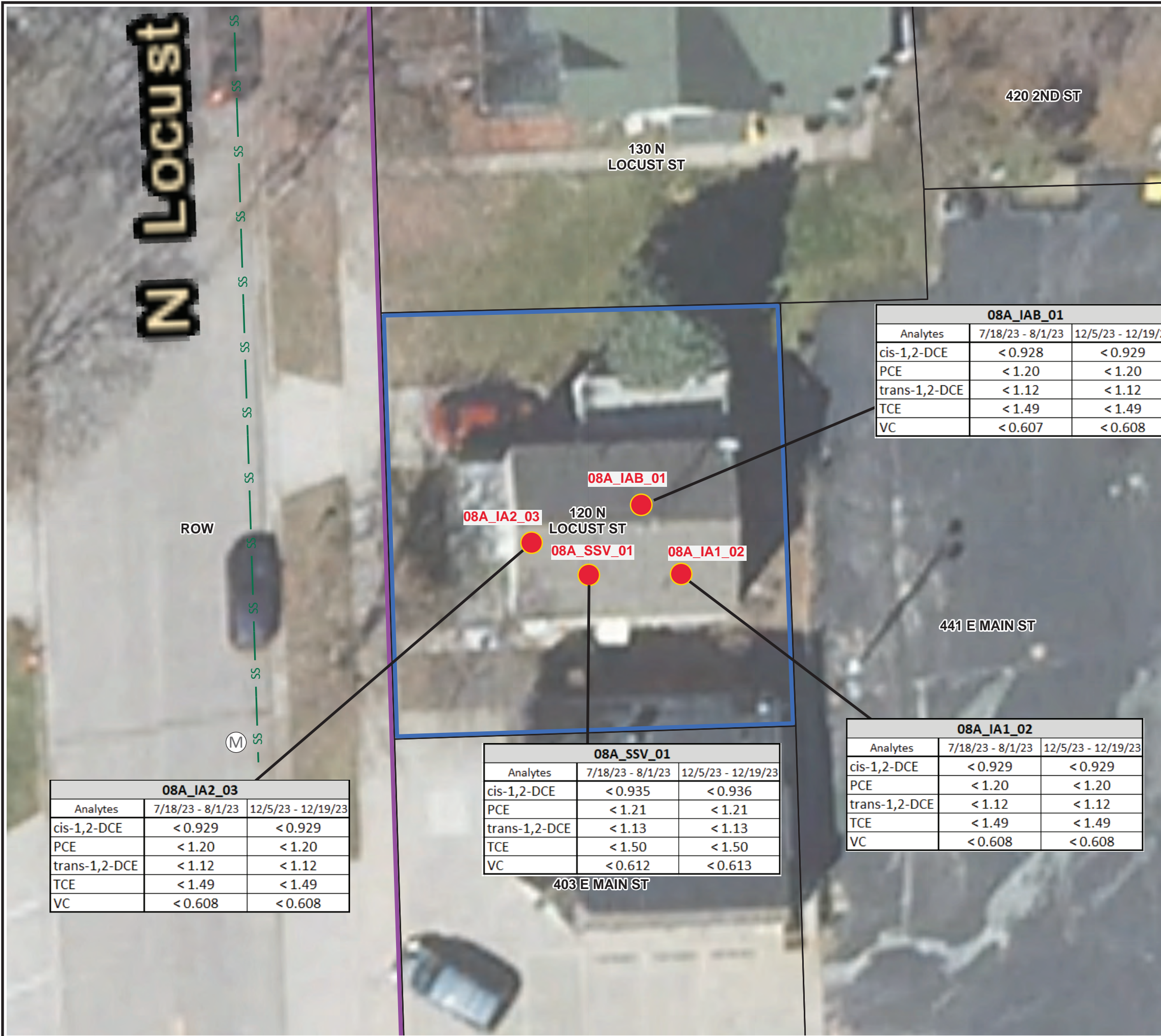


- Manhole
- Sanitary Sewers
- 120 N Locust St (PSI A)
- 125 N Locust St (PSI B)
- 335 E Main St (PSI C)
- ROW (PSI R)
- 349 E Main St (Source)
- Parcel Boundaries





**N Locust St**



08A_IA2_03		
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23
cis-1,2-DCE	< 0.929	< 0.929
PCE	< 1.20	< 1.20
trans-1,2-DCE	< 1.12	< 1.12
TCE	< 1.49	< 1.49
VC	< 0.608	< 0.608

08A_SSV_01		
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23
cis-1,2-DCE	< 0.935	< 0.936
PCE	< 1.21	< 1.21
trans-1,2-DCE	< 1.13	< 1.13
TCE	< 1.50	< 1.50
VC	< 0.612	< 0.613

08A_IAB_01		
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23
cis-1,2-DCE	< 0.928	< 0.929
PCE	< 1.20	< 1.20
trans-1,2-DCE	< 1.12	< 1.12
TCE	< 1.49	< 1.49
VC	< 0.607	< 0.608

08A_IA1_02		
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23
cis-1,2-DCE	< 0.929	< 0.929
PCE	< 1.20	< 1.20
trans-1,2-DCE	< 1.12	< 1.12
TCE	< 1.49	< 1.49
VC	< 0.608	< 0.608

### Figure 2A

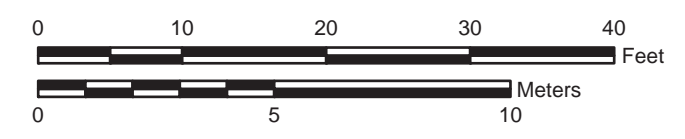
### Site Map

**Reedsburg Cleaners**  
**WDNR ERP Case #: 02-57-001682**

120 N Locust Street  
 Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15N, Meters  
 Basemap: WI DNR Aerial Imagery WMS, 10/14/2022



- (M) Manhole
- SS Sanitary Sewer
- 120 N Locust St (PSI A)
- ROW (PSI R)
- Parcel Boundaries

#### Features

- Passive Vapor Sample Location

#### Notes:

All results are in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )  
 < – Less than the laboratory Reporting Limit (RL)  
**Bold – Analyte detected**  
 Grey – Result exceeds the Residential VAL  
 Orange – Result exceeds the Residential VRSL





Y:\Clients\WISCONSIN\_DEPT\_OF\_NATURAL\_RESOURCES\Reedsburg\Cleaners\Projects\J230382\001\_Vapor\_Intrusion\001\_Vapor\_Intrusion.aprx



08B_OA_02	
Analytes	3/14/24 - 3/28/24
cis-1,2-DCE	<0.481
PCE	<0.622
trans-1,2-DCE	<0.579
TCE	<0.772
VC	<0.315

08B_IA2_06			
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23	3/14/24 - 3/28/24
cis-1,2-DCE	<0.934	<0.929	<0.465
PCE	<1.21	<b>2.44</b>	<b>1.04 J</b>
trans-1,2-DCE	<1.12	<1.12	<0.560
TCE	<1.50	<1.49	<0.747
VC	<0.611	<0.608	<0.304

08B_IA1_05			
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23	3/14/24 - 3/28/24
cis-1,2-DCE	<0.933	<0.929	<0.465
PCE	<1.21	<1.20	<b>0.628 J</b>
trans-1,2-DCE	<1.12	<1.12	<0.560
TCE	<1.50	<1.49	<0.746
VC	<0.611	<0.608	<0.304

08B_IAB_04			
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23	3/14/24 - 3/28/24
cis-1,2-DCE	<0.933	<0.929	<0.465
PCE	<1.21	<1.20	<0.601
trans-1,2-DCE	<1.12	<1.12	<0.560
TCE	<1.50	<1.49	<0.746
VC	<0.610	<0.608	<0.304

08B_SSV_02			
Analytes	7/18/23 - 8/1/23	12/5/23 - 12/19/23	3/14/24 - 3/28/24
cis-1,2-DCE	<0.940	<0.937	<0.936
PCE	<b>5.17</b>	<b>3.14</b>	<b>4.51</b>
trans-1,2-DCE	<1.13	<1.13	<1.13
TCE	<1.51	<1.50	<1.50
VC	<0.615	<0.613	<0.613

## Figure 2B

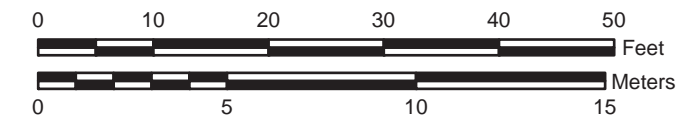
### Site Map

Reedsburg Cleaners  
WDNR ERP Case #: 02-57-001682

125 N Locust Street  
Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15N, Meters  
Basemap: WI DNR Aerial Imagery WMS, 10/14/2022



- 125 N Locust St (PSI B)
- 335 E Main St (PSI C)
- ROW (PSI R)
- 349 E Main St (Source)
- Parcel Boundaries

#### Features

- Passive Vapor Sample Location

#### Notes:

All results are in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

< – Less than the laboratory Reporting Limit (RL)

**Bold** – Analyte detected

Grey – Result exceeds the Residential VAL

Orange – Result exceeds the Residential VRSL





Y:\Clients\WISCONSIN\_DEPT\_OF\_NATURAL\_RESOURCES\Reedsburg\Cleaners\Projects\J230382\001\_Vapor\_Intrusion\001\_Vapor\_Intrusion.aprx



**Figure 2C**

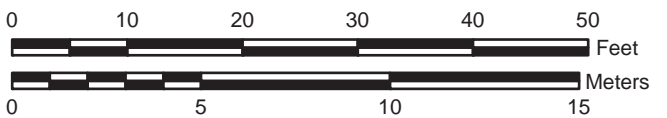
**Site Map**

**Reedsburg Cleaners**  
**WDNR ERP Case #: 02-57-001682**

335 E Main Street  
 Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15N, Meters  
 Basemap: WI DNR Aerial Imagery WMS, 10/14/2022



- SS Sanitary Sewer
- 120 N Locust St (PSI B)
- 335 E Main St (PSI C)
- ROW (PSI R)
- 349 E Main St (Source)
- Parcel Boundaries

**Features**

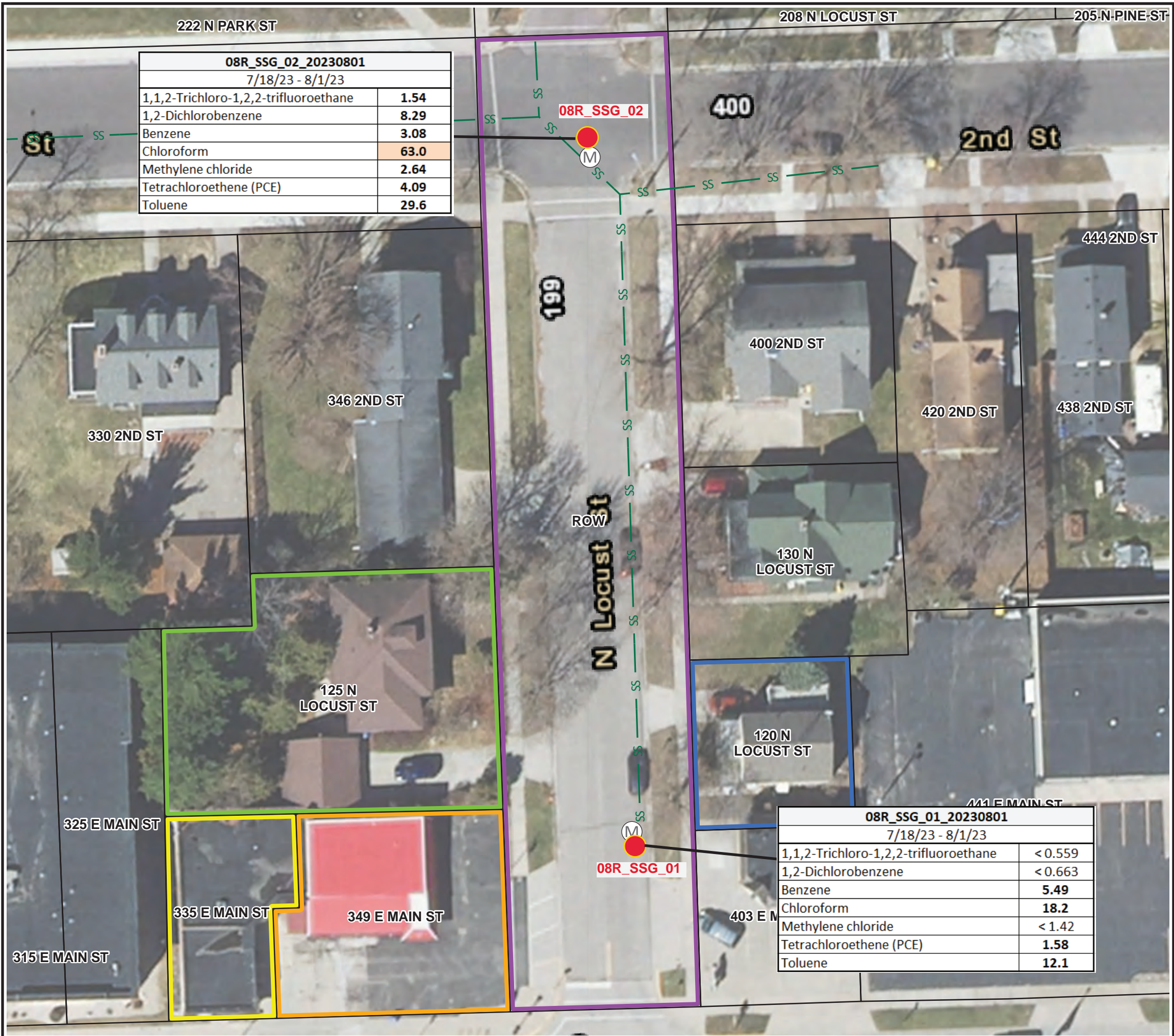
- Passive Vapor Sample Location

**Notes:**  
 All results are in micrograms per cubic meter (µg/m³)  
**Bold – Analyte detected**  
 \* Tan – Result exceeds the Small Commercial VAL  
 \* Light blue – Result exceeds the Small Commercial VRSL  
 \* A detection is counted as an exceedance only if the exceeded action level applies to the sample.  
 For example, if a sub-slab result exceeds a VAL, but not a VRSL, no exceedance shading is applied.





Y:\Clients\WISCONSIN\_DEPT\_OF\_NATURAL\_RESOURCES\Reedsburg\Cleaners\Projects\J230382\001\_Vapor\_Intrusion\001\_Vapor\_Intrusion.aprx



# Figure 2R

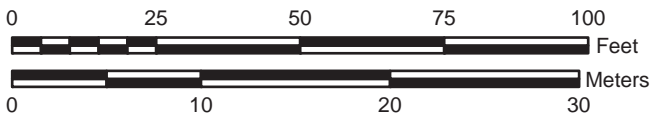
## Site Map

**Reedsburg Cleaners**  
**WDNR ERP Case #: 02-57-001682**

ROW  
 Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15N, Meters  
 Basemap: WI DNR Aerial Imagery WMS, 10/14/2022



- Manhole
- Sanitary Sewer
- 120 N Locust St (PSI A)
- 125 N Locust St (PSI B)
- 335 E Main St (PSI C)
- ROW (PSI R)
- 349 E Main St (Source)
- Parcel Boundaries

**Features**

- Passive Vapor Sample Location

**Notes:**

- Only detected analytes are depicted
- No USEPA VISL established
- < - Less than the laboratory Reporting Limit (RL)
- Bold - Analyte detected**
- Orange - Result exceeds the Residential SSGSL
- Light blue - Result exceeds the Small Commercial SSGSL





**Appendix A**  
**Building Surveys and Photologs**

*120 N Locust Street*

**120 N Locust Street Building Checklist**

157001460 – Reedsburg Cleaners  
120 N. Locust Street, Reedsburg, WI  
Property Sample Identifier (PSI) - A

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Anders Santelman					NA	NA
Building Owner	Lee Gnatzig	Box 101, Reedsburg, WI 53959	owner	608-963-5266	<a href="mailto:LeeGnatzig@gmail.com">LeeGnatzig@gmail.com</a>		
Building Contact	Lee Gnatzig						
Occupant	Harry Ardon		renter	608-415-2046			
Occupant							

120 N Locust Street Building Checklist

157001460 - Reedsburg Cleaners  
 120 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - A

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
120 N. Locust Street	Occupied				No	Residential	1120	Residential Single Family	2	Wood Frame	Public	Public		No online building info with Sauk 30 County Records. <a href="https://irs.co.sauk.wi.us/AscentLandRecords/PropertyListing/RealEstateTaxParcel#/Details/47757">https://irs.co.sauk.wi.us/AscentLandRecords/PropertyListing/RealEstateTaxParcel#/Details/47757</a> Parcel ID: 276 0942-00000

120 N Locust Street Building Checklist

157001460 - Reedburg Cleaners  
 120 N. Locust Street, Reedburg, WI  
 Property Sample Identifier (PSI) - A

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Basement - partial	Concrete	5	None	None	Unknown		Moderate(some cracking)	Dry	Block filled	No	No	No				No	No	Unknown	1	1	Unkown	

120 N Locust Street Building Checklist

157001460 - Reedsburg Cleaners  
 120 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - A

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy	No	Concrete					8.00	0.00		6	Not energy efficient	Yes	No	Two large dogs kept in the basement.
First	Occupied	No	Other					8.00	1.00				Yes	No	
2nd	Occupied	Yes	NA					8.00	1.00				Yes	No	

## 120 N Locust Street Building Checklist

157001460 – Reedsburg Cleaners  
120 N. Locust Street, Reedsburg, WI  
Property Sample Identifier (PSI) - A

Feature	Observed	Comment
Ditching	No	
Drain Tiles	No	
Dry Well	No	
Sanitary Sewers	No	
Storm Sewers	No	
Trenches	No	
Tunnels	No	
Other	No	

**120 N Locust Street Building Checklist**

157001460 – Reedsburg Cleaners  
120 N. Locust Street, Reedsburg, WI  
Property Sample Identifier (PSI) - A

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	Unknown	No	Yes	Unknown		Attached garage used for storage



120 N Locust Street Building Checklist

157001460 - Reedsburg Cleaners  
 120 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - A

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure?	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Forced Air Furnace	1	Natural Gas	B	Window Air	O	No	No	1			no		No		No	No	Window air on second floor Bathroom fan for ventilation



Main Area



Main Area



Main Area



Main Area





Laundry



Furnace



Water heater and sewer pipe



Backroom sewer pipe

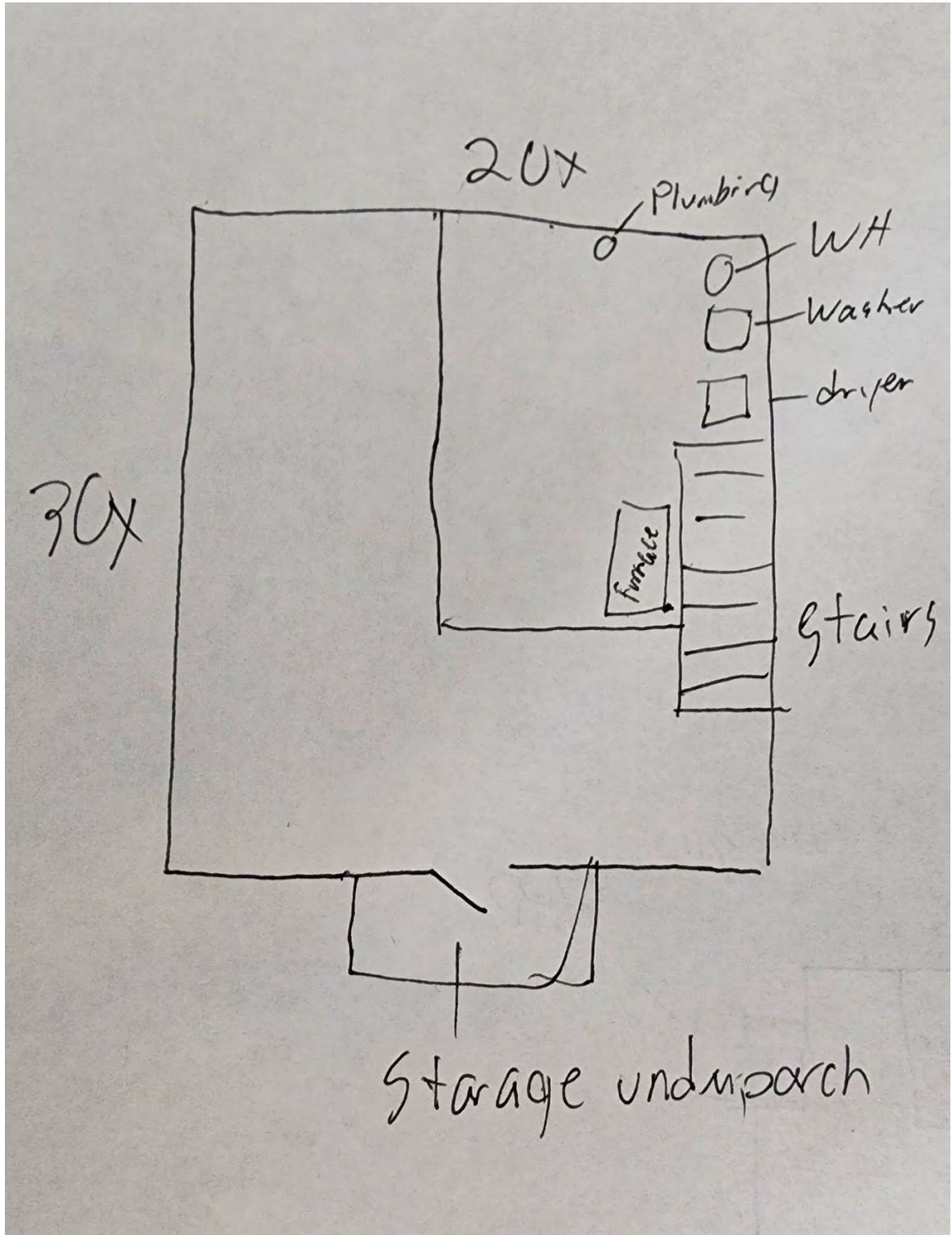




Pipe by stairs



Under porch storage, door not accessible.



Simple basement sketch

*125 N Locust Street*



### 125 N Locust Street Building Checklist

157001460 – Reedsburg Cleaners  
125 N. Locust Street, Reedsburg, WI  
Property Sample Identifier (PSI) - B

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Anders Santelman					NA	NA
Building Owner	Stephanie and Joseph Hasler	125 N. Locust Street	owners	608-524-4840			
Building Contact	Stephanie Hasler			608-415-1395	<a href="mailto:madametristence@gmail.com">madametristence@gmail.com</a>		
Occupant	Stephanie Hasler						
Occupant	Joseph Hasler				<a href="mailto:JHasler@boardmanclark.com">JHasler@boardmanclark.com</a>		

125 N Locust Street Building Checklist

157001460 - Reedsburg Cleaners  
 125 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - B

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
125 N. Locust Street	Occupied				No	Residential	1745	Residential Single Family	2	Other	Public	Public		No online building info with Sauk County Records. <a href="https://irs.co.sauk.wi.us/AscentLandRecords/PropertyListing/RealEstateTaxParcel#/Details/47748">https://irs.co.sauk.wi.us/AscentLandRecords/PropertyListing/RealEstateTaxParcel#/Details/47748</a> Parcel ID: 276 0933-00000

125 N Locust Street Building Checklist

157001460 - Reedburg Cleaners  
 125 N. Locust Street, Reedburg, WI  
 Property Sample Identifier (PSI) - B

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Basement - partial	Concrete	7	None	None	Fine grained native	Moderate(some cracking)	Damp	Block filled	No	No	No	No	No	No	No	Yes	No	2	Unknown	Unknown	Seldom wet but may flood in heavy rain	

125 N Locust Street Building Checklist

157001460 - Reedsburg Cleaners  
 125 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - B

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy		Concrete					10.00	1.00			Not energy efficient	Yes	No	Dehumidifiers used in the basement
First	Occupied		Other					10.00	1.00	Good		Not energy efficient	Yes	No	
2nd	Occupied	Yes	wood					10.00	1.00	Good		Not energy efficient	Yes	No	4 bedrooms, sink in every one

## 125 N Locust Street Building Checklist

157001460 – Reedsburg Cleaners  
125 N. Locust Street, Reedsburg, WI  
Property Sample Identifier (PSI) - B

Feature	Observed	Comment
Ditching	No	
Drain Tiles	No	
Dry Well	No	
Sanitary Sewers	Yes	manhole just past walkway
Storm Sewers	No	
Trenches	No	
Tunnels	No	
Other	No	

**125 N Locust Street Building Checklist**

157001460 – Reedsburg Cleaners  
 125 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - B

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	No	No	Yes	No		Painting sun porch, kitchen remodeled 4 years ago

125 N Locust Street Building Checklist

157001460 - Reedsburg Cleaners  
 125 N. Locust Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - B

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure?	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Boiler- Hot water or steam	1	Natural Gas	B	Window Air		No	No	2			no		No	Yes	Yes	No	One ventilation fan in the bathroom, and one in the kitchen Use between 2-6 window AC units 2 drains, one by boiler and one by laundry Slab in good condition minimal cracking Some gaps by utilities in walls, but mostly well sealed



Main Area



Main Area





Backroom



Backroom



Cellar Exit



Laundry





Laundry Sink



Under stair storage



Pantry/storage



Former dark room





Pantry/storage



Pantry window





Former dark room



Dark room sink





Cracks under darkroom sink



Cabinet in dark room



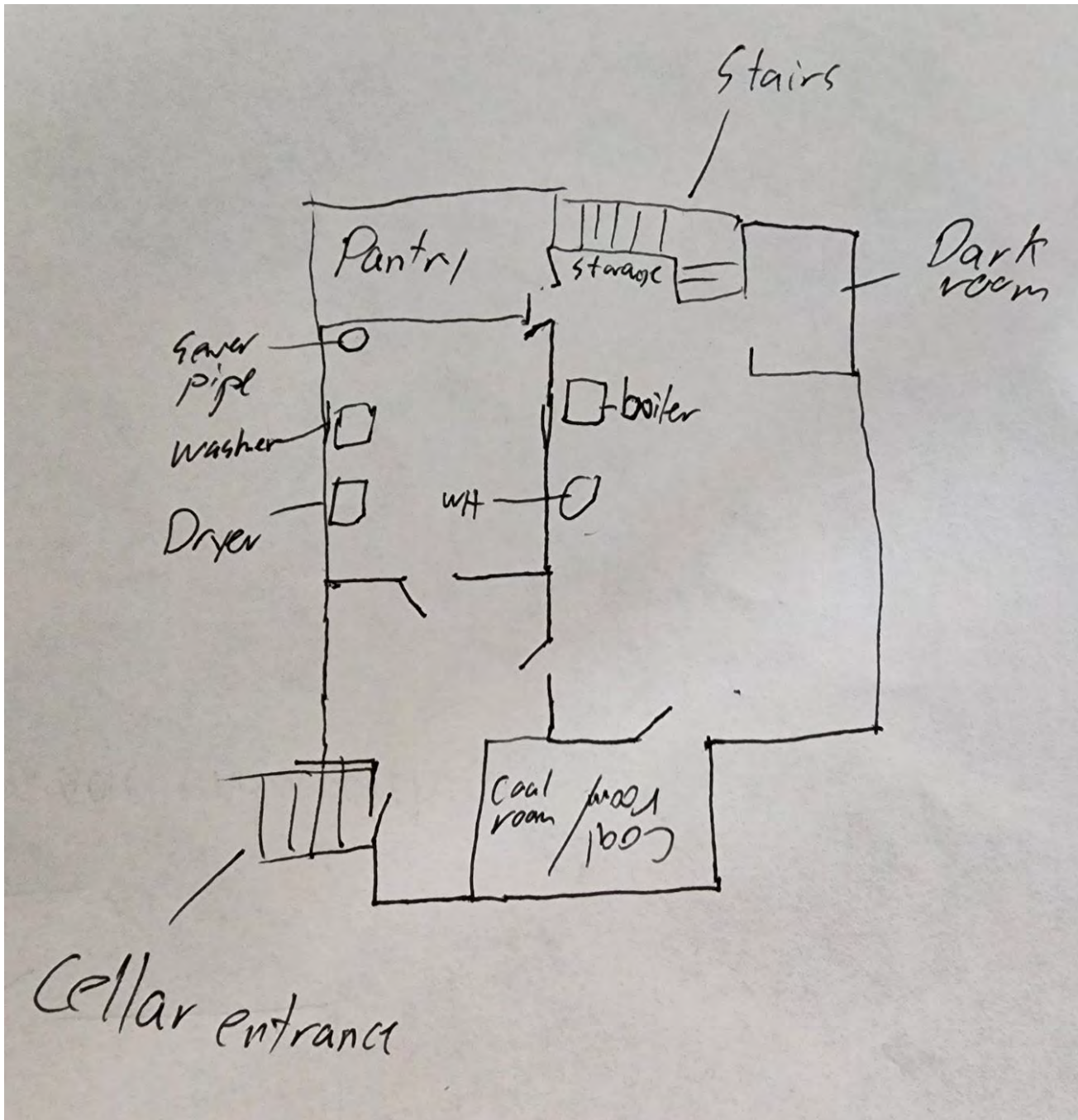


Coal chute room



Coal Chute room





Basic sketch

***335 E Main Street***

335 E Main Street Building Checklist

157001460 – Reedsburg Cleaners  
335 E. Main Street, Reedsburg, WI  
Property Sample Identifier (PSI) - C

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Anders Santelman					NA	NA
		144 4th Ave, Suite 3					
Building Owner	Starkweather Properties, LLC	Baraboo, WI 53913					
Building Contact	Nanci Caflisch		Owner	608-393-3330	<a href="mailto:NanciCaflisch@gmail.com">NanciCaflisch@gmail.com</a>		
Occupant	Jamie Phephles		Owner	608-963-6923	<a href="mailto:Jamie@grandalliancewi.com">Jamie@grandalliancewi.com</a>		
Occupant							

335 E Main Street Building Checklist

157001460 - Reedsburg Cleaners  
 335 E. Main Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - C

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
335 E. Main Street	Occupied	2			No	Commercial	2240	Commercial single unit	1		Public	Public		No online building info with Sauk 98 County Records. <a href="https://irs.co.sauk.wi.us/AscentLandRecords/PropertyListing/RealEstateTaxParcel#/Details/47749">https://irs.co.sauk.wi.us/AscentLandRecords/PropertyListing/RealEstateTaxParcel#/Details/47749</a> Parcel ID: 276 0934-00000



335 E Main Street Building Checklist

157001460 - Reedburg Cleaners  
 335 E. Main Street, Reedburg, WI  
 Property Sample Identifer (PSI) - C

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Slab on grade	Concrete	0	None	None	Unknown			Dry	Other	No		Yes - Plasti	No	Unknown		No	No	No	0	0	Unkown	

335 E Main Street Building Checklist

157001460 - Reedsburg Cleaners  
 335 E. Main Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - C

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement First 2nd	Occupied	No	Other		Real Estate Office	Yes	No	10.00	1.00		300	Not energy efficient	No	No	

### 335 E Main Street Building Checklist

157001460 – Reedsburg Cleaners  
335 E. Main Street, Reedsburg, WI  
Property Sample Identifier (PSI) - C

Feature	Observed	Comment
Ditching	No	
Drain Tiles	No	
Dry Well	No	
Sanitary Sewers	Yes	Manhole on the street
Storm Sewers	Yes	West side of property
Trenches	No	
Tunnels	No	
Other	No	

### 335 E Main Street Building Checklist

157001460 – Reedsburg Cleaners  
335 E. Main Street, Reedsburg, WI  
Property Sample Identifier (PSI) - C

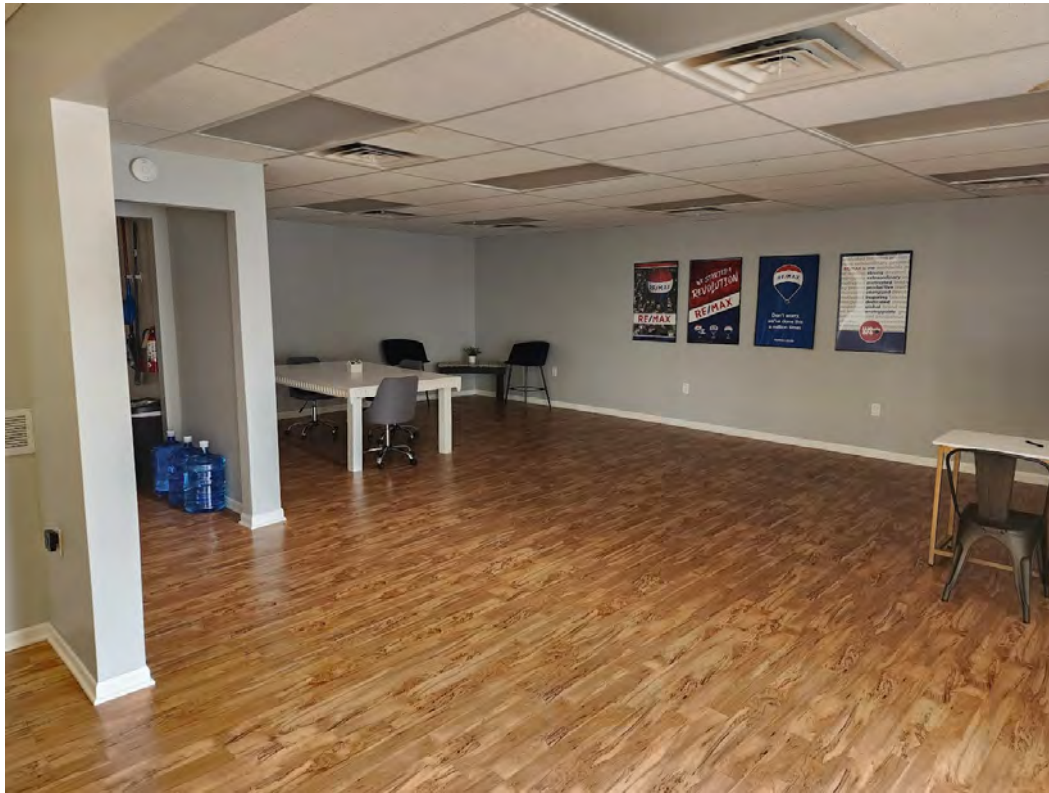
COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	Yes	No	No	No		adjacent to main street

335 E Main Street Building Checklist

157001460 – Reedsburg Cleaners  
 335 E. Main Street, Reedsburg, WI  
 Property Sample Identifier (PSI) - C

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure? Unknown	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Forced Air Furnace		1 Natural Gas	R	Central Air	R						NA		No	No	No	No	HVAC in ceiling, unable to look at it





Main Area



Main Area



Main Area



Kitchen





Bathroom



Storage room



Electrical in storage



Main Area





Main Area



Main Area



Office 1

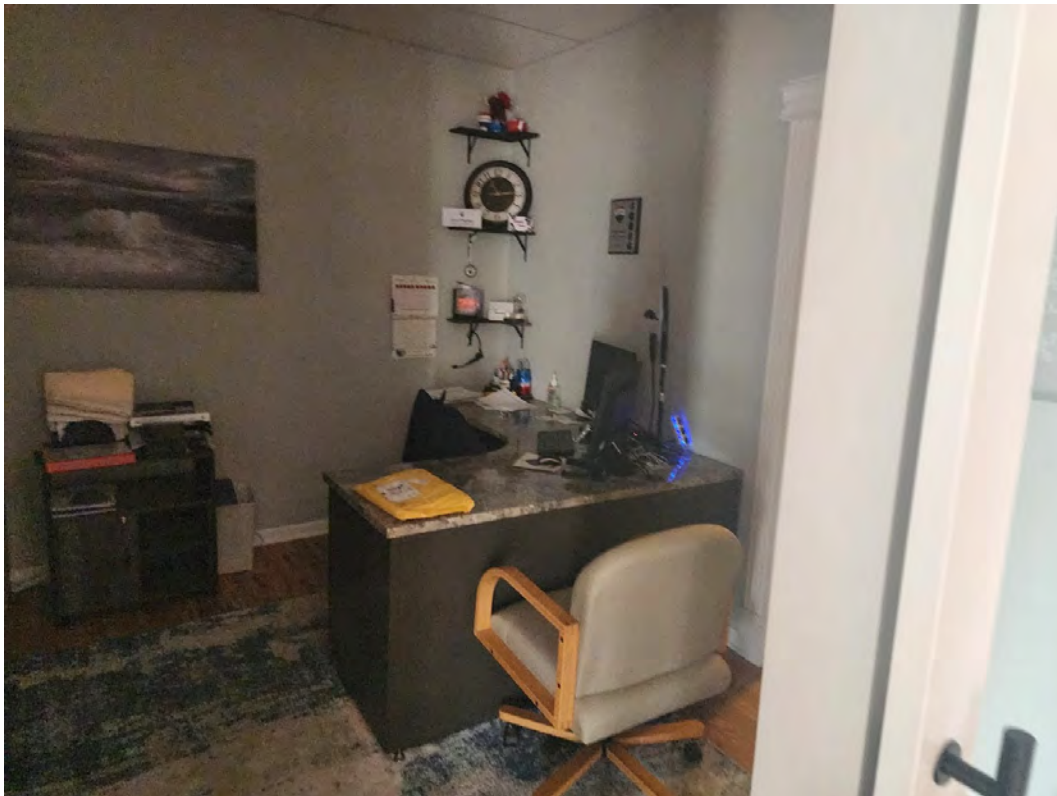


Office 1





Office 2



Office 2



Sump Pump



Inside sump pit





Ceiling ventilation



Nearby manhole



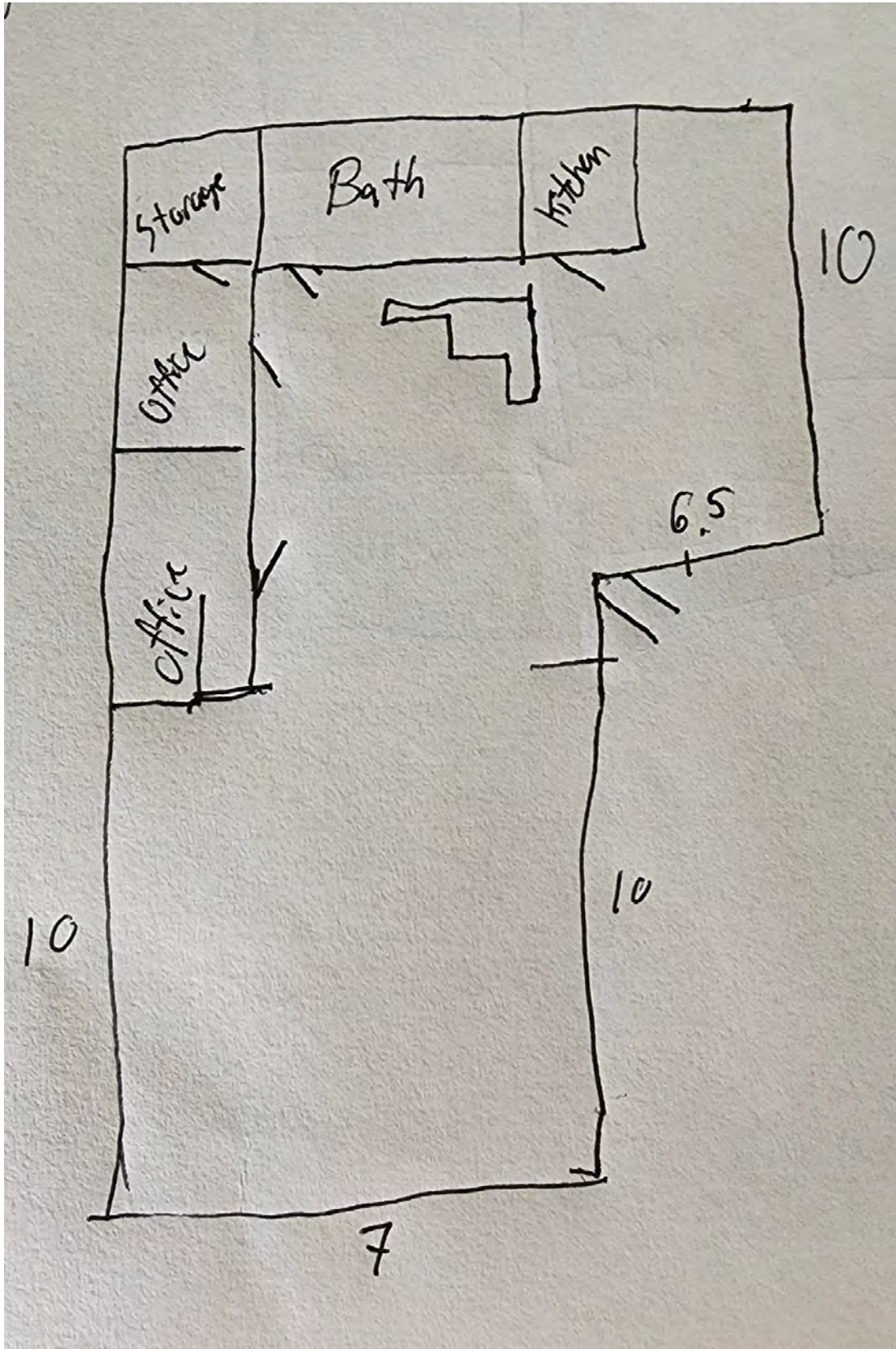


Storm drain



Storm drain





Basic building diagram

**Appendix B**  
**Field Forms**



*120 N Locust Street*

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: Reedsburg Cleaners  
 Bay West Job #: J230382  
 Bay West Sampler Name(s): Anders Santelman  
 Weather Conditions: 80 and sunny

### Project Information

Property Address: 120 N Locust St, Reedsburg Wisconsin  
 Property Owner Name: Lee Gnatzig  
 Property Type: Single Family Residential, currently rented

### Sub-Slab Installation information

Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 910  
 Time for Sub-Slab Vapor Equilibration: 910 to 930  
 Water based or leak test performed and passed? Y or N  
 General Indoor Air PID (ppm) Reading: 0.0

#1

Sample ID: 08A SSV 01 20230801  
 Passive Sampler Type: Passive Sub-Slab Vapor Sampler  
 Sample Location: Sub-Slab (basement)  
 Duration of Test: 2 weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

#### Start (or Grab) Sample

Date: 7/18/2023  
 Time: 0926  
 Static Pressure: 0.6 Pa  
 PID (ppm): 5.0

#### End (or Grab) Sample

Date: 8/01/2023  
 Time: 0936  
 Static Pressure: 0.6 Pa  
 PID (ppm): 7.8



Photo 1: Tools used to drill SS

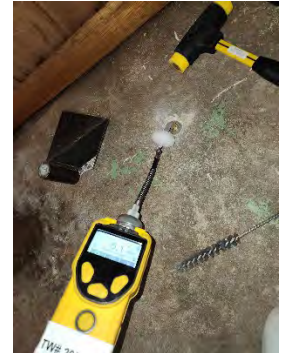


Photo 2: Taking PID readings


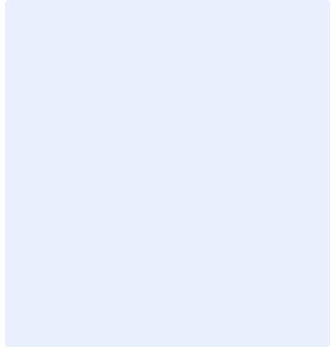
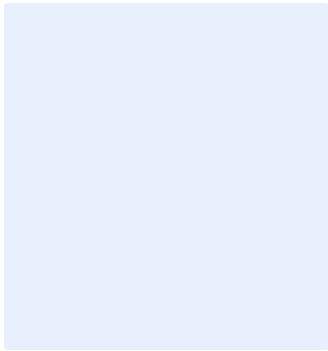
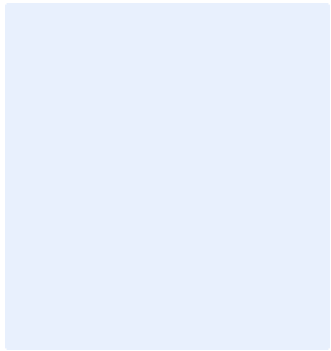


Photo 3: Sampler Setup


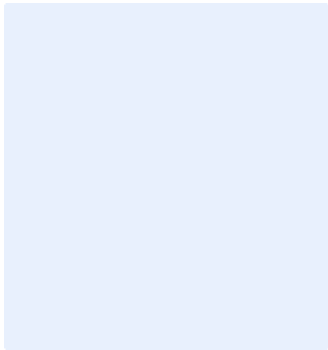
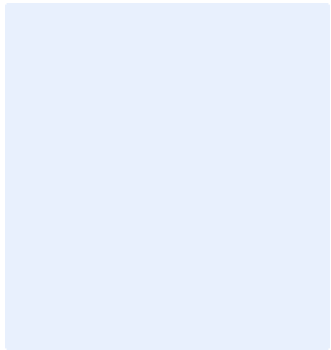


Photo 4: SS as left

#2

<p>Sample ID: <u>08A IAB 01 20230801</u>          Passive Sampler Type: <u>Passive Indoor Air Sampler</u>          Sample Location: <u>Basement</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p> <p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>0932</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>0928</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.9</u>          Floor recently cleaned, causing elevated PID</p>	 <p>Photo 1: Basement Ambient</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#3

<p>Sample ID: <u>08A IA1 02 20230801</u>          Passive Sampler Type: <u>Passive Indoor Air Sampler</u>          Sample Location: <u>First Floor</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p> <p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>0944</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>0924</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.3</u></p>	 <p>Photo 1: 1<sup>st</sup> floor ambient</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>



#4

Sample ID: 08A\_IA2\_03\_20230801  
 Passive Sampler Type: Passive Indoor Air Sampler  
 Sample Location: Second Floor  
 Duration of Test: 2 weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 7/18/2023  
 Time: 0947  
 Static Pressure: NA  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 8/01/2023  
 Time: 0947  
 Static Pressure: NA  
 PID (ppm): 0.2

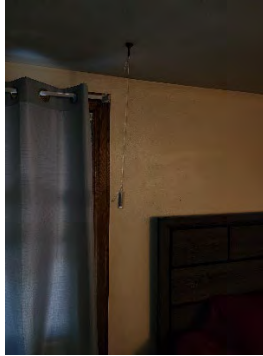


Photo 1: 2<sup>nd</sup> floor ambient

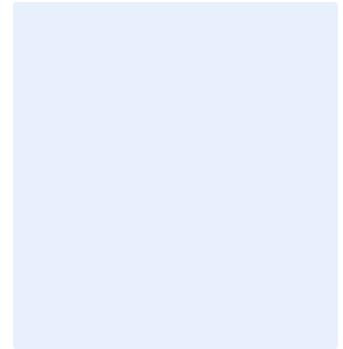


Photo 2: \_\_\_\_\_

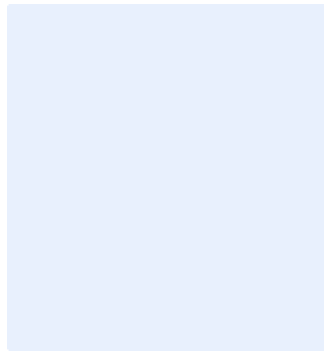


Photo 3: \_\_\_\_\_

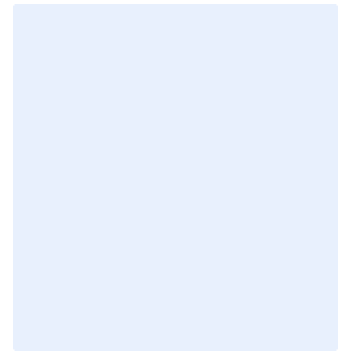


Photo 4: \_\_\_\_\_

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: \_\_\_\_\_ Reedsburg Cleaners \_\_\_\_\_  
 Bay West Job #: \_\_\_\_\_ J230382 \_\_\_\_\_  
 Bay West Sampler Name(s) \_\_\_\_\_ Anders Santelman \_\_\_\_\_  
 Weather Conditions \_\_\_\_\_



### Project Information

Property Address: \_\_\_\_\_ 120 N Locust St \_\_\_\_\_  
 Property Owner Name: \_\_\_\_\_ Lee Gnatzig \_\_\_\_\_  
 Property Type: \_\_\_\_\_ Single Family, Residential \_\_\_\_\_

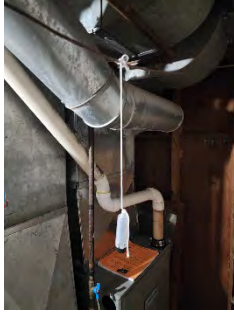
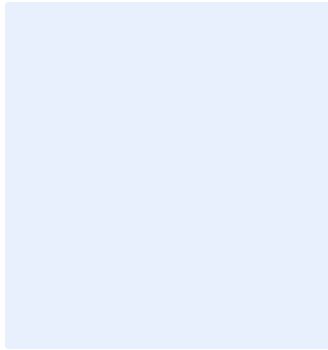
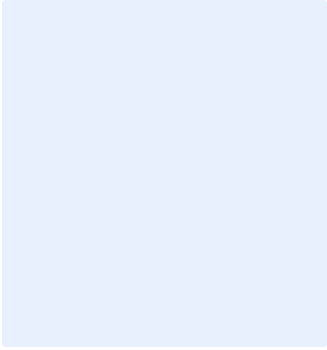
### Sub-Slab Installation information

Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 7/18/2023  
 Time for Sub-Slab Vapor Equilibration:  
 Ambient PID (ppm): 0.0

#1

<p>Sample ID: 08A_SSV_01_20231219          Passive Sampler Type: Passive Soil-Gas Sampler          Sample Location: __Sub-Slab          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,          and vinyl chloride          Laboratory: _____ Beacon _____</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0915          PID (ppm): 1.6          Pressure Reading (Pa): 0.6</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0908          PID (ppm): 2.1          Pressure Reading (Pa): 0</p>	 <p>Photo 1: Sub-slab sample as left</p>	 <p>Photo 2: Point sealed 3/14/2024</p>
	<p>Photo 3:</p>	<p>Photo 4:</p>


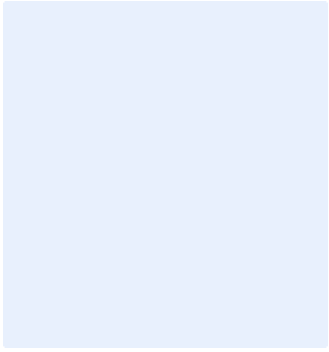
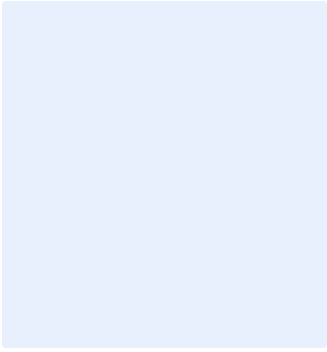
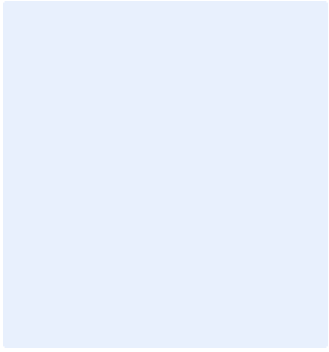
#2

<p>Sample ID: 08A_IAB_01_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: Basement, Laundry/Utility room          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: Beacon</p>	 <p>Photo 1: Basement Sample</p>	 <p>Photo 2: _____</p>
<p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0921          PID (ppm): 0.0          Pressure Reading (Pa):  <b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0915          PID (ppm): 0.1</p>	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#3

<p>Sample ID: 08A_IA1_02_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: 1<sup>st</sup> Floor, kitchen          Duration of Test: 2 Weels          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: Beacon</p>	 <p>Photo 1: 1<sup>st</sup> floor sample</p>	 <p>Photo 2: _____</p>
<p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0925          PID (ppm): 0.1  <b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0920          PID (ppm): 0.1</p>	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#4

<p>Sample ID: 08A_IA2_03_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: 2<sup>nd</sup> Floor, Main bedroom          Duration of Test: 2 Weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,          and vinyl chloride          Laboratory: Beacon</p>	 <p>Photo 1: 2<sup>nd</sup> floor sample</p>	 <p>Photo 2: _____</p>
<p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0929          PID (ppm): 0.1</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0923          PID (ppm): 0.0</p>	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>



*125 N Locust Street*

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: Reedsburg Cleaners  
 Bay West Job #: J230382  
 Bay West Sampler Name(s): Anders Santelman  
 Weather Conditions: 80 and sunny


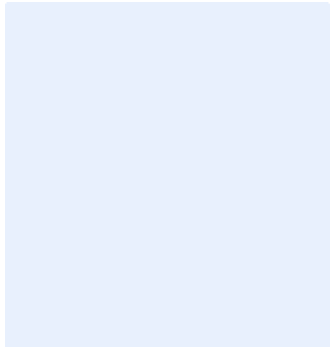
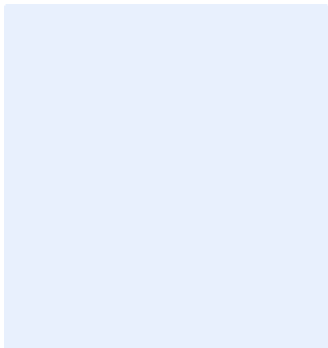
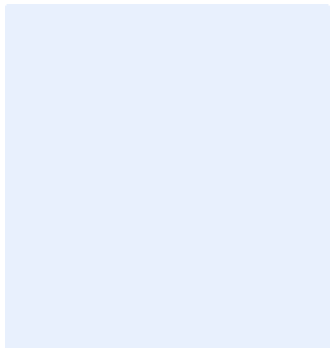
### Project Information

Property Address: 125 N Locust St, Reedsburg Wisconsin  
 Property Owner Name: Stephanie Hasler  
 Property Type: Single Family Residential

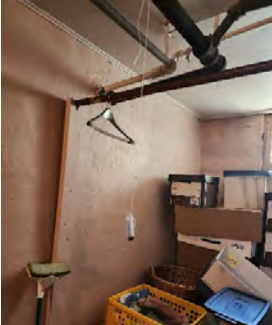
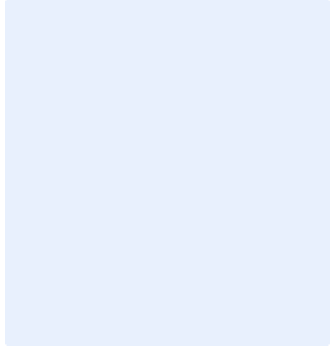
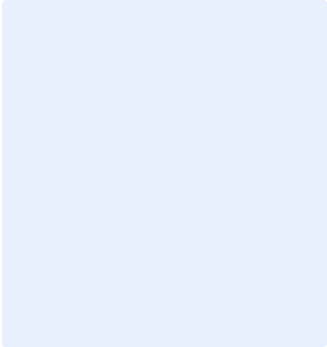
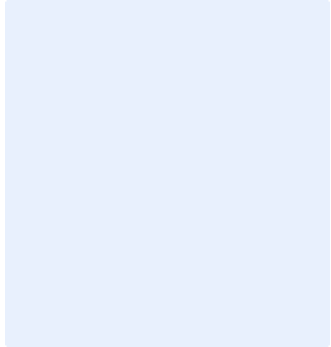
### Sub-Slab Installation information

Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 1100  
 Time for Sub-Slab Vapor Equilibration: 1100 to 1120  
 Water based or leak test performed and passed? Y or N  
 General Indoor Air PID (ppm) Reading: 0.0


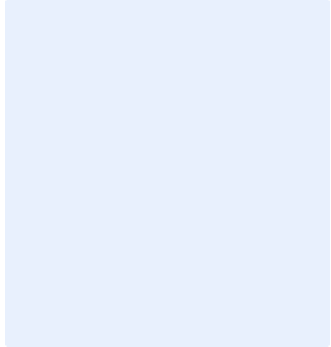
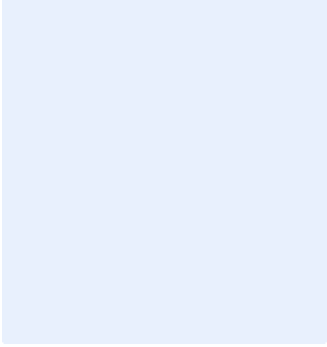
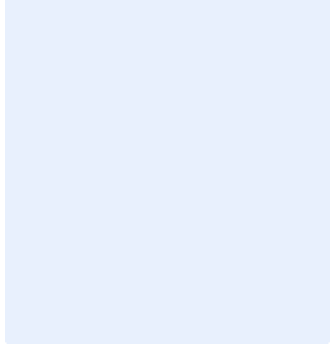
### #1

<p>Sample ID: <u>08B_SSV_02_20230801</u>          Passive Sampler Type: <u>Passive Sub-Slab Vapor Sampler</u>          Sample Location: <u>Sub-Slab (basement)</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p> <p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>1136</u>          Static Pressure: <u>0.0 Pa</u>          PID (ppm): <u>3.3</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>1009</u>          Static Pressure: <u>0.3</u>          PID (ppm): <u>4.6</u></p>	 <p>Photo 1: Marked SS location</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

### #2

<p>Sample ID: <u>08B IAB 04 20230801</u>          Passive Sampler Type: <u>Passive Indoor Air Sampler</u>          Sample Location: <u>Basement</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p>	 <p>Photo 1: Basement Ambient</p>	 <p>Photo 2: _____</p>
<p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>1143</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>1003</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0</u></p>	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#3

<p>Sample ID: <u>08B IA1 05 20230801</u>          Passive Sampler Type: <u>Passive Indoor Air Sampler</u>          Sample Location: <u>First Floor</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p>	 <p>Photo 1: 1<sup>st</sup> floor ambient</p>	 <p>Photo 2: _____</p>
<p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>1159</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>0959</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0</u></p>	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#4

Sample ID: 08B IA2 06 20230801  
 Passive Sampler Type: Passive Indoor Air Sampler  
 Sample Location: Second Floor  
 Duration of Test: 2 weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 7/18/2023  
 Time: 1157  
 Static Pressure: NA  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 8/01/2023  
 Time: 0953  
 Static Pressure: NA  
 PID (ppm): 0.0



Photo 1: 2<sup>nd</sup> floor ambient

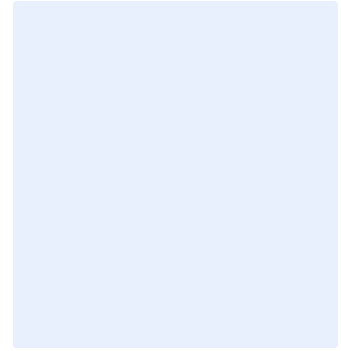


Photo 2: \_\_\_\_\_

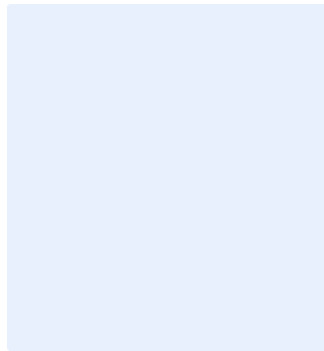


Photo 3: \_\_\_\_\_

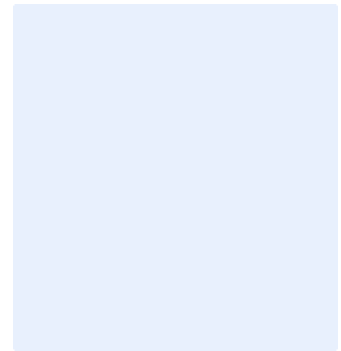


Photo 4: \_\_\_\_\_



## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: \_\_\_\_\_ Reedsburg Cleaners \_\_\_\_\_  
 Bay West Job #: \_\_\_\_\_ J230382 \_\_\_\_\_  
 Bay West Sampler Name(s) \_\_\_\_\_ Anders Santelman \_\_\_\_\_  
 Weather Conditions \_\_\_\_\_

### Project Information

Property Address: \_\_\_\_\_ 125 N Locust St \_\_\_\_\_  
 Property Owner Name: \_\_\_\_\_ Joseph and Stephanie Halser \_\_\_\_\_  
 Property Type: \_\_\_\_\_ Single Family, Residential \_\_\_\_\_

### Sub-Slab Installation information

Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 7/18/2023  
 Time for Sub-Slab Vapor Equilibration:  
 Ambient PID (ppm): 0.0


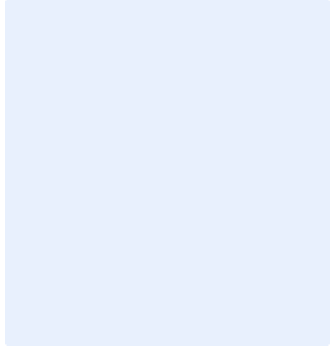
### #1

<p>Sample ID: 08B_SSV_02_20231219          Passive Sampler Type: Passive Soil-Gas Sampler          Sample Location: __Sub-Slab          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,          and vinyl chloride          Laboratory: ____Beacon____</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0945          PID (ppm): 3.1          Pressure Reading (Pa): 0.2</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0932          PID (ppm): 0.6          Pressure Reading (Pa): 0</p>	 <p>Photo 1: Sub-slab sample as left</p>	<p>Photo 2:</p>
	<p>Photo 3:</p>	<p>Photo 4:</p>

### #2

<p>Sample ID: 08B_IAB_04_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: Basement, southwest corner          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: Beacon</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0950          PID (ppm): 0.0</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0950          PID (ppm): 0</p>	 <p>Photo 1: Basement sample</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#3

<p>Sample ID: 08B_IA1_05_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: 1<sup>st</sup> Floor, dining room          Duration of Test: 2 Weels          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: Beacon</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 0954          PID (ppm): 0.0</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 0954          PID (ppm): 0.1</p>	 <p>Photo 1: 1<sup>st</sup> floor sample</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#4

Sample ID: 08B\_IA2\_06\_20231219  
 Passive Sampler Type: Passive Air Sampler  
 Sample Location: 2<sup>nd</sup> Floor, TV room  
 Duration of Test: 2 Weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,  
 and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 12/05/2023  
 Time: 0958  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 12/19/2023  
 Time: 0958  
 PID (ppm): 0.6



Photo 1: 2<sup>nd</sup> floor ambient

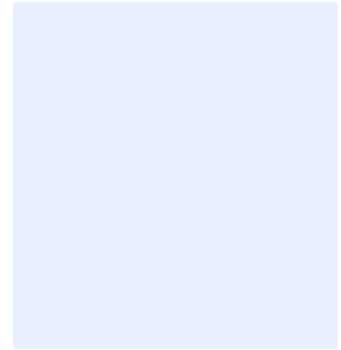


Photo 2: \_\_\_\_\_

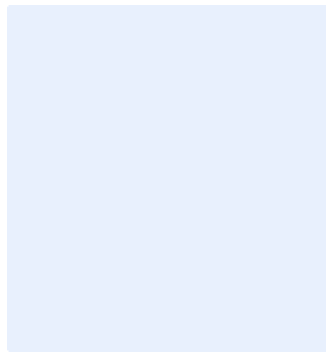


Photo 3: \_\_\_\_\_

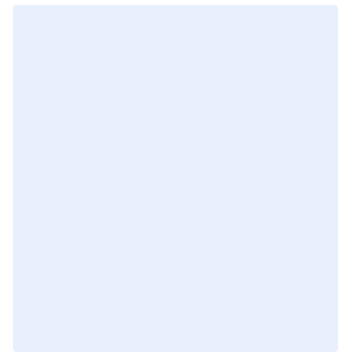


Photo 4: \_\_\_\_\_

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: \_\_\_\_\_ Reedsburg Cleaners \_\_\_\_\_  
 Bay West Job #: \_\_\_\_\_ J230382 \_\_\_\_\_  
 Bay West Sampler Name(s) \_\_\_\_\_ Anders Santelman \_\_\_\_\_  
 Weather Conditions \_\_\_\_\_ 32 and rainy \_\_\_\_\_

### Project Information

Property Address: \_\_\_\_\_ 125 N Locust St \_\_\_\_\_  
 Property Owner Name: \_\_\_\_\_ Joseph and Stephanie Halser \_\_\_\_\_  
 Property Type: \_\_\_\_\_ Single Family, Residential \_\_\_\_\_

### Sub-Slab Installation information


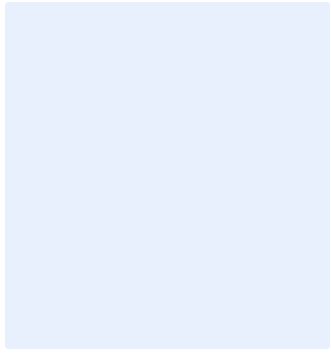
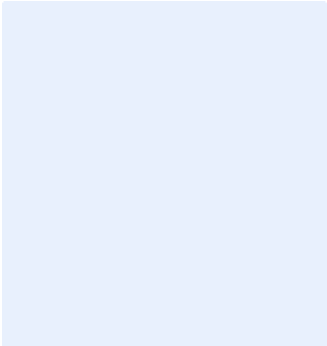
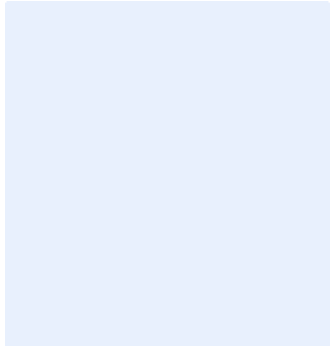
Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 7/18/2023  
 Time for Sub-Slab Vapor Equilibration:  
 Ambient PID (ppm): 0.0

### #1


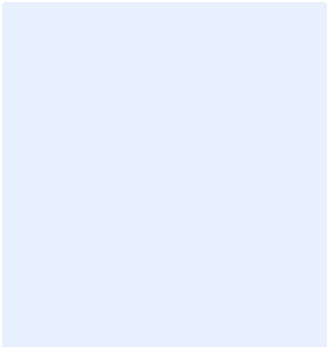
<p>Sample ID: 08B_SSV_02_20240328          Passive Sampler Type: Passive Soil-Gas Sampler          Sample Location: __Sub-Slab          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,          and vinyl chloride          Laboratory: _____ Beacon _____</p> <p><b>Start (or Grab) Sample</b>          Date: 03/14/2024          Time: 1005          PID (ppm): 8.0          Pressure Reading (Pa): -0.9</p> <p><b>End (or Grab) Sample</b>          Date: 03/28/2024          Time: 0955          PID (ppm): 0.6          Pressure Reading (Pa): 0.1 Pa</p>	 <p>Photo 1: Sub-slab sample as left</p>	 <p>Photo 2: Point sealed 3/28/2024</p>
	<p>h</p> <p>Photo 3:</p>	<p>Photo 4:</p>



#2

<p>Sample ID: 08B_IAB_04_20240328 Passive Sampler Type: Passive Air Sampler Sample Location: Basement, southwest corner Duration of Test: 2 weeks Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride Laboratory: Beacon</p> <p><b>Start (or Grab) Sample</b> Date: 03/14/2024 Time: 1016 PID (ppm): 1.2</p> <p><b>End (or Grab) Sample</b> Date: 03/28/2024 Time: 0953 PID (ppm): 0.1</p>	 <p>Photo 1: Basement sample</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#3

<p>Sample ID: 08B_IA1_05_20240328 Passive Sampler Type: Passive Air Sampler Sample Location: 1<sup>st</sup> Floor, dining room Duration of Test: 2 Weels Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride Laboratory: Beacon</p> <p><b>Start (or Grab) Sample</b> Date: 03/14/2024 Time: 1022 PID (ppm): 1.2</p> <p><b>End (or Grab) Sample</b> Date: 03/28/2024 Time: 0948 PID (ppm): 0.2</p>	 <p>Photo 1: 1<sup>st</sup> floor sample</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#4

Sample ID: 08B\_IA2\_06\_20240328  
 Passive Sampler Type: Passive Air Sampler  
 Sample Location: 2<sup>nd</sup> Floor, TV room  
 Duration of Test: 2 Weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,  
 and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 03/14/2024  
 Time: 1025  
 PID (ppm): 3.7

**End (or Grab) Sample**

Date: 03/28/2024  
 Time: 0945  
 PID (ppm): 0.3



Photo 1: 2<sup>nd</sup> floor ambient

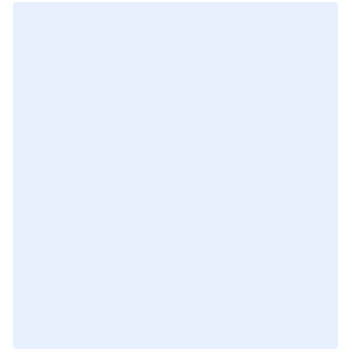


Photo 2: \_\_\_\_\_

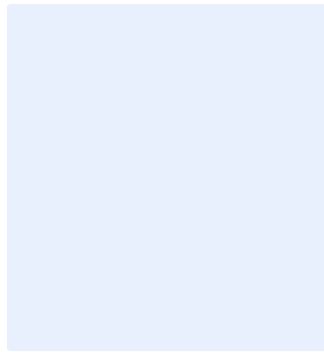


Photo 3: \_\_\_\_\_

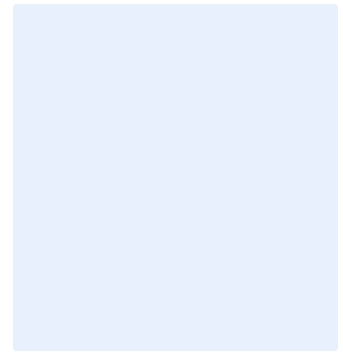


Photo 4: \_\_\_\_\_

#5

Sample ID: 08B\_OA1\_01\_20240328  
 Passive Sampler Type: Passive Air Sampler  
 Sample Location: 2<sup>nd</sup> Floor, TV room  
 Duration of Test: 2 Weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,  
 and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 03/14/2024  
 Time: 1033  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 03/28/2024  
 Time: 1019  
 PID (ppm): 0.0



Photo 1: 2<sup>nd</sup> floor ambient

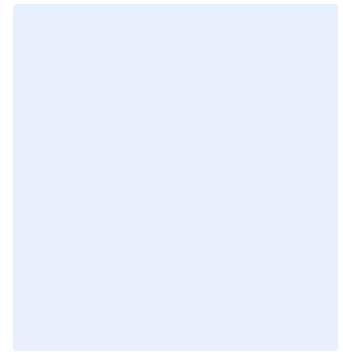


Photo 2: \_\_\_\_\_

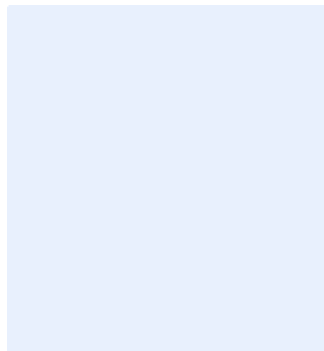


Photo 3: \_\_\_\_\_

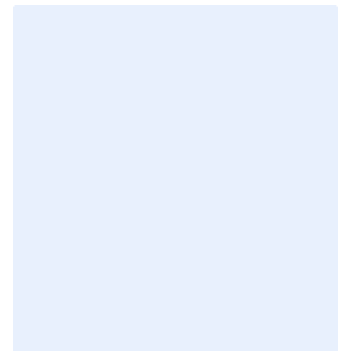


Photo 4: \_\_\_\_\_

***335 E Main Street***

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: Reedsburg Cleaners  
 Bay West Job #: J230382  
 Bay West Sampler Name(s): Anders Santelman  
 Weather Conditions: 80 and sunny

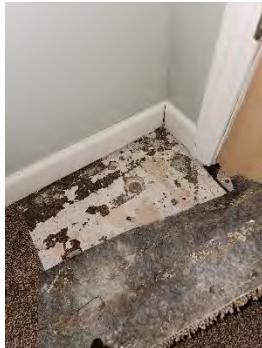
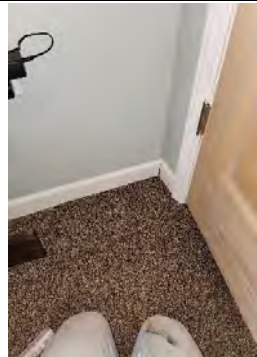
### Project Information

Property Address: 335 E Main St  
 Property Owner Name: Nanci  
 Property Type: Commercial

### Sub-Slab Installation information

Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 1400  
 Time for Sub-Slab Vapor Equilibration: 1400 to 1420  
 Water based or leak test performed and passed? Y or N  
 General Indoor Air PID (ppm) Reading: 0.0

### #1

<p>Sample ID: <u>08C SSV 03 20230801</u>          Passive Sampler Type: <u>Passive Sub-Slab Vapor Sampler</u>          Sample Location: <u>Sub-Slab (First Floor)</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p> <p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>1425</u>          Static Pressure: <u>-1.0 Pa</u>          PID (ppm): <u>6.6</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>1042</u>          Static Pressure: <u>-0.4 Pa</u>          PID (ppm): <u>5.4</u></p>	 <p>Photo 1: Sub-slab finished</p>	 <p>Photo 2: Sub-slab as left</p>
	<p>Photo 3:</p>	<p>Photo 4:</p>

### #2



Sample ID: 08C Sump 01 20230801  
 Passive Sampler Type: Passive Sump Air Sampler  
 Sample Location: Sump on First floor  
 Duration of Test: 2 weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 7/18/2023  
 Time: 1433  
 Static Pressure: NA  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 8/01/2023  
 Time: 1037  
 Static Pressure: NA  
 PID (ppm): 0.0



Photo 1: Airtight sealed sump

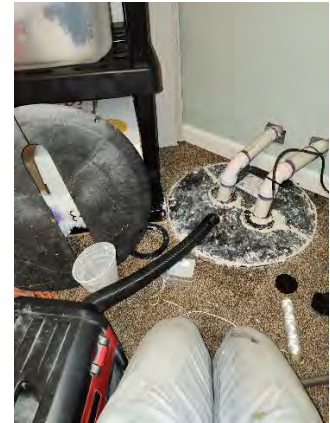


Photo 2: Purging Sump



Photo 3: Sample attached to cap



Photo 4: Airtight sump with sampler

**#3**

Sample ID: 08C IA1 07 20230801  
 Passive Sampler Type: Passive Indoor Air Sampler  
 Sample Location: First Floor  
 Duration of Test: 2 weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 7/18/2023  
 Time: 1442  
 Static Pressure: NA  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 8/01/2023  
 Time: 1032  
 Static Pressure: NA  
 PID (ppm): 0.2

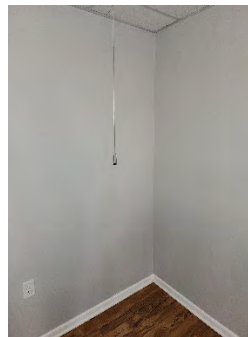


Photo 1: 1<sup>st</sup> floor indoor air

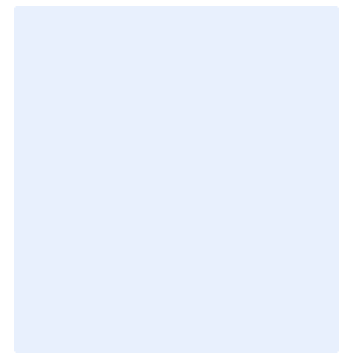


Photo 2: \_\_\_\_\_

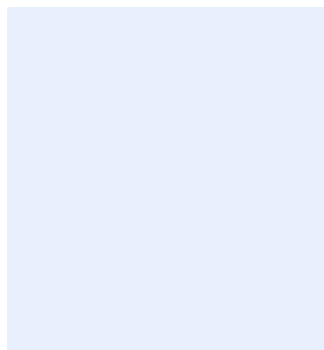


Photo 3: \_\_\_\_\_

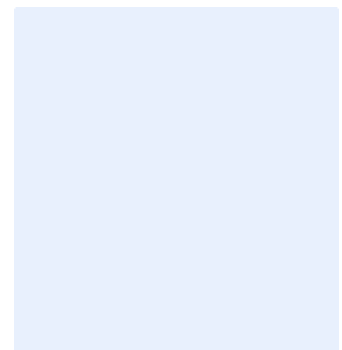


Photo 4: \_\_\_\_\_

#4

Sample ID: 08C OA 01 20230801  
 Passive Sampler Type: Passive Outdoor Air Sampler  
 Sample Location: Behind 335 E, Outdoor  
 Duration of Test: 2 weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 7/18/2023  
 Time: 1510  
 Static Pressure: NA  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 8/01/2023  
 Time: 1021  
 Static Pressure: NA  
 PID (ppm): 0.0



Photo 1: Outdoor Sampler



Photo 2: Outdoor Sampler

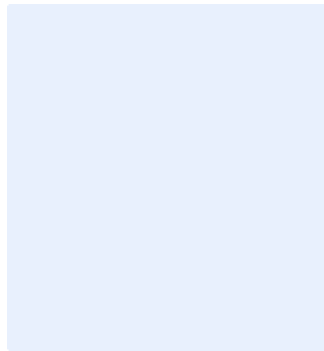


Photo 3: \_\_\_\_\_

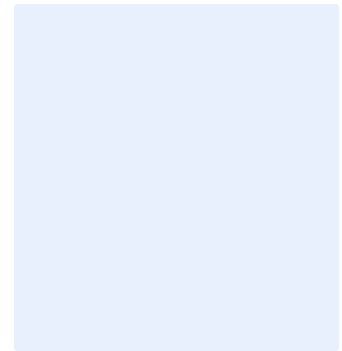


Photo 4: \_\_\_\_\_

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: \_\_\_\_\_ Reedsburg Cleaners \_\_\_\_\_  
 Bay West Job #: \_\_\_\_\_ J230382 \_\_\_\_\_  
 Bay West Sampler Name(s) \_\_\_\_\_ Anders Santelman \_\_\_\_\_  
 Weather Conditions \_\_\_\_\_

### Project Information

Property Address: \_\_\_\_\_ 335 E Main St \_\_\_\_\_  
 Property Owner Name: \_\_\_\_\_ Jaime Phephles \_\_\_\_\_  
 Property Type: \_\_\_\_\_ Commercial Office \_\_\_\_\_

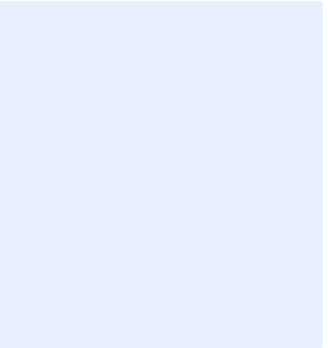
### Sub-Slab Installation information

Concrete Slab Thickness: 5 inches  
 Type of Sub-slab installed: Poured  
 Time of Sub-Slab Installation: 07/18/2023  
 Time for Sub-Slab Vapor Equilibration:  
 Ambient PID (ppm): 0.0

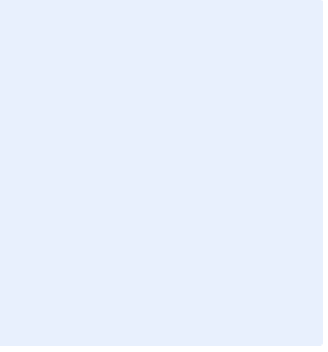
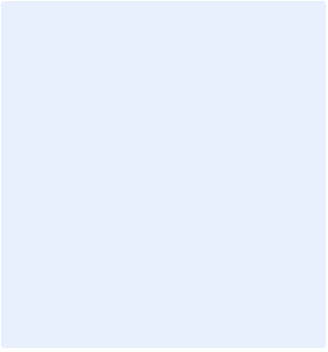
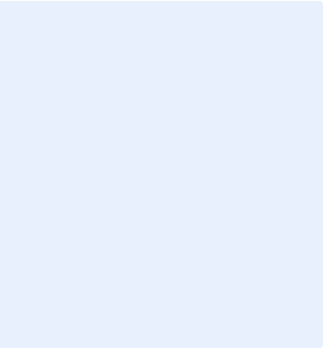
### #1

<p>Sample ID: 08C_SSV_03_20231219          Passive Sampler Type: Passive Soil-Gas Sampler          Sample Location: __Sub-Slab          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: _____ Beacon _____</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 1045          PID (ppm): 2.0          Pressure Reading (Pa): 1.9</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 1042          PID (ppm): 2.5          Pressure Reading (Pa): 0</p>	 <p>Photo 1: Sub-slab sample as left</p>	 <p>Photo 2: Sealed on 3/14/2024</p>
	<p>Photo 3:</p>	<p>Photo 4:</p>

### #2

<p>Sample ID: 08C_Sump_01_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: Sump Pump          Duration of Test: 2 weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: Beacon</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 1113          PID (ppm): 0.0</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 1050          PID (ppm): 0</p>	 <p>Photo 1: Sump sample</p>	 <p>Photo 2: Sealed sump</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>

#3

<p>Sample ID: 08C_IA1_07_20231219          Passive Sampler Type: Passive Air Sampler          Sample Location: 1<sup>st</sup> Floor, Main room          Duration of Test: 2 Weeks          Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride          Laboratory: Beacon</p> <p><b>Start (or Grab) Sample</b>          Date: 12/05/2023          Time: 1123          PID (ppm): 0.0</p> <p><b>End (or Grab) Sample</b>          Date: 12/19/2023          Time: 1105          PID (ppm): 0</p>	<p>Photo 1:</p>	 <p>Photo 2: _____</p>
	 <p>Photo 3: _____</p>	 <p>Photo 4: _____</p>



#4

Sample ID: 08C\_OA1\_01\_20231219  
 Passive Sampler Type: Passive Air Sampler  
 Sample Location: North of building, outside  
 Duration of Test: 2 Weeks  
 Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE,  
 and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 12/05/2023  
 Time: 1019  
 PID (ppm): 0.0

**End (or Grab) Sample**

Date: 12/19/2023  
 Time: 1002  
 PID (ppm): 0



Photo 1: Outdoor air sample

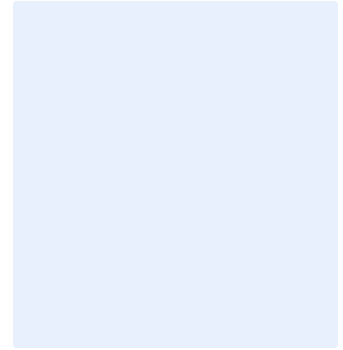


Photo 2: \_\_\_\_\_

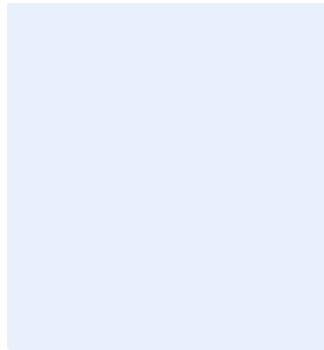


Photo 3: \_\_\_\_\_

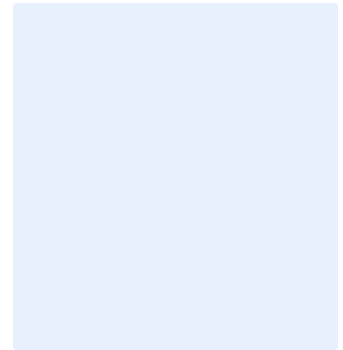


Photo 4: \_\_\_\_\_

*Sanitary Sewer ROW*

## PASSIVE VAPOR SAMPLING INFORMATION

### Project Information

Project Name: Reedsburg Cleaners  
 Bay West Job #: J230382  
 Bay West Sampler Name(s): Anders Santelman  
 Weather Conditions: 80 and sunny


### Project Information

Property Address: Locust St Sewers  
 Property Owner Name: City of Reedsburg Utility ROW  
 Property Type: Sanitary Sewers ROW)

### Sub-Slab Installation information

Concrete Slab Thickness: NA  
 Type of Sub-slab installed: NA  
 Time of Sub-Slab Installation: NA  
 Time for Sub-Slab Vapor Equilibration: NA  
 Pressure Test Time: NA  
 General Outdoor Air PID (ppm) Reading: 0.0

### #1

<p>Sample ID: <u>08R_SSG_01_20230801</u>          Passive Sampler Type: <u>Passive Sewer Air Sampler</u>          Sample Location: <u>ROW 12.10.4</u>          Duration of Test: <u>2 weeks</u>          Analysis: <u>Extended VOCS and PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</u>          Laboratory: <u>Beacon</u></p> <p><b>Start (or Grab) Sample</b>          Date: <u>7/18/2023</u>          Time: <u>1535</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0 Top, 0.0 Bottom</u></p> <p><b>End (or Grab) Sample</b>          Date: <u>8/01/2023</u>          Time: <u>1154</u>          Static Pressure: <u>NA</u>          PID (ppm): <u>0.0 Top, 0.0 Bottom</u></p>	 Photo 1: Inside Manhole	 Photo 2: Sampler in place
	 Photo 3: Manhole as left	 Photo 4: _____

### #2

Sample ID: 08R SSG 02 20230801  
 Passive Sampler Type: Passive Sewer Air Sampler  
 Sample Location: ROW 12.5.4  
 Duration of Test: 2 weeks  
 Analysis: Extended VOCS and PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride  
 Laboratory: Beacon

**Start (or Grab) Sample**

Date: 7/18/2023  
 Time: 1604  
 Static Pressure: NA  
 PID (ppm): 0.0 Top, 0.0 Bottom

**End (or Grab) Sample**

Date: 8/01/2023  
 Time: 1130  
 Static Pressure: NA  
 PID (ppm): 0.0 Top, 1.9 Bottom



Photo 1: Inside Manhole



Photo 2: Sampler in place

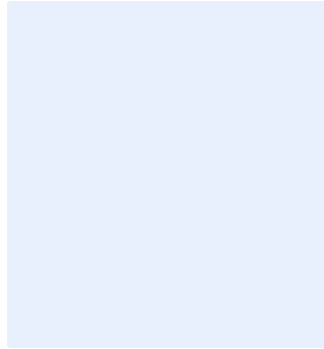


Photo 3: \_\_\_\_\_

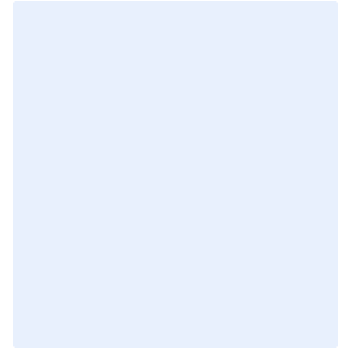


Photo 4: \_\_\_\_\_



**Appendix C**  
**Laboratory Analytical Results**

*120 N Locust Street*



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007114

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Detailed Analytical Results	6
- Mass	7
0007114-01 - 08A_SSV_01_20230801	8
- Concentration	9
0007114-01 - 08A_SSV_01_20230801	10
QC Summaries	11
Additional QC Information	22
Sample Result Calculations	23
Equation	23
MRL Calculation Table	24
Certifications	25
Notes and Definitions	26
Sample Management Records	27
Chain of Custody	28



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007114-01	08A_SSV_01_20230801	08/03/2023	TO-17 (Passive)	Soil Gas
Sampler Type: Beacon Passive Sampler				

#### Project Completeness

**Samples Received:** 1  
**Samples Analyzed:** 1

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

## *Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

*Detailed Analytical Results*



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

*Detailed Analytical Results- Mass*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

Lab Sample ID: 0007114-01

**08A\_SSV\_01\_20230801**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	08/07/2023 16:41	Ka23080709.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	08/07/2023 16:41	Ka23080709.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	08/07/2023 16:41	Ka23080709.D	
Trichloroethene	79-01-6	<10.0	10.0	08/07/2023 16:41	Ka23080709.D	
Tetrachloroethene	127-18-4	<10.0	10.0	08/07/2023 16:41	Ka23080709.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	96.3%	70-130		08/07/2023 16:41	Ka23080709.D
Surrogate: Toluene-d8	2037-26-5	96.2%	70-130		08/07/2023 16:41	Ka23080709.D
Surrogate: Bromofluorobenzene	460-00-4	90.4%	70-130		08/07/2023 16:41	Ka23080709.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

*Detailed Analytical Results- Concentration*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

Lab Sample ID: 0007114-01

**08A\_SSV\_01\_20230801**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.612		0.612	08/07/2023 16:41	Ka23080709.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/07/2023 16:41	Ka23080709.D
cis-1,2-Dichloroethene	156-59-2	<0.935		0.935	08/07/2023 16:41	Ka23080709.D
Trichloroethene	79-01-6	<1.50		1.50	08/07/2023 16:41	Ka23080709.D
Tetrachloroethene	127-18-4	<1.21		1.21	08/07/2023 16:41	Ka23080709.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	96.3%	70-130		08/07/2023 16:41	Ka23080709.D
Surrogate: Toluene-d8	2037-26-5	96.2%	70-130		08/07/2023 16:41	Ka23080709.D
Surrogate: Bromofluorobenzene	460-00-4	90.4%	70-130		08/07/2023 16:41	Ka23080709.D



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**
***B23G105-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**
***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**
**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**
***B23H016-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.2</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.8</i>		<i>ng</i>	<i>50.0</i>		<i>87.5</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.612	0.612	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.935	0.935	µg/m <sup>3</sup>							U
Trichloroethene	<1.50	1.50	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.21	1.21	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**
***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**
***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23H0012-BS1 File ID: Ka23080702.D**

Analyzed: 8/7/23 12:49

**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007114 <b>Reported:</b> 08/14/2023
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---------------------------------	---------

**Lab ID:** 0007114-01      **Sample Name:** 08A\_SSV\_01\_20230801

Vinyl Chloride	20,170	1.00	0.810	U	U	Ka23080709.D
trans-1,2-Dichloroethene	20,170	1.00	0.440	U	U	Ka23080709.D
cis-1,2-Dichloroethene	20,170	1.00	0.530	U	U	Ka23080709.D
Trichloroethene	20,170	1.00	0.330	U	U	Ka23080709.D
Tetrachloroethene	20,170	1.00	0.410	U	U	Ka23080709.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where: C = concentration (µg/m³)  
 M = mass (ng)  
 DF = dilution factor  
 U<sub>c</sub> = uptake rate (ml/min), corrected  
 t = sampling time (minutes)  
 U = compound specific uptake rate  
 T<sub>u</sub> = uptake rate study temperature  
 T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007114-01

**Sample Name:** 08A\_SSV\_01\_20230801

Vinyl Chloride	20,170	1.00	0.810	10.0	0.612
trans-1,2-Dichloroethene	20,170	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,170	1.00	0.530	10.0	0.935
Trichloroethene	20,170	1.00	0.330	10.0	1.50
Tetrachloroethene	20,170	1.00	0.410	10.0	1.21



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007114  
**Reported:** 08/14/2023

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007114  
Reported: 08/14/2023

## *Sample Management Records*

Project Information			Client Information				
Site Name: Reedsburg Cleaners (ERP 0257001682)			Company Name: Bay West LLC		Project Manager: Jason Kunze (jkunze@baywest.com)		
Site Location: 120 N. Locust Street (PSI A)			Office Location: 5 Empire Drive, St. Paul, MN 55103		Client PO: J230382 / PO1309		
			Submitted by: Anders Santelman		Turn around time (check one):		
			Email: asantelman@baywest.com		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ____ days		
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ■ cm ■ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08A_SSV_01_20230801	7/18/23	0926	8/1/23	0936	5 inches	Concrete	A_SSV_01
Special Instructions: <b>Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</b>							
Relinquished by (signature):		Date / Time: 08022023 / 1000		Received by (signature):		Date / Time: 8/3/23 12:42	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
<b>For Lab Use Only</b>		Beacon Job No: 7114		Beacon Proposal: 230427H01		Analytical Method:	
Courier Name: FedEx		Shipment Condition: Good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5504084	



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007115

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager



# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Detailed Analytical Results	6
0007115-01 - 08A_IAB_01_20230801	7
0007115-02 - 08A_IA1_02_20230801	8
0007115-03 - 08A_IA2_03_20230801	9
QC Summaries	10
Additional QC Information	21
Sample Result Calculations	22
Equation	23
MRL Calculation Table	24
Certifications	25
Notes and Definitions	26
Sample Management Records	27
Chain of Custody	28

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007115-01 Sampler Type: Beacon Passive Sampler	08A_IAB_01_20230801	08/03/2023	TO-17 (Passive)	Indoor Air
0007115-02 Sampler Type: Beacon Passive Sampler	08A_IA1_02_20230801	08/03/2023	TO-17 (Passive)	Indoor Air
0007115-03 Sampler Type: Beacon Passive Sampler	08A_IA2_03_20230801	08/03/2023	TO-17 (Passive)	Indoor Air

**Project Completeness**
**Samples Received:** 3  
**Samples Analyzed:** 3

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007115  
Reported: 08/14/2023

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007115  
Reported: 08/14/2023

## *Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007115  
Reported: 08/14/2023

*Detailed Analytical Results*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

Lab Sample ID: 0007115-01

**08A\_IAB\_01\_20230801**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	LOQ ( $\mu\text{g}/\text{m}^3$ )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.607		0.607	08/07/2023 17:11	Ka23080710.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	08/07/2023 17:11	Ka23080710.D
cis-1,2-Dichloroethene	156-59-2	<0.928		0.928	08/07/2023 17:11	Ka23080710.D
Trichloroethene	79-01-6	<1.49		1.49	08/07/2023 17:11	Ka23080710.D
Tetrachloroethene	127-18-4	<1.20		1.20	08/07/2023 17:11	Ka23080710.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	100%	70-130		08/07/2023 17:11	Ka23080710.D
Surrogate: Toluene-d8	2037-26-5	96.8%	70-130		08/07/2023 17:11	Ka23080710.D
Surrogate: Bromofluorobenzene	460-00-4	92.1%	70-130		08/07/2023 17:11	Ka23080710.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

Lab Sample ID: 0007115-02

**08A\_IA1\_02\_20230801**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	LOQ ( $\mu\text{g}/\text{m}^3$ )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	08/07/2023 19:19	Ka23080711.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	08/07/2023 19:19	Ka23080711.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	08/07/2023 19:19	Ka23080711.D
Trichloroethene	79-01-6	<1.49		1.49	08/07/2023 19:19	Ka23080711.D
Tetrachloroethene	127-18-4	<1.20		1.20	08/07/2023 19:19	Ka23080711.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.9%	70-130		08/07/2023 19:19	Ka23080711.D
Surrogate: Toluene-d8	2037-26-5	97.8%	70-130		08/07/2023 19:19	Ka23080711.D
Surrogate: Bromofluorobenzene	460-00-4	93.8%	70-130		08/07/2023 19:19	Ka23080711.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

Lab Sample ID: 0007115-03

**08A\_IA2\_03\_20230801**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	08/07/2023 19:48	Ka23080712.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	08/07/2023 19:48	Ka23080712.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	08/07/2023 19:48	Ka23080712.D
Trichloroethene	79-01-6	<1.49		1.49	08/07/2023 19:48	Ka23080712.D
Tetrachloroethene	127-18-4	<1.20		1.20	08/07/2023 19:48	Ka23080712.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.5%	70-130		08/07/2023 19:48	Ka23080712.D
Surrogate: Toluene-d8	2037-26-5	95.3%	70-130		08/07/2023 19:48	Ka23080712.D
Surrogate: Bromofluorobenzene	460-00-4	93.1%	70-130		08/07/2023 19:48	Ka23080712.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007115  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**
***B23G105-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**
***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**
**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**
***B23H016-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.2</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.8</i>		<i>ng</i>	<i>50.0</i>		<i>87.5</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.607	0.607	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.12	1.12	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.928	0.928	µg/m <sup>3</sup>							U
Trichloroethene	<1.49	1.49	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.20	1.20	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**
***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080723.D**
***B23H016-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	35.0	10	ng	50.0		70.0	70-130			
trans-1,2-Dichloroethene	48.5	10	ng	50.0		96.9	70-130			
cis-1,2-Dichloroethene	48.6	10	ng	50.0		97.2	70-130			
Trichloroethene	46.9	10	ng	50.0		93.7	70-130			
Tetrachloroethene	47.2	10	ng	50.0		94.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.2</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.9</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.1</i>		<i>ng</i>	<i>50.0</i>		<i>90.1</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**
***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23H0012-BS1 File ID: Ka23080702.D**

Analyzed: 8/7/23 12:49

**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007115  
Reported: 08/14/2023

*Additional QC Information*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

**Lab ID:** 0007115-01      **Sample Name:** 08A\_IAB\_01\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,156	1.00	0.817	U	U	Ka23080710.D
trans-1,2-Dichloroethene	20,156	1.00	0.444	U	U	Ka23080710.D
cis-1,2-Dichloroethene	20,156	1.00	0.535	U	U	Ka23080710.D
Trichloroethene	20,156	1.00	0.333	U	U	Ka23080710.D
Tetrachloroethene	20,156	1.00	0.414	U	U	Ka23080710.D

**Lab ID:** 0007115-02      **Sample Name:** 08A\_IA1\_02\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,140	1.00	0.817	U	U	Ka23080711.D
trans-1,2-Dichloroethene	20,140	1.00	0.444	U	U	Ka23080711.D
cis-1,2-Dichloroethene	20,140	1.00	0.535	U	U	Ka23080711.D
Trichloroethene	20,140	1.00	0.333	U	U	Ka23080711.D
Tetrachloroethene	20,140	1.00	0.414	U	U	Ka23080711.D

**Lab ID:** 0007115-03      **Sample Name:** 08A\_IA2\_03\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,132	1.00	0.817	U	U	Ka23080712.D
trans-1,2-Dichloroethene	20,132	1.00	0.444	U	U	Ka23080712.D
cis-1,2-Dichloroethene	20,132	1.00	0.535	U	U	Ka23080712.D
Trichloroethene	20,132	1.00	0.333	U	U	Ka23080712.D
Tetrachloroethene	20,132	1.00	0.414	U	U	Ka23080712.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007115-01      **Sample Name:** 08A\_IAB\_01\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,156	1.00	0.817	10.0	0.607
trans-1,2-Dichloroethene	20,156	1.00	0.444	10.0	1.12
cis-1,2-Dichloroethene	20,156	1.00	0.535	10.0	0.928
Trichloroethene	20,156	1.00	0.333	10.0	1.49
Tetrachloroethene	20,156	1.00	0.414	10.0	1.20

**Lab ID:** 0007115-02      **Sample Name:** 08A\_IA1\_02\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,140	1.00	0.817	10.0	0.608
trans-1,2-Dichloroethene	20,140	1.00	0.444	10.0	1.12
cis-1,2-Dichloroethene	20,140	1.00	0.535	10.0	0.929
Trichloroethene	20,140	1.00	0.333	10.0	1.49
Tetrachloroethene	20,140	1.00	0.414	10.0	1.20

**Lab ID:** 0007115-03      **Sample Name:** 08A\_IA2\_03\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,132	1.00	0.817	10.0	0.608
trans-1,2-Dichloroethene	20,132	1.00	0.444	10.0	1.12
cis-1,2-Dichloroethene	20,132	1.00	0.535	10.0	0.929
Trichloroethene	20,132	1.00	0.333	10.0	1.49
Tetrachloroethene	20,132	1.00	0.414	10.0	1.20

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007115  
**Reported:** 08/14/2023

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007115  
Reported: 08/14/2023

## *Sample Management Records*

<b>Client Information</b>		Project Manager: Jason Kunze (jkunze@baywest.com)			Client PO: J230382 / PO1309		INDOOR AIR AMBIENT AIR CRAWL SPACE SEWER GAS				
Company:	Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)			Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) _____ days						
Address:	5 Empire Dr.	Location: 120 N Locust St. (PSI A)			Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C						
City / State / Zip:	St. Paul, MN, 55103	Submitted by: Anders Santelman									
Phone:	651-724-9757	Email: asantelman@baywest.com									
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes					
08A_IAB_01_20230801	7/18/2023	0932	8/1/2023	0928	21.66	A_IAB_01	X				
08A_IA1_02_20230801	7/18/2023	0944	8/1/2023	0924	21.66	A_IA1_02	X				
08A_IA2_03_20230801	7/18/2023	0947	8/1/2023	0919	21.66	A_IA2_03	X				
Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride											
Relinquished by (signature): 			Date / Time: 08.02.2023 / 10:00			Received by (signature): 			Date / Time: 8/3/23 12:42		
Relinquished by (signature):			Date / Time:			Received by (signature):			Date / Time:		
<b>For Lab Use Only</b>			Beacon Job No: 7115			Beacon Proposal: 230427H01 & 230427H02					
Courier Name: FedEx			Shipment Condition: Good			Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a			Custody Seal No: 5504084		



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007389

### Project Description:

Reedsburg Cleaners (PSI A)

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

January 02, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Detailed Analytical Results	6
- Mass	7
0007389-01 - 08A_SSV_01_20231219	8
- Concentration	9
0007389-01 - 08A_SSV_01_20231219	10
QC Summaries	11
Additional QC Information	19
Sample Result Calculations	20
Equation	20
MRL Calculation Table	21
Certifications	22
Notes and Definitions	23
Sample Management Records	24
Chain of Custody	25

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007389-01	08A_SSV_01_20231219	12/20/2023	TO-17 (Passive)	Soil Gas
Sampler Type:	Beacon Passive Sampler			

**Project Completeness****Samples Received:** 1**Samples Analyzed:** 1



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007389  
Reported: 01/02/2024

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

## *Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

## *Detailed Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007389  
Reported: 01/02/2024

*Detailed Analytical Results- Mass*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

Lab Sample ID: 0007389-01

**08A\_SSV\_01\_20231219**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	12/21/2023 16:34	C23122105.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	12/21/2023 16:34	C23122105.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	12/21/2023 16:34	C23122105.D	
Trichloroethene	79-01-6	<10.0	10.0	12/21/2023 16:34	C23122105.D	
Tetrachloroethene	127-18-4	<10.0	10.0	12/21/2023 16:34	C23122105.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	89.5%	70-130		12/21/2023 16:34	C23122105.D
Surrogate: Toluene-d8	2037-26-5	98.1%	70-130		12/21/2023 16:34	C23122105.D
Surrogate: Bromofluorobenzene	460-00-4	88.8%	70-130		12/21/2023 16:34	C23122105.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007389  
Reported: 01/02/2024

*Detailed Analytical Results- Concentration*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

Lab Sample ID: 0007389-01

**08A\_SSV\_01\_20231219**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.613		0.613	12/21/2023 16:34	C23122105.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	12/21/2023 16:34	C23122105.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	12/21/2023 16:34	C23122105.D
Trichloroethene	79-01-6	<1.50		1.50	12/21/2023 16:34	C23122105.D
Tetrachloroethene	127-18-4	<1.21		1.21	12/21/2023 16:34	C23122105.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	89.5%	70-130		12/21/2023 16:34	C23122105.D
Surrogate: Toluene-d8	2037-26-5	98.1%	70-130		12/21/2023 16:34	C23122105.D
Surrogate: Bromofluorobenzene	460-00-4	88.8%	70-130		12/21/2023 16:34	C23122105.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007389  
Reported: 01/02/2024

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122102.D**
**23L0060-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.3	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	48.8	10	ng	50.0		97.6	70-130			
cis-1,2-Dichloroethene	48.0	10	ng	50.0		96.1	70-130			
Trichloroethene	50.4	10	ng	50.0		101	70-130			
Tetrachloroethene	44.6	10	ng	50.0		89.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>47.2</i>		<i>ng</i>	<i>50.0</i>		<i>94.4</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.9</i>		<i>ng</i>	<i>50.0</i>		<i>99.9</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>47.9</i>		<i>ng</i>	<i>50.0</i>		<i>95.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D**
**23L0060-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.613	0.613	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.936	0.936	µg/m <sup>3</sup>							U
Trichloroethene	<1.50	1.50	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.21	1.21	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>91.7</i>		<i>ng</i>	<i>100</i>		<i>91.7</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>90.0</i>		<i>ng</i>	<i>100</i>		<i>90.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D**
**23L0060-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>91.7</i>		<i>ng</i>	<i>100</i>		<i>91.7</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>90.0</i>		<i>ng</i>	<i>100</i>		<i>90.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122104.D**
***B23L064-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.4	10	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	51.1	10	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	49.2	10	ng	50.0		98.3	70-130			
Trichloroethene	49.7	10	ng	50.0		99.5	70-130			
Tetrachloroethene	49.6	10	ng	50.0		99.1	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>46.2</i>		<i>ng</i>	<i>50.0</i>		<i>92.5</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>54.7</i>		<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>46.3</i>		<i>ng</i>	<i>50.0</i>		<i>92.6</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122124.D**
***B23L064-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	ng	50.0		79.5	70-130			
trans-1,2-Dichloroethene	49.3	10	ng	50.0		98.6	70-130			
cis-1,2-Dichloroethene	48.7	10	ng	50.0		97.4	70-130			
Trichloroethene	49.9	10	ng	50.0		99.8	70-130			
Tetrachloroethene	47.3	10	ng	50.0		94.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>45.0</i>		<i>ng</i>	<i>50.0</i>		<i>90.0</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.3</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.8</i>		<i>ng</i>	<i>50.0</i>		<i>91.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122125.D**
***B23L064-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>89.6</i>		<i>ng</i>	<i>100</i>		<i>89.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>99.0</i>		<i>ng</i>	<i>100</i>		<i>99.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.0</i>		<i>ng</i>	<i>100</i>		<i>91.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23L0060-BS1 File ID: C23122102.D**

Analyzed: 12/21/23 16:06

**LCSD: B23L064-ICV1 File ID: C23122104.D**

Analyzed: 12/21/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	50.31	100.62	50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56	50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06	50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74	50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26	50	49.56	99.10	70-130	10.47	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI A) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007389 <b>Reported:</b> 01/02/2024
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---------------------------------	---------

**Lab ID:** 0007389-01      **Sample Name:** 08A\_SSV\_01\_20231219

Vinyl Chloride	20,153	1.00	0.810	U	U	C23122105.D
trans-1,2-Dichloroethene	20,153	1.00	0.440	U	U	C23122105.D
cis-1,2-Dichloroethene	20,153	1.00	0.530	U	U	C23122105.D
Trichloroethene	20,153	1.00	0.330	U	U	C23122105.D
Tetrachloroethene	20,153	1.00	0.410	U	U	C23122105.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where:
- C = concentration (µg/m³)
  - M = mass (ng)
  - DF = dilution factor
  - Uc = uptake rate (ml/min), corrected
  - t = sampling time (minutes)
  - U = compound specific uptake rate
  - Tu = uptake rate study temperature
  - Ts = sample average temperature

**Note:** Tu is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI A) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007389 <b>Reported:</b> 01/02/2024
---	--	--

**Method Detection and Reporting Limit Calculations (Concentration)**

**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007389-01      **Sample Name:** 08A\_SSV\_01\_20231219

Vinyl Chloride	20,153	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,153	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,153	1.00	0.530	10.0	0.936
Trichloroethene	20,153	1.00	0.330	10.0	1.50
Tetrachloroethene	20,153	1.00	0.410	10.0	1.21



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007389  
**Reported:** 01/02/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007389  
Reported: 01/02/2024

## *Sample Management Records*

Project Information				Client Information			
Site Name: Reedsburg Cleaners (ERP 0257001682)		Company Name: Bay West LLC		Project Manager: Jason Kunze (jkunze@baywest.com)			
Site Location: 120 N Locust St (PSI A)		Office Location: 5 Empire Drive, St. Paul, MN 55103		Client PO: J230382 / PO1309			
		Submitted by: Anders Santelman		Turn-around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days			
		Email: asantelman@baywest.com					
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth <input type="checkbox"/> cm <input checked="" type="checkbox"/> inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08A_SSV_01_20231219	12/5/23	0915	12/19/23	0908	5 inches	Concrete	A_SSV_01
Special Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride							
Relinquished by (signature):		Date / Time: 12/19/23 1300		Received by (signature):		Date / Time: 12-20-23 1456	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
For Lab Use Only		Beacon Job No: 7389		Beacon Proposal: 230427H01		Analytical Method:	
Courier Name: FedEx		Shipment Condition: good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5722458	



Beacon Environmental  
2203A Commerce Road, Suite 1  
Forest Hill, MD 21050 USA  
1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01  
Laboratory Work Order: 0007393

### Project Description:

Reedsburg Cleaners (PSI A)  
Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

January 02, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Detailed Analytical Results	6
0007393-01 - 08A_IAB_01_20231219	7
0007393-02 - 08A_IA1_02_20231219	8
0007393-03 - 08A_IA2_03_20231219	9
QC Summaries	10
Additional QC Information	17
Sample Result Calculations	18
Equation	19
MRL Calculation Table	20
Certifications	21
Notes and Definitions	22
Sample Management Records	23
Chain of Custody	24



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007393-01 Sampler Type: Beacon Passive Sampler	08A_IAB_01_20231219	12/20/2023	TO-17 (Passive)	Indoor Air
0007393-02 Sampler Type: Beacon Passive Sampler	08A_IA1_02_20231219	12/20/2023	TO-17 (Passive)	Indoor Air
0007393-03 Sampler Type: Beacon Passive Sampler	08A_IA2_03_20231219	12/20/2023	TO-17 (Passive)	Indoor Air

**Project Completeness**
**Samples Received: 3**  
**Samples Analyzed: 3**

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007393  
Reported: 01/02/2024

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

## *Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

## *Detailed Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

Lab Sample ID: 0007393-01

**08A\_IAB\_01\_20231219**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 13:13	C23122120.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 13:13	C23122120.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	12/22/2023 13:13	C23122120.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 13:13	C23122120.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/22/2023 13:13	C23122120.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	92.6%	70-130		12/22/2023 13:13	C23122120.D
Surrogate: Toluene-d8	2037-26-5	100%	70-130		12/22/2023 13:13	C23122120.D
Surrogate: Bromofluorobenzene	460-00-4	96.7%	70-130		12/22/2023 13:13	C23122120.D

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI A) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007393 <b>Reported:</b> 01/02/2024
---	--	--

Lab Sample ID: 0007393-02	<b>08A_IA1_02_20231219</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 13:41	C23122121.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 13:41	C23122121.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	12/22/2023 13:41	C23122121.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 13:41	C23122121.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/22/2023 13:41	C23122121.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	86.0%	70-130		12/22/2023 13:41	C23122121.D
Surrogate: Toluene-d8	2037-26-5	93.7%	70-130		12/22/2023 13:41	C23122121.D
Surrogate: Bromofluorobenzene	460-00-4	91.5%	70-130		12/22/2023 13:41	C23122121.D



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

Lab Sample ID: 0007393-03

**08A\_IA2\_03\_20231219**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 14:08	C23122122.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 14:08	C23122122.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	12/22/2023 14:08	C23122122.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 14:08	C23122122.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/22/2023 14:08	C23122122.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	91.7%	70-130		12/22/2023 14:08	C23122122.D
Surrogate: Toluene-d8	2037-26-5	96.0%	70-130		12/22/2023 14:08	C23122122.D
Surrogate: Bromofluorobenzene	460-00-4	92.1%	70-130		12/22/2023 14:08	C23122122.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007393  
Reported: 01/02/2024

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122102.D**

*23L0060-BS1 (LCS, Calibration Source Verification)*

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.3	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	48.8	10	ng	50.0		97.6	70-130			
cis-1,2-Dichloroethene	48.0	10	ng	50.0		96.1	70-130			
Trichloroethene	50.4	10	ng	50.0		101	70-130			
Tetrachloroethene	44.6	10	ng	50.0		89.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>47.2</i>		<i>ng</i>	<i>50.0</i>		<i>94.4</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.9</i>		<i>ng</i>	<i>50.0</i>		<i>99.9</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>47.9</i>		<i>ng</i>	<i>50.0</i>		<i>95.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D**
**23L0060-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.608	0.608	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.12	1.12	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.929	0.929	µg/m <sup>3</sup>							U
Trichloroethene	<1.49	1.49	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.20	1.20	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>91.7</i>		<i>ng</i>	<i>100</i>		<i>91.7</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>90.0</i>		<i>ng</i>	<i>100</i>		<i>90.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122104.D**
***B23L064-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.4	10	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	51.1	10	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	49.2	10	ng	50.0		98.3	70-130			
Trichloroethene	49.7	10	ng	50.0		99.5	70-130			
Tetrachloroethene	49.6	10	ng	50.0		99.1	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>46.2</i>		<i>ng</i>	<i>50.0</i>		<i>92.5</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>54.7</i>		<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>46.3</i>		<i>ng</i>	<i>50.0</i>		<i>92.6</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122124.D**
***B23L064-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	ng	50.0		79.5	70-130			
trans-1,2-Dichloroethene	49.3	10	ng	50.0		98.6	70-130			
cis-1,2-Dichloroethene	48.7	10	ng	50.0		97.4	70-130			
Trichloroethene	49.9	10	ng	50.0		99.8	70-130			
Tetrachloroethene	47.3	10	ng	50.0		94.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>45.0</i>		<i>ng</i>	<i>50.0</i>		<i>90.0</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.3</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.8</i>		<i>ng</i>	<i>50.0</i>		<i>91.7</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122125.D**
***B23L064-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>89.6</i>		<i>ng</i>	<i>100</i>		<i>89.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>99.0</i>		<i>ng</i>	<i>100</i>		<i>99.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.0</i>		<i>ng</i>	<i>100</i>		<i>91.0</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI A) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007393 <b>Reported:</b> 01/02/2024
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 23L0060-BS1 File ID: C23122102.D**  
**LCSD: B23L064-ICV1 File ID: C23122104.D**

Analyzed: 12/21/23 16:06  
 Analyzed: 12/21/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	50.31	100.62	50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56	50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06	50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74	50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26	50	49.56	99.10	70-130	10.47	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007393-01	<b>Sample Name:</b> 08A_IAB_01_20231219	<b>̄ Temp (°C):</b> 21.00
---------------------------	---	---------------------------

Vinyl Chloride	20,154	1.00	0.816	U	U	C23122120.D
trans-1,2-Dichloroethene	20,154	1.00	0.443	U	U	C23122120.D
cis-1,2-Dichloroethene	20,154	1.00	0.534	U	U	C23122120.D
Trichloroethene	20,154	1.00	0.332	U	U	C23122120.D
Tetrachloroethene	20,154	1.00	0.413	U	U	C23122120.D

<b>Lab ID:</b> 0007393-02	<b>Sample Name:</b> 08A_IA1_02_20231219	<b>̄ Temp (°C):</b> 21.00
---------------------------	---	---------------------------

Vinyl Chloride	20,155	1.00	0.816	U	U	C23122121.D
trans-1,2-Dichloroethene	20,155	1.00	0.443	U	U	C23122121.D
cis-1,2-Dichloroethene	20,155	1.00	0.534	U	U	C23122121.D
Trichloroethene	20,155	1.00	0.332	U	U	C23122121.D
Tetrachloroethene	20,155	1.00	0.413	U	U	C23122121.D

<b>Lab ID:</b> 0007393-03	<b>Sample Name:</b> 08A_IA2_03_20231219	<b>̄ Temp (°C):</b> 21.00
---------------------------	---	---------------------------

Vinyl Chloride	20,154	1.00	0.816	U	U	C23122122.D
trans-1,2-Dichloroethene	20,154	1.00	0.443	U	U	C23122122.D
cis-1,2-Dichloroethene	20,154	1.00	0.534	U	U	C23122122.D
Trichloroethene	20,154	1.00	0.332	U	U	C23122122.D
Tetrachloroethene	20,154	1.00	0.413	U	U	C23122122.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI A)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007393  
Reported: 01/02/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007393-01      **Sample Name:** 08A\_IAB\_01\_20231219      **̄ Temp (°C):** 21.00

Vinyl Chloride	20,154	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,154	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,154	1.00	0.534	10.0	0.929
Trichloroethene	20,154	1.00	0.332	10.0	1.49
Tetrachloroethene	20,154	1.00	0.413	10.0	1.20

**Lab ID:** 0007393-02      **Sample Name:** 08A\_IA1\_02\_20231219      **̄ Temp (°C):** 21.00

Vinyl Chloride	20,155	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,155	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,155	1.00	0.534	10.0	0.929
Trichloroethene	20,155	1.00	0.332	10.0	1.49
Tetrachloroethene	20,155	1.00	0.413	10.0	1.20

**Lab ID:** 0007393-03      **Sample Name:** 08A\_IA2\_03\_20231219      **̄ Temp (°C):** 21.00

Vinyl Chloride	20,154	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,154	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,154	1.00	0.534	10.0	0.929
Trichloroethene	20,154	1.00	0.332	10.0	1.49
Tetrachloroethene	20,154	1.00	0.413	10.0	1.20



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI A)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007393  
**Reported:** 01/02/2024

## *Sample Management Records*

<b>Client Information</b>		Project Manager: Jason Kunze (jkunze@baywest.com)		Client PO: J230382 / PO1309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company:	Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days					
Address:	5 Empire Dr.	Location: 120 N Locust St (PSI A)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C					
City / State / Zip:	St. Paul, MN 55103	Submitted by: Anders Santelman							
Phone:	651-724-9757	Email: asantelman@baywest.com							
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes			
08A_IAB_01_20231219	12/5/23	0921	12/19/23	0915	21	A_IAB_01	X		
08A_IA1_02_20231219	12/5/23	0925	12/19/23	0920	21	A_IA1_02	X		
08A_IA2_03_20231219	12/5/23	0929	12/19/23	0923	21	A_IA2_03	X		
Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride									
Relinquished by (signature): <i>[Signature]</i>	Date / Time: 12/19/23 1300	Received by (signature): <i>[Signature]</i>		Date / Time: 12-20-23 1456					
Relinquished by (signature):	Date / Time:	Received by (signature):		Date / Time:					
<b>For Lab Use Only</b>	Beacon Job No: 7393	Beacon Proposal: 230427H01							
Courier Name: Fedex	Shipment Condition: good	Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5722455					

*125 N Locust Street*



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007116

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager



# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table-Mass	8
Data Summary Table-Concentration	9
Detailed Analytical Results	10
- Mass	11
0007116-01 - 08B_SSV_02_20230801	12
- Concentration	13
0007116-01 - 08B_SSV_02_20230801	14
QC Summaries	15
Additional QC Information	26
Sample Result Calculations	27
Equation	27
MRL Calculation Table	28
Certifications	29
Notes and Definitions	30
Sample Management Records	31
Chain of Custody	32

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023**Sample Summary**

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007116-01	08B_SSV_02_20230801	08/03/2023	TO-17 (Passive)	Soil Gas
Sampler Type:	Beacon Passive Sampler			

**Project Completeness****Samples Received:** 1**Samples Analyzed:** 1

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Summary of Compound Detections- Mass*

Lab Sample ID: 0007116-01	<b>08B_SSV_02_20230801</b>	Method: TO-17 (Passive)
Soil Gas		

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>42.5</b>		8.157	10.0	Ka23080713.D

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007116 <b>Reported:</b> 08/14/2023
---	--	--

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0007116-01	<b>08B_SSV_02_20230801</b> Soil Gas	Method: TO-17 (Passive)
---------------------------	--	-------------------------

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>5.17</b>		8.157	1.22	Ka23080713.D



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Data Summary Table- Mass*

Compound	Frequency	LOQ (ng)	Max Value (ng)
Tetrachloroethene	1	10	43

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Data Summary Table- Concentration*

Compound	Frequency	LOQ ( $\mu\text{g}/\text{m}^3$ )	Max Value ( $\mu\text{g}/\text{m}^3$ )
Tetrachloroethene	1	1.22	5.17

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Detailed Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Detailed Analytical Results- Mass*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

Lab Sample ID: 0007116-01

**08B\_SSV\_02\_20230801**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	08/07/2023 20:17	Ka23080713.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	08/07/2023 20:17	Ka23080713.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	08/07/2023 20:17	Ka23080713.D	
Trichloroethene	79-01-6	<10.0	10.0	08/07/2023 20:17	Ka23080713.D	
<b>Tetrachloroethene</b>	127-18-4	<b>42.5</b>	10.0	08/07/2023 20:17	Ka23080713.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.7%	70-130		08/07/2023 20:17	Ka23080713.D
Surrogate: Toluene-d8	2037-26-5	94.2%	70-130		08/07/2023 20:17	Ka23080713.D
Surrogate: Bromofluorobenzene	460-00-4	92.4%	70-130		08/07/2023 20:17	Ka23080713.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Detailed Analytical Results- Concentration*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

Lab Sample ID: 0007116-01

**08B\_SSV\_02\_20230801**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.615		0.615	08/07/2023 20:17	Ka23080713.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/07/2023 20:17	Ka23080713.D
cis-1,2-Dichloroethene	156-59-2	<0.940		0.940	08/07/2023 20:17	Ka23080713.D
Trichloroethene	79-01-6	<1.51		1.51	08/07/2023 20:17	Ka23080713.D
<b>Tetrachloroethene</b>	127-18-4	<b>5.17</b>		1.22	08/07/2023 20:17	Ka23080713.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.7%	70-130		08/07/2023 20:17	Ka23080713.D
Surrogate: Toluene-d8	2037-26-5	94.2%	70-130		08/07/2023 20:17	Ka23080713.D
Surrogate: Bromofluorobenzene	460-00-4	92.4%	70-130		08/07/2023 20:17	Ka23080713.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**
***B23G105-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**
***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**
**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**
***B23H016-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.2</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.8</i>		<i>ng</i>	<i>50.0</i>		<i>87.5</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.615	0.615	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.940	0.940	µg/m <sup>3</sup>							U
Trichloroethene	<1.51	1.51	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.22	1.22	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**
***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**
***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007116 <b>Reported:</b> 08/14/2023
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 23H0012-BS1 File ID: Ka23080702.D**  
**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 12:49  
 Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007116 <b>Reported:</b> 08/14/2023
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---------------------------------	---------

**Lab ID:** 0007116-01      **Sample Name:** 08B\_SSV\_02\_20230801

Vinyl Chloride	20,073	1.00	0.810	U	U	Ka23080713.D
trans-1,2-Dichloroethene	20,073	1.00	0.440	U	U	Ka23080713.D
cis-1,2-Dichloroethene	20,073	1.00	0.530	U	U	Ka23080713.D
Trichloroethene	20,073	1.00	0.330	U	U	Ka23080713.D
Tetrachloroethene	20,073	1.00	0.410	42.52	5.17	Ka23080713.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where: C = concentration (µg/m³)  
 M = mass (ng)  
 DF = dilution factor  
 U<sub>c</sub> = uptake rate (ml/min), corrected  
 t = sampling time (minutes)  
 U = compound specific uptake rate  
 T<sub>u</sub> = uptake rate study temperature  
 T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007116-01

**Sample Name:** 08B\_SSV\_02\_20230801

Vinyl Chloride	20,073	1.00	0.810	10.0	0.615
trans-1,2-Dichloroethene	20,073	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,073	1.00	0.530	10.0	0.940
Trichloroethene	20,073	1.00	0.330	10.0	1.51
Tetrachloroethene	20,073	1.00	0.410	10.0	1.22

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007116  
**Reported:** 08/14/2023

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007116  
Reported: 08/14/2023

## *Sample Management Records*

Project Information				Client Information			
Site Name: <b>Reedsburg Cleaners (ERP 0257001682)</b>				Company Name: <b>Bay West LLC</b>		Project Manager: <b>Jason Kunze (jkunze@baywest.com)</b>	
Site Location: <b>125 N. Locust Street (PSI B)</b>				Office Location: <b>5 Empire Drive, St. Paul, MN 55103</b>		Client PO: <b>J230382 / PO1309</b>	
				Submitted by: <b>Anders Santelman</b>		Turn around time (check one): <input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Rush (specify) _____ days</b>	
				Email: <b>asantelman@baywest.com</b>			
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ■ cm ■ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08B_SSV_02_20230801	7/18/23	1136	8/1/23	1009	5 inches	Concrete	B_SSV_02
Special Instructions: <b>Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</b>							
Relinquished by (signature): <i>L</i>		Date / Time: <i>08.02.2023/1000</i>		Received by (signature): <i>Michal Kest</i>		Date / Time: <i>8/3/23 12:42</i>	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
<b>For Lab Use Only</b>		Beacon Job No: <i>7116</i>		Beacon Proposal: <b>230427H01</b>		Analytical Method:	
Courier Name: <i>FedEx</i>		Shipment Condition: <i>Good</i>		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: <i>5504084</i>	



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007117

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Detailed Analytical Results	6
0007117-01 - 08B_IAB_04_20230801	7
0007117-02 - 08B_IA1_05_20230801	8
0007117-03 - 08B_IA2_06_20230801	9
QC Summaries	10
Additional QC Information	21
Sample Result Calculations	22
Equation	23
MRL Calculation Table	24
Certifications	25
Notes and Definitions	26
Sample Management Records	27
Chain of Custody	28



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007117-01 Sampler Type:	08B_IAB_04_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Indoor Air
0007117-02 Sampler Type:	08B_IA1_05_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Indoor Air
0007117-03 Sampler Type:	08B_IA2_06_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Indoor Air

**Project Completeness**
**Samples Received:** 3  
**Samples Analyzed:** 3

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

## *Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

*Detailed Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

Lab Sample ID: 0007117-01

**08B\_IAB\_04\_20230801**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	LOQ ( $\mu\text{g}/\text{m}^3$ )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.610		0.610	08/07/2023 21:36	Ka23080716.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	08/07/2023 21:36	Ka23080716.D
cis-1,2-Dichloroethene	156-59-2	<0.933		0.933	08/07/2023 21:36	Ka23080716.D
Trichloroethene	79-01-6	<1.50		1.50	08/07/2023 21:36	Ka23080716.D
Tetrachloroethene	127-18-4	<1.21		1.21	08/07/2023 21:36	Ka23080716.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	95.4%	70-130		08/07/2023 21:36	Ka23080716.D
Surrogate: Toluene-d8	2037-26-5	98.3%	70-130		08/07/2023 21:36	Ka23080716.D
Surrogate: Bromofluorobenzene	460-00-4	90.9%	70-130		08/07/2023 21:36	Ka23080716.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

Lab Sample ID: 0007117-02

**08B\_IA1\_05\_20230801**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.611		0.611	08/07/2023 22:06	Ka23080717.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	08/07/2023 22:06	Ka23080717.D
cis-1,2-Dichloroethene	156-59-2	<0.933		0.933	08/07/2023 22:06	Ka23080717.D
Trichloroethene	79-01-6	<1.50		1.50	08/07/2023 22:06	Ka23080717.D
Tetrachloroethene	127-18-4	<1.21		1.21	08/07/2023 22:06	Ka23080717.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130		08/07/2023 22:06	Ka23080717.D
Surrogate: Toluene-d8	2037-26-5	95.0%	70-130		08/07/2023 22:06	Ka23080717.D
Surrogate: Bromofluorobenzene	460-00-4	91.4%	70-130		08/07/2023 22:06	Ka23080717.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

Lab Sample ID: 0007117-03

**08B\_IA2\_06\_20230801**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.611		0.611	08/07/2023 22:35	Ka23080718.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	08/07/2023 22:35	Ka23080718.D
cis-1,2-Dichloroethene	156-59-2	<0.934		0.934	08/07/2023 22:35	Ka23080718.D
Trichloroethene	79-01-6	<1.50		1.50	08/07/2023 22:35	Ka23080718.D
Tetrachloroethene	127-18-4	<1.21		1.21	08/07/2023 22:35	Ka23080718.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	103%	70-130		08/07/2023 22:35	Ka23080718.D
Surrogate: Toluene-d8	2037-26-5	92.6%	70-130		08/07/2023 22:35	Ka23080718.D
Surrogate: Bromofluorobenzene	460-00-4	94.5%	70-130		08/07/2023 22:35	Ka23080718.D



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**
***B23G105-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**
***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**
**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**
***B23H016-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.2</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.8</i>		<i>ng</i>	<i>50.0</i>		<i>87.5</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.610	0.610	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.12	1.12	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.933	0.933	µg/m <sup>3</sup>							U
Trichloroethene	<1.50	1.50	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.21	1.21	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**
***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080723.D**
***B23H016-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	35.0	10	ng	50.0		70.0	70-130			
trans-1,2-Dichloroethene	48.5	10	ng	50.0		96.9	70-130			
cis-1,2-Dichloroethene	48.6	10	ng	50.0		97.2	70-130			
Trichloroethene	46.9	10	ng	50.0		93.7	70-130			
Tetrachloroethene	47.2	10	ng	50.0		94.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.2</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.9</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.1</i>		<i>ng</i>	<i>50.0</i>		<i>90.1</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**
***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23H0012-BS1 File ID: Ka23080702.D**

Analyzed: 8/7/23 12:49

**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007117-01	<b>Sample Name:</b> 08B_IAB_04_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	---	---------------------------

Vinyl Chloride	20,060	1.00	0.817	U	U	Ka23080716.D
trans-1,2-Dichloroethene	20,060	1.00	0.444	U	U	Ka23080716.D
cis-1,2-Dichloroethene	20,060	1.00	0.535	U	U	Ka23080716.D
Trichloroethene	20,060	1.00	0.333	U	U	Ka23080716.D
Tetrachloroethene	20,060	1.00	0.414	U	U	Ka23080716.D

<b>Lab ID:</b> 0007117-02	<b>Sample Name:</b> 08B_IA1_05_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	---	---------------------------

Vinyl Chloride	20,040	1.00	0.817	U	U	Ka23080717.D
trans-1,2-Dichloroethene	20,040	1.00	0.444	U	U	Ka23080717.D
cis-1,2-Dichloroethene	20,040	1.00	0.535	U	U	Ka23080717.D
Trichloroethene	20,040	1.00	0.333	U	U	Ka23080717.D
Tetrachloroethene	20,040	1.00	0.414	U	U	Ka23080717.D

<b>Lab ID:</b> 0007117-03	<b>Sample Name:</b> 08B_IA2_06_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	---	---------------------------

Vinyl Chloride	20,036	1.00	0.817	U	U	Ka23080718.D
trans-1,2-Dichloroethene	20,036	1.00	0.444	U	U	Ka23080718.D
cis-1,2-Dichloroethene	20,036	1.00	0.535	U	U	Ka23080718.D
Trichloroethene	20,036	1.00	0.333	U	U	Ka23080718.D
Tetrachloroethene	20,036	1.00	0.414	U	U	Ka23080718.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason KunzeBeacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007117-01      **Sample Name:** 08B\_IAB\_04\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,060	1.00	0.817	10.0	0.610
trans-1,2-Dichloroethene	20,060	1.00	0.444	10.0	1.12
cis-1,2-Dichloroethene	20,060	1.00	0.535	10.0	0.933
Trichloroethene	20,060	1.00	0.333	10.0	1.50
Tetrachloroethene	20,060	1.00	0.414	10.0	1.21

**Lab ID:** 0007117-02      **Sample Name:** 08B\_IA1\_05\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,040	1.00	0.817	10.0	0.611
trans-1,2-Dichloroethene	20,040	1.00	0.444	10.0	1.12
cis-1,2-Dichloroethene	20,040	1.00	0.535	10.0	0.933
Trichloroethene	20,040	1.00	0.333	10.0	1.50
Tetrachloroethene	20,040	1.00	0.414	10.0	1.21

**Lab ID:** 0007117-03      **Sample Name:** 08B\_IA2\_06\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	20,036	1.00	0.817	10.0	0.611
trans-1,2-Dichloroethene	20,036	1.00	0.444	10.0	1.12
cis-1,2-Dichloroethene	20,036	1.00	0.535	10.0	0.934
Trichloroethene	20,036	1.00	0.333	10.0	1.50
Tetrachloroethene	20,036	1.00	0.414	10.0	1.21

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007117  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007117  
Reported: 08/14/2023

## *Sample Management Records*

<b>Client Information</b>		Project Manager: Jason Kunze (jkunze@baywest.com)		Client PO: J230382 / PO1309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company: Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days						
Address: 5 Empire Dr.	Location: 125 N. Locust Street (PSI B)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C						
City / State / Zip: St. Paul, MN, 55103	Submitted by: Anders Santelman								
Phone: 651-724-9757	Email: asantelman@baywest.com								
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes			
08B_IAB_04_20230801	7/18/2023	1143	8/1/2023	1003	21.66	B_IAB_04	X		
08B_IA1_05_20230801	7/18/2023	1159	8/1/2023	0959	21.66	B_IA1_05	X		
08B_IA2_06_20230801	7/18/2023	1157	8/1/2023	0953	21.66	B_IA2_06	X		
Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride									
Relinquished by (signature): <i>ch</i>	Date / Time: 09.02.2023 / 1000		Received by (signature): <i>Mike Kemp</i>		Date / Time: 8/13/23 12:42				
Relinquished by (signature):	Date / Time:		Received by (signature):		Date / Time:				
<b>For Lab Use Only</b>	Beacon Job No: 7117		Beacon Proposal: 230427H01 & <del>230427H02</del>						
Courier Name: <i>FedEx</i>	Shipment Condition: <i>Good</i>		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5504084				



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007390

### Project Description:

Reedsburg Cleaners (PSI B)

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

January 02, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table-Concentration	8
Detailed Analytical Results	9
- Mass	10
0007390-01 - 08B_SSV_02_20231219	11
- Concentration	12
0007390-01 - 08B_SSV_02_20231219	13
Additional QC Information	15
Sample Result Calculations	16
Equation	16
MRL Calculation Table	17
Certifications	18
Notes and Definitions	19
Sample Management Records	20
Chain of Custody	21



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI B)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007390  
Reported: 01/02/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007390-01	08B_SSV_02_20231219	12/20/2023	TO-17 (Passive)	Soil Gas
Sampler Type:	Beacon Passive Sampler			

#### Project Completeness

Samples Received: 1  
Samples Analyzed: 1

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI B)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007390  
Reported: 01/02/2024

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

## *Analytical Results*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI B) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007390 <b>Reported:</b> 01/02/2024
---	--	--

*Summary of Compound Detections- Mass*

Lab Sample ID: 0007390-01	<b>08B_SSV_02_20231219</b> Soil Gas	Method: TO-17 (Passive)
---------------------------	--	-------------------------

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>25.9</b>		5.922	10.0	C23122108.D

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI B) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007390 <b>Reported:</b> 01/02/2024
---	--	--

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0007390-01	<b>08B_SSV_02_20231219</b> Soil Gas	Method: TO-17 (Passive)
---------------------------	--	-------------------------

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>3.14</b>		5.922	1.21	C23122108.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI B)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007390  
Reported: 01/02/2024

*Data Summary Table- Concentration*

Compound	Frequency	LOQ ( $\mu\text{g}/\text{m}^3$ )	Max Value ( $\mu\text{g}/\text{m}^3$ )
Tetrachloroethene	1	1.21	3.14

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI B)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007390  
Reported: 01/02/2024

## *Detailed Analytical Results*



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI B)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007390  
Reported: 01/02/2024

*Detailed Analytical Results- Mass*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

Lab Sample ID: 0007390-01

**08B\_SSV\_02\_20231219**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	12/21/2023 17:49	C23122108.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	12/21/2023 17:49	C23122108.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	12/21/2023 17:49	C23122108.D	
Trichloroethene	79-01-6	<10.0	10.0	12/21/2023 17:49	C23122108.D	
<b>Tetrachloroethene</b>	127-18-4	<b>25.9</b>	10.0	12/21/2023 17:49	C23122108.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	88.1%	70-130		12/21/2023 17:49	C23122108.D
Surrogate: Toluene-d8	2037-26-5	97.4%	70-130		12/21/2023 17:49	C23122108.D
Surrogate: Bromofluorobenzene	460-00-4	89.5%	70-130		12/21/2023 17:49	C23122108.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI B)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007390  
Reported: 01/02/2024

*Detailed Analytical Results- Concentration*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

Lab Sample ID: 0007390-01

**08B\_SSV\_02\_20231219**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.613		0.613	12/21/2023 17:49	C23122108.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	12/21/2023 17:49	C23122108.D
cis-1,2-Dichloroethene	156-59-2	<0.937		0.937	12/21/2023 17:49	C23122108.D
Trichloroethene	79-01-6	<1.50		1.50	12/21/2023 17:49	C23122108.D
<b>Tetrachloroethene</b>	127-18-4	<b>3.14</b>		1.21	12/21/2023 17:49	C23122108.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	88.1%	70-130		12/21/2023 17:49	C23122108.D
Surrogate: Toluene-d8	2037-26-5	97.4%	70-130		12/21/2023 17:49	C23122108.D
Surrogate: Bromofluorobenzene	460-00-4	89.5%	70-130		12/21/2023 17:49	C23122108.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23L0060-BS1 File ID: C23122102.D**

Analyzed: 12/21/23 16:06

**LCSD: B23L064-ICV1 File ID: C23122104.D**

Analyzed: 12/21/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	50.31	100.62	50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56	50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06	50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74	50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26	50	49.56	99.10	70-130	10.47	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI B) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007390 <b>Reported:</b> 01/02/2024
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
<b>Lab ID:</b> 0007390-01 <b>Sample Name:</b> 08B_SSV_02_20231219						
Vinyl Chloride	20,147	1.00	0.810	U	U	C23122108.D
trans-1,2-Dichloroethene	20,147	1.00	0.440	U	U	C23122108.D
cis-1,2-Dichloroethene	20,147	1.00	0.530	U	U	C23122108.D
Trichloroethene	20,147	1.00	0.330	U	U	C23122108.D
Tetrachloroethene	20,147	1.00	0.410	25.93	3.14	C23122108.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where:
- C = concentration (µg/m³)
  - M = mass (ng)
  - DF = dilution factor
  - Uc = uptake rate (ml/min), corrected
  - t = sampling time (minutes)
  - U = compound specific uptake rate
  - Tu = uptake rate study temperature
  - Ts = sample average temperature

**Note:** Tu is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*



<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI B) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007390 <b>Reported:</b> 01/02/2024
---	--	--

**Method Detection and Reporting Limit Calculations (Concentration)**

**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

<b>Lab ID:</b> 0007390-01	<b>Sample Name:</b> 08B_SSV_02_20231219
---------------------------	---

Vinyl Chloride	20,147	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,147	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,147	1.00	0.530	10.0	0.937
Trichloroethene	20,147	1.00	0.330	10.0	1.50
Tetrachloroethene	20,147	1.00	0.410	10.0	1.21

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007390  
**Reported:** 01/02/2024

## *Sample Management Records*

Project Information			Client Information				
Site Name: Reedsburg Cleaners (ERP 0257001682)			Company Name: Bay West LLC		Project Manager: Jason Kunze (jkunze@baywest.com)		
Site Location: 125 N Locust St (PSI B)			Office Location: 5 Empire Drive, St. Paul, MN 55103		Client PO: J230382 / PO1309		
			Submitted by: Anders Santelman		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days		
			Email: asantelman@baywest.com				
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth <input type="checkbox"/> cm <input type="checkbox"/> inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08B_SSV_02_20231219	12/5/23	0945	12/19/23	0932	5 inches	Concrete	B_SSV_02
Special Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride							
Relinquished by (signature): <i>L</i>		Date / Time: 12/19/23 1300		Received by (signature): <i>[Signature]</i>		Date / Time: 12.20.23 1456	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
For Lab Use Only		Beacon Job No: 7390		Beacon Proposal: 230427H01		Analytical Method:	
Courier Name: Fedex		Shipment Condition: good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5722456	



Beacon Environmental  
2203A Commerce Road, Suite 1  
Forest Hill, MD 21050 USA  
1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01  
Laboratory Work Order: 0007392

### Project Description:

Reedsburg Cleaners (PSI B)  
Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

January 02, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table	7
Detailed Analytical Results	8
0007392-01 - 08B_IAB_04_20231219	9
0007392-02 - 08B_IA1_05_20231219	10
0007392-03 - 08B_IA2_06_20231219	11
Additional QC Information	13
Sample Result Calculations	14
Equation	15
MRL Calculation Table	16
Certifications	17
Notes and Definitions	18
Sample Management Records	19
Chain of Custody	20



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007392-01 Sampler Type:	08B_IAB_04_20231219 Beacon Passive Sampler	12/20/2023	TO-17 (Passive)	Indoor Air
0007392-02 Sampler Type:	08B_IA1_05_20231219 Beacon Passive Sampler	12/20/2023	TO-17 (Passive)	Indoor Air
0007392-03 Sampler Type:	08B_IA2_06_20231219 Beacon Passive Sampler	12/20/2023	TO-17 (Passive)	Indoor Air

**Project Completeness**
**Samples Received: 3**  
**Samples Analyzed: 3**

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0007392-03	<b>08B_IA2_06_20231219</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>2.44</b>		5.921	1.20	C23122117.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOQ (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Tetrachloroethene	1	1.20	2.44

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

## *Detailed Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

Lab Sample ID: 0007392-01

**08B\_IAB\_04\_20231219**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 11:23	C23122115.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 11:23	C23122115.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	12/22/2023 11:23	C23122115.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 11:23	C23122115.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/22/2023 11:23	C23122115.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	93.7%	70-130		12/22/2023 11:23	C23122115.D
Surrogate: Toluene-d8	2037-26-5	91.3%	70-130		12/22/2023 11:23	C23122115.D
Surrogate: Bromofluorobenzene	460-00-4	91.8%	70-130		12/22/2023 11:23	C23122115.D



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

Lab Sample ID: 0007392-02

**08B\_IA1\_05\_20231219**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 11:53	C23122116.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 11:53	C23122116.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	12/22/2023 11:53	C23122116.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 11:53	C23122116.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/22/2023 11:53	C23122116.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	88.6%	70-130		12/22/2023 11:53	C23122116.D
Surrogate: Toluene-d8	2037-26-5	98.8%	70-130		12/22/2023 11:53	C23122116.D
Surrogate: Bromofluorobenzene	460-00-4	95.2%	70-130		12/22/2023 11:53	C23122116.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

Lab Sample ID: 0007392-03

**08B\_IA2\_06\_20231219**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 12:21	C23122117.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 12:21	C23122117.D
cis-1,2-Dichloroethene	156-59-2	<0.929		0.929	12/22/2023 12:21	C23122117.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 12:21	C23122117.D
<b>Tetrachloroethene</b>	127-18-4	<b>2.44</b>		1.20	12/22/2023 12:21	C23122117.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	88.0%	70-130		12/22/2023 12:21	C23122117.D
Surrogate: Toluene-d8	2037-26-5	95.5%	70-130		12/22/2023 12:21	C23122117.D
Surrogate: Bromofluorobenzene	460-00-4	89.7%	70-130		12/22/2023 12:21	C23122117.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23L0060-BS1 File ID: C23122102.D**  
**LCSD: B23L064-ICV1 File ID: C23122104.D**

 Analyzed: 12/21/23 16:06  
 Analyzed: 12/21/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	50.31	100.62	50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56	50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06	50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74	50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26	50	49.56	99.10	70-130	10.47	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007392-01	<b>Sample Name:</b> 08B_IAB_04_20231219	<b>̄ Temp (°C):</b> 21.00
---------------------------	---	---------------------------

Vinyl Chloride	20,155	1.00	0.816	U	U	C23122115.D
trans-1,2-Dichloroethene	20,155	1.00	0.443	U	U	C23122115.D
cis-1,2-Dichloroethene	20,155	1.00	0.534	U	U	C23122115.D
Trichloroethene	20,155	1.00	0.332	U	U	C23122115.D
Tetrachloroethene	20,155	1.00	0.413	U	U	C23122115.D

<b>Lab ID:</b> 0007392-02	<b>Sample Name:</b> 08B_IA1_05_20231219	<b>̄ Temp (°C):</b> 21.00
---------------------------	---	---------------------------

Vinyl Chloride	20,156	1.00	0.816	U	U	C23122116.D
trans-1,2-Dichloroethene	20,156	1.00	0.443	U	U	C23122116.D
cis-1,2-Dichloroethene	20,156	1.00	0.534	U	U	C23122116.D
Trichloroethene	20,156	1.00	0.332	U	U	C23122116.D
Tetrachloroethene	20,156	1.00	0.413	U	U	C23122116.D

<b>Lab ID:</b> 0007392-03	<b>Sample Name:</b> 08B_IA2_06_20231219	<b>̄ Temp (°C):</b> 21.00
---------------------------	---	---------------------------

Vinyl Chloride	20,155	1.00	0.816	U	U	C23122117.D
trans-1,2-Dichloroethene	20,155	1.00	0.443	U	U	C23122117.D
cis-1,2-Dichloroethene	20,155	1.00	0.534	U	U	C23122117.D
Trichloroethene	20,155	1.00	0.332	U	U	C23122117.D
Tetrachloroethene	20,155	1.00	0.413	20.32	2.44	C23122117.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007392-01      **Sample Name:** 08B\_IAB\_04\_20231219      **̄ Temp (°C):** 21.00

Vinyl Chloride	20,155	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,155	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,155	1.00	0.534	10.0	0.929
Trichloroethene	20,155	1.00	0.332	10.0	1.49
Tetrachloroethene	20,155	1.00	0.413	10.0	1.20

**Lab ID:** 0007392-02      **Sample Name:** 08B\_IA1\_05\_20231219      **̄ Temp (°C):** 21.00

Vinyl Chloride	20,156	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,156	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,156	1.00	0.534	10.0	0.929
Trichloroethene	20,156	1.00	0.332	10.0	1.49
Tetrachloroethene	20,156	1.00	0.413	10.0	1.20

**Lab ID:** 0007392-03      **Sample Name:** 08B\_IA2\_06\_20231219      **̄ Temp (°C):** 21.00

Vinyl Chloride	20,155	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,155	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,155	1.00	0.534	10.0	0.929
Trichloroethene	20,155	1.00	0.332	10.0	1.49
Tetrachloroethene	20,155	1.00	0.413	10.0	1.20

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	



**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI B)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007392  
**Reported:** 01/02/2024

## *Sample Management Records*

<b>Client Information</b>		Project Manager: Jason Kunze (jkunze@baywest.com)		Client PO: J230382 / PO1309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS	
Company: Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) _____ days							
Address: 5 Empire Dr.	Location: 125 N Locust St (PSI B)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C							
City / State / Zip: St. Paul, MN 55103	Submitted by: Anders Santelman		Email: asantelman@baywest.com							
Phone: 651-724-9757	Submitted by: Anders Santelman		Email: asantelman@baywest.com							
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes				
08B_IAB_04_20231219	12/5/23	0950	12/19/23	0945	21	B_IAB_04	X			
08B_IA1_05_20231219	12/5/23	0954	12/19/23	0950	21	B_IA1_05	X			
08B_IA2_06_20231219	12/5/23	0958	12/19/23	0953	21	B_IA2_06	X			
Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride										
Relinquished by (signature): <i>[Signature]</i>		Date / Time: 12/19/23 : 1300		Received by (signature): <i>[Signature]</i>		Date / Time: 12.20.23 1457				
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:				
<b>For Lab Use Only</b>		Beacon Job No: 7392		Beacon Proposal: 230427H01						
Courier Name: Fedy		Shipment Condition: good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5722455				



Beacon Environmental

526 Underwood Lane  
Bel Air, MD 21014 USA  
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H02

Laboratory Work Order: 0007650

**Project Description:**

Reedsburg Cleaners

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

April 09, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table	7
Detailed Analytical Results	8
0007650-01 - 08B_IAB_04_20240328	9
0007650-02 - 08B_IA1_05_20240328	10
0007650-03 - 08B_IA2_06_20240328	11
0007650-04 - 08B_OA_02_20240328	12
QC Summaries	13
Additional QC Information	30
Sample Result Calculations	31
Equation	32
LOD/MRL Calculation Table	33
Certifications	34
Notes and Definitions	35
Sample Management Records	36
Chain of Custody	37

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007650-01 Sampler Type:	08B_IAB_04_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Indoor Air
0007650-02 Sampler Type:	08B_IA1_05_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Indoor Air
0007650-03 Sampler Type:	08B_IA2_06_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Indoor Air
0007650-04 Sampler Type:	08B_OA_02_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Ambient Air

**Project Completeness**
**Samples Received:** 4  
**Samples Analyzed:** 4

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs) for EPA Method TO-17**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

## *Analytical Results*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### *Summary of Compound Detections- Concentration*

Lab Sample ID: 0007650-02	<b>08B_IA1_05_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	RT	LOQ ( $\mu\text{g}/\text{m}^3$ )	LOD ( $\mu\text{g}/\text{m}^3$ )	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>0.628</b>	J	8.074	1.20	0.601	Kb24040222.D

Lab Sample ID: 0007650-03	<b>08B_IA2_06_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	RT	LOQ ( $\mu\text{g}/\text{m}^3$ )	LOD ( $\mu\text{g}/\text{m}^3$ )	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>1.04</b>	J	8.071	1.20	0.601	Ka24040307.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOD (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Tetrachloroethene	2	0.601	1.04

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

*Detailed Analytical Results*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

Lab Sample ID: 0007650-01	<b>08B_IAB_04_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.304	U	0.304	0.608	04/03/2024 07:29	Kb24040229.D
trans-1,2-Dichloroethene	156-60-5	<0.560	U	0.560	1.12	04/03/2024 07:29	Kb24040229.D
cis-1,2-Dichloroethene	156-59-2	<0.465	U	0.465	0.929	04/03/2024 07:29	Kb24040229.D
Trichloroethene	79-01-6	<0.746	U	0.746	1.49	04/03/2024 07:29	Kb24040229.D
Tetrachloroethene	127-18-4	<0.601	U	0.601	1.20	04/03/2024 07:29	Kb24040229.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	99.2%	70-130			04/03/2024 07:29	Kb24040229.D
Surrogate: Toluene-d8	2037-26-5	97.6%	70-130			04/03/2024 07:29	Kb24040229.D
Surrogate: Bromofluorobenzene	460-00-4	88.6%	70-130			04/03/2024 07:29	Kb24040229.D

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

Lab Sample ID: 0007650-02	<b>08B_IA1_05_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.304	U	0.304	0.608	04/03/2024 01:51	Kb24040222.D
trans-1,2-Dichloroethene	156-60-5	<0.560	U	0.560	1.12	04/03/2024 01:51	Kb24040222.D
cis-1,2-Dichloroethene	156-59-2	<0.465	U	0.465	0.930	04/03/2024 01:51	Kb24040222.D
Trichloroethene	79-01-6	<0.746	U	0.746	1.49	04/03/2024 01:51	Kb24040222.D
<b>Tetrachloroethene</b>	127-18-4	<b>0.628</b>	J	0.601	1.20	04/03/2024 01:51	Kb24040222.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID	
Surrogate: 1,2-DCA-d4	17060-07-0	96.4%	70-130		04/03/2024 01:51	Kb24040222.D	
Surrogate: Toluene-d8	2037-26-5	91.9%	70-130		04/03/2024 01:51	Kb24040222.D	
Surrogate: Bromofluorobenzene	460-00-4	86.3%	70-130		04/03/2024 01:51	Kb24040222.D	

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

Lab Sample ID: 0007650-03	<b>08B_IA2_06_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.304	U	0.304	0.608	04/03/2024 12:04	Ka24040307.D
trans-1,2-Dichloroethene	156-60-5	<0.560	U	0.560	1.12	04/03/2024 12:04	Ka24040307.D
cis-1,2-Dichloroethene	156-59-2	<0.465	U	0.465	0.930	04/03/2024 12:04	Ka24040307.D
Trichloroethene	79-01-6	<0.747	U	0.747	1.49	04/03/2024 12:04	Ka24040307.D
<b>Tetrachloroethene</b>	127-18-4	<b>1.04</b>	J	0.601	1.20	04/03/2024 12:04	Ka24040307.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.8%	70-130			04/03/2024 12:04	Ka24040307.D
Surrogate: Toluene-d8	2037-26-5	87.1%	70-130			04/03/2024 12:04	Ka24040307.D
Surrogate: Bromofluorobenzene	460-00-4	93.3%	70-130			04/03/2024 12:04	Ka24040307.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

Lab Sample ID: 0007650-04

**08B\_OA\_02\_20240328**

Method: TO-17 (Passive)

Ambient Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.315	U	0.315	0.629	04/03/2024 02:48	Kb24040224.D
trans-1,2-Dichloroethene	156-60-5	<0.579	U	0.579	1.16	04/03/2024 02:48	Kb24040224.D
cis-1,2-Dichloroethene	156-59-2	<0.481	U	0.481	0.962	04/03/2024 02:48	Kb24040224.D
Trichloroethene	79-01-6	<0.772	U	0.772	1.54	04/03/2024 02:48	Kb24040224.D
Tetrachloroethene	127-18-4	<0.622	U	0.622	1.24	04/03/2024 02:48	Kb24040224.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	90.8%	70-130			04/03/2024 02:48	Kb24040224.D
Surrogate: Toluene-d8	2037-26-5	90.9%	70-130			04/03/2024 02:48	Kb24040224.D
Surrogate: Bromofluorobenzene	460-00-4	89.4%	70-130			04/03/2024 02:48	Kb24040224.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

*QC Information/Summary*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24A120 - Instrument: K System - File ID: Kb24013016.D**
***B24A120-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.7	10	5	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	52.6	10	5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	50.6	10	5	ng	50.0		101	70-130			
Trichloroethene	49.6	10	5	ng	50.0		99.2	70-130			
Tetrachloroethene	46.3	10	5	ng	50.0		92.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.5</i>			<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.1</i>			<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.9</i>			<i>ng</i>	<i>50.0</i>		<i>91.9</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24A120 - Instrument: K System - File ID: Kb24013020.D**
***B24A120-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>			<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>			<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.4</i>			<i>ng</i>	<i>100</i>		<i>91.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040302.D**
**24D0009-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.2	10	5	ng	50.0		82.3	70-130			
trans-1,2-Dichloroethene	46.3	10	5	ng	50.0		92.5	70-130			
cis-1,2-Dichloroethene	48.3	10	5	ng	50.0		96.7	70-130			
Trichloroethene	49.5	10	5	ng	50.0		99.0	70-130			
Tetrachloroethene	41.8	10	5	ng	50.0		83.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>			<i>ng</i>	<i>50.0</i>		<i>99.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>45.0</i>			<i>ng</i>	<i>50.0</i>		<i>90.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>37.7</i>			<i>ng</i>	<i>50.0</i>		<i>75.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040303.D**
**24D0009-BLK1 (Lab Blank)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.304	0.608	0.304	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<0.559	1.12	0.559	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.464	0.929	0.464	µg/m <sup>3</sup>							U
Trichloroethene	<0.746	1.49	0.746	µg/m <sup>3</sup>							U
Tetrachloroethene	<0.600	1.20	0.600	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	99.9			ng	100		99.9	70-130			
<i>Surrogate: Toluene-d8</i>	99.2			ng	100		99.2	70-130			
<i>Surrogate: Bromofluorobenzene</i>	83.5			ng	100		83.5	70-130			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040304.D**
***B24D010-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	46.5	10	5	ng	50.0		93.1	70-130			
trans-1,2-Dichloroethene	47.9	10	5	ng	50.0		95.7	70-130			
cis-1,2-Dichloroethene	49.7	10	5	ng	50.0		99.5	70-130			
Trichloroethene	51.9	10	5	ng	50.0		104	70-130			
Tetrachloroethene	47.4	10	5	ng	50.0		94.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.1</i>			<i>ng</i>	<i>50.0</i>		<i>98.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.8</i>			<i>ng</i>	<i>50.0</i>		<i>97.5</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>40.4</i>			<i>ng</i>	<i>50.0</i>		<i>80.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040312.D**
***B24D010-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	5	ng	50.0		79.4	70-130			
trans-1,2-Dichloroethene	47.3	10	5	ng	50.0		94.5	70-130			
cis-1,2-Dichloroethene	48.4	10	5	ng	50.0		96.9	70-130			
Trichloroethene	48.7	10	5	ng	50.0		97.4	70-130			
Tetrachloroethene	45.9	10	5	ng	50.0		91.8	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.1</i>			<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.1</i>			<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.4</i>			<i>ng</i>	<i>50.0</i>		<i>84.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040313.D**
***B24D010-CCB1 (Lab Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>102</i>			<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>			<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>84.6</i>			<i>ng</i>	<i>100</i>		<i>84.6</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Batch: 24D0008 - Instrument: K System - File ID: Kb24040202.D**
**24D0008-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	40.5	10	5	ng	50.0		81.0	70-130			
trans-1,2-Dichloroethene	45.5	10	5	ng	50.0		91.0	70-130			
cis-1,2-Dichloroethene	47.3	10	5	ng	50.0		94.5	70-130			
Trichloroethene	48.0	10	5	ng	50.0		96.1	70-130			
Tetrachloroethene	42.3	10	5	ng	50.0		84.6	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.0</i>			<i>ng</i>	50.0		<i>97.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>43.4</i>			<i>ng</i>	50.0		<i>86.8</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>37.1</i>			<i>ng</i>	50.0		<i>74.2</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Batch: 24D0008 - Instrument: K System - File ID: Kb24040203.D**
**24D0008-BLK1 (Lab Blank)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.304	0.608	0.304	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<0.559	1.12	0.559	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.464	0.929	0.464	µg/m <sup>3</sup>							U
Trichloroethene	<0.746	1.49	0.746	µg/m <sup>3</sup>							U
Tetrachloroethene	<0.600	1.20	0.600	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>99.6</i>			<i>ng</i>	<i>100</i>		<i>99.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>100</i>			<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>82.3</i>			<i>ng</i>	<i>100</i>		<i>82.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040204.D**
***B24D009-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	5	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	48.2	10	5	ng	50.0		96.4	70-130			
cis-1,2-Dichloroethene	49.3	10	5	ng	50.0		98.5	70-130			
Trichloroethene	50.1	10	5	ng	50.0		100	70-130			
Tetrachloroethene	48.5	10	5	ng	50.0		97.0	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.9</i>			<i>ng</i>	<i>50.0</i>		<i>99.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.3</i>			<i>ng</i>	<i>50.0</i>		<i>96.7</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>40.5</i>			<i>ng</i>	<i>50.0</i>		<i>81.1</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040215.D**
***B24D009-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.4	10	5	ng	50.0		82.9	70-130			
trans-1,2-Dichloroethene	47.0	10	5	ng	50.0		94.1	70-130			
cis-1,2-Dichloroethene	47.7	10	5	ng	50.0		95.4	70-130			
Trichloroethene	48.9	10	5	ng	50.0		97.9	70-130			
Tetrachloroethene	46.4	10	5	ng	50.0		92.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.8</i>			<i>ng</i>	<i>50.0</i>		<i>99.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.6</i>			<i>ng</i>	<i>50.0</i>		<i>97.2</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.1</i>			<i>ng</i>	<i>50.0</i>		<i>84.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040216.D**
***B24D009-CCB1 (Lab Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>102</i>			<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>98.7</i>			<i>ng</i>	<i>100</i>		<i>98.7</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>80.7</i>			<i>ng</i>	<i>100</i>		<i>80.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040230.D**
***B24D009-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.3	10	5	ng	50.0		82.6	70-130			
trans-1,2-Dichloroethene	47.7	10	5	ng	50.0		95.4	70-130			
cis-1,2-Dichloroethene	48.9	10	5	ng	50.0		97.8	70-130			
Trichloroethene	49.2	10	5	ng	50.0		98.5	70-130			
Tetrachloroethene	45.8	10	5	ng	50.0		91.6	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.5</i>			<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.2</i>			<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.2</i>			<i>ng</i>	<i>50.0</i>		<i>84.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040231.D**
***B24D009-CCB2 (Lab Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	99.2			ng	100		99.2	70-130			
<i>Surrogate: Toluene-d8</i>	102			ng	100		102	70-130			
<i>Surrogate: Bromofluorobenzene</i>	85.3			ng	100		85.3	70-130			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 24D0009-BS1 File ID: Ka24040302.D**

Analyzed: 4/3/24 10:30

**LCSD: B24D010-ICV1 File ID: Ka24040304.D**

Analyzed: 4/3/24 9:26

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	41.15	82.3	50	46.54	93.10	70-130	12.29	30	
trans-1,2-Dichloroethene	156-60-5	46.27	92.54	50	47.85	95.70	70-130	3.36	30	
cis-1,2-Dichloroethene	156-59-2	48.33	96.66	50	49.73	99.50	70-130	2.86	30	
Trichloroethene	79-01-6	49.52	99.04	50	51.86	104.00	70-130	4.62	30	
Tetrachloroethene	127-18-4	41.77	83.54	50	47.36	94.70	70-130	12.54	30	

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 24D0008-BS1 File ID: Kb24040202.D**

Analyzed: 4/2/24 17:57

**LCSD: B24D009-ICV1 File ID: Kb24040204.D**

Analyzed: 4/2/24 17:08

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	40.48	80.96	50	51.54	103.00	70-130	24.04	30	
trans-1,2-Dichloroethene	156-60-5	45.48	90.96	50	48.18	96.40	70-130	5.77	30	
cis-1,2-Dichloroethene	156-59-2	47.25	94.5	50	49.26	98.50	70-130	4.17	30	
Trichloroethene	79-01-6	48.03	96.06	50	50.05	100.00	70-130	4.12	30	
Tetrachloroethene	127-18-4	42.30	84.6	50	48.51	97.00	70-130	13.68	30	



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007650-01	<b>Sample Name:</b> 08B_IAB_04_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,137	1.00	0.817	U	U	Kb24040229.D
trans-1,2-Dichloroethene	20,137	1.00	0.444	U	U	Kb24040229.D
cis-1,2-Dichloroethene	20,137	1.00	0.535	U	U	Kb24040229.D
Trichloroethene	20,137	1.00	0.333	U	U	Kb24040229.D
Tetrachloroethene	20,137	1.00	0.413	U	U	Kb24040229.D

<b>Lab ID:</b> 0007650-02	<b>Sample Name:</b> 08B_IA1_05_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,126	1.00	0.817	U	U	Kb24040222.D
trans-1,2-Dichloroethene	20,126	1.00	0.444	U	U	Kb24040222.D
cis-1,2-Dichloroethene	20,126	1.00	0.535	U	U	Kb24040222.D
Trichloroethene	20,126	1.00	0.333	U	U	Kb24040222.D
Tetrachloroethene	20,126	1.00	0.413	5.23	0.628	Kb24040222.D

<b>Lab ID:</b> 0007650-03	<b>Sample Name:</b> 08B_IA2_06_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,120	1.00	0.817	U	U	Ka24040307.D
trans-1,2-Dichloroethene	20,120	1.00	0.444	U	U	Ka24040307.D
cis-1,2-Dichloroethene	20,120	1.00	0.535	U	U	Ka24040307.D
Trichloroethene	20,120	1.00	0.333	U	U	Ka24040307.D
Tetrachloroethene	20,120	1.00	0.413	8.67	1.04	Ka24040307.D

<b>Lab ID:</b> 0007650-04	<b>Sample Name:</b> 08B_OA_02_20240328	<b>̄ Temp (°C):</b> 1.67
---------------------------	--	--------------------------

Vinyl Chloride	20,146	1.00	0.789	U	U	Kb24040224.D
trans-1,2-Dichloroethene	20,146	1.00	0.428	U	U	Kb24040224.D
cis-1,2-Dichloroethene	20,146	1.00	0.516	U	U	Kb24040224.D
Trichloroethene	20,146	1.00	0.321	U	U	Kb24040224.D
Tetrachloroethene	20,146	1.00	0.399	U	U	Kb24040224.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

**Method Detection and Reporting Limit Calculations (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

<b>Lab ID:</b> 0007650-01	<b>Sample Name:</b> 08B_IAB_04_20240328	<b>̄ Temp (°C):</b> 21.60					
Vinyl Chloride	20,137	1.00	0.817	10.00	5.00	0.608	0.304
trans-1,2-Dichloroethene	20,137	1.00	0.444	10.00	5.00	1.12	0.560
cis-1,2-Dichloroethene	20,137	1.00	0.535	10.00	5.00	0.929	0.465
Trichloroethene	20,137	1.00	0.333	10.00	5.00	1.49	0.746
Tetrachloroethene	20,137	1.00	0.413	10.00	5.00	1.20	0.601

<b>Lab ID:</b> 0007650-02	<b>Sample Name:</b> 08B_IA1_05_20240328	<b>̄ Temp (°C):</b> 21.60					
Vinyl Chloride	20,126	1.00	0.817	10.00	5.00	0.608	0.304
trans-1,2-Dichloroethene	20,126	1.00	0.444	10.00	5.00	1.12	0.560
cis-1,2-Dichloroethene	20,126	1.00	0.535	10.00	5.00	0.930	0.465
Trichloroethene	20,126	1.00	0.333	10.00	5.00	1.49	0.746
Tetrachloroethene	20,126	1.00	0.413	10.00	5.00	1.20	0.601

<b>Lab ID:</b> 0007650-03	<b>Sample Name:</b> 08B_IA2_06_20240328	<b>̄ Temp (°C):</b> 21.60					
Vinyl Chloride	20,120	1.00	0.817	10.00	5.00	0.608	0.304
trans-1,2-Dichloroethene	20,120	1.00	0.444	10.00	5.00	1.12	0.560
cis-1,2-Dichloroethene	20,120	1.00	0.535	10.00	5.00	0.930	0.465
Trichloroethene	20,120	1.00	0.333	10.00	5.00	1.49	0.747
Tetrachloroethene	20,120	1.00	0.413	10.00	5.00	1.20	0.601

<b>Lab ID:</b> 0007650-04	<b>Sample Name:</b> 08B_OA_02_20240328	<b>̄ Temp (°C):</b> 1.67					
Vinyl Chloride	20,146	1.00	0.789	10.00	5.00	0.629	0.315
trans-1,2-Dichloroethene	20,146	1.00	0.428	10.00	5.00	1.16	0.579
cis-1,2-Dichloroethene	20,146	1.00	0.516	10.00	5.00	0.962	0.481
Trichloroethene	20,146	1.00	0.321	10.00	5.00	1.54	0.772
Tetrachloroethene	20,146	1.00	0.399	10.00	5.00	1.24	0.622

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2025	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

### Qualifiers/Notes and Definitions

#### General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

#### Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

## *Sample Management Records*



j.kunze@baywest.com

(ERP 0257001682)

<b>Client Information</b>		Project Manager: Jason Kunze		Client PO: J2303821 P01309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company: Bay West LLC		Project Name: Reedsburg Cleaners		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days					
Address: 5 Empire Dr.		Location: 125 N Locust Street (PSIB)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C					
City / State / Zip: St. Paul / MN / 55103		Submitted by: Anders Santelman		Email: asantelman@baywest.com					
Phone: 651-724-9757		Email: asantelman@baywest.com							
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes			
08B-IAB-04-20240328	3/14/24	1016	3/28/24	0953	21.6	B-IAB-04	X		
08B-IA1-05-20240328	3/14/24	1022	3/28/24	0948	21.6	B-IA1-05	X		
08B-IA2-06-20240328	3/14/24	1025	3/28/24	0945	21.6	B-IA2-06	X		
08B-OA-02-20240328	3/14/24	1033	3/28/24	1019	1.667°	B-OA-02		X	
Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE and vinyl chloride									
Relinquished by (signature):		Date / Time: 3/28/24 1100		Received by (signature):		Date / Time: <del>4/1/24 9:30</del> 3/29/24 11:00			
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time: <del>4/1/24</del>			
<b>For Lab Use Only</b>		Beacon Job No: 7650		Beacon Proposal: 230427H02					
Courier Name: FedEx		Shipment Condition: Good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 6047395			





Beacon Environmental

526 Underwood Lane  
Bel Air, MD 21014 USA  
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007649

**Project Description:**

Reedsburg Cleaners  
Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

April 09, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table-Mass	8
Data Summary Table-Concentration	9
Detailed Analytical Results	10
- Mass	11
0007649-01 - 08B_SSV_02_20240328	12
- Concentration	13
0007649-01 - 08B_SSV_02_20240328	14
QC Summaries	15
Additional QC Information	25
Sample Result Calculations	26
Equation	26
MRL Calculation Table	27
Certifications	28
Notes and Definitions	29
Sample Management Records	30
Chain of Custody	31

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007649-01	08B_SSV_02_20240328	03/29/2024	TO-17 (Passive)	Soil Gas
Sampler Type: Beacon Passive Sampler				

#### Project Completeness

**Samples Received:** 1  
**Samples Analyzed:** 1

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

## *Analytical Results*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007649 <b>Reported:</b> 04/09/2024
---	--	--

*Summary of Compound Detections- Mass*

Lab Sample ID: 0007649-01	<b>08B_SSV_02_20240328</b> Soil Gas	Method: TO-17 (Passive)
---------------------------	--	-------------------------

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>37.3</b>		8.071	10.0	Ka24040309.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0007649-01	<b>08B_SSV_02_20240328</b>	Method: TO-17 (Passive)
	Soil Gas	

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	RT	LOQ (µg/m <sup>3</sup> )	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>4.51</b>		8.071	1.21	Ka24040309.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

*Data Summary Table- Mass*

Compound	Frequency	LOQ (ng)	Max Value (ng)
Tetrachloroethene	1	10	37



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOQ (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Tetrachloroethene	1	1.21	4.51

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

## *Detailed Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

*Detailed Analytical Results- Mass*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

Lab Sample ID: 0007649-01

**08B\_SSV\_02\_20240328**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	04/03/2024 13:01	Ka24040309.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	04/03/2024 13:01	Ka24040309.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	04/03/2024 13:01	Ka24040309.D	
Trichloroethene	79-01-6	<10.0	10.0	04/03/2024 13:01	Ka24040309.D	
<b>Tetrachloroethene</b>	127-18-4	<b>37.3</b>	10.0	04/03/2024 13:01	Ka24040309.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	95.8%	70-130		04/03/2024 13:01	Ka24040309.D
Surrogate: Toluene-d8	2037-26-5	88.0%	70-130		04/03/2024 13:01	Ka24040309.D
Surrogate: Bromofluorobenzene	460-00-4	88.8%	70-130		04/03/2024 13:01	Ka24040309.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

*Detailed Analytical Results- Concentration*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

Lab Sample ID: 0007649-01

**08B\_SSV\_02\_20240328**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	LOQ ( $\mu\text{g}/\text{m}^3$ )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.613		0.613	04/03/2024 13:01	Ka24040309.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	04/03/2024 13:01	Ka24040309.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	04/03/2024 13:01	Ka24040309.D
Trichloroethene	79-01-6	<1.50		1.50	04/03/2024 13:01	Ka24040309.D
<b>Tetrachloroethene</b>	127-18-4	<b>4.51</b>		1.21	04/03/2024 13:01	Ka24040309.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	95.8%	70-130		04/03/2024 13:01	Ka24040309.D
Surrogate: Toluene-d8	2037-26-5	88.0%	70-130		04/03/2024 13:01	Ka24040309.D
Surrogate: Bromofluorobenzene	460-00-4	88.8%	70-130		04/03/2024 13:01	Ka24040309.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

## *QC Information/Summary*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007649 <b>Reported:</b> 04/09/2024
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B24A120 - Instrument: K System - File ID: Kb24013016.D**

*B24A120-ICV1 (LCSD/Second Source Verification/CALV)*

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.7	10	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	52.6	10	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	50.6	10	ng	50.0		101	70-130			
Trichloroethene	49.6	10	ng	50.0		99.2	70-130			
Tetrachloroethene	46.3	10	ng	50.0		92.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.5</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.1</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.9</i>		<i>ng</i>	<i>50.0</i>		<i>91.9</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B24A120 - Instrument: K System - File ID: Kb24013020.D**
***B24A120-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.4</i>		<i>ng</i>	<i>100</i>		<i>91.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040302.D**
**24D0009-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.2	10	ng	50.0		82.3	70-130			
trans-1,2-Dichloroethene	46.3	10	ng	50.0		92.5	70-130			
cis-1,2-Dichloroethene	48.3	10	ng	50.0		96.7	70-130			
Trichloroethene	49.5	10	ng	50.0		99.0	70-130			
Tetrachloroethene	41.8	10	ng	50.0		83.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>99.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>45.0</i>		<i>ng</i>	<i>50.0</i>		<i>90.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>37.7</i>		<i>ng</i>	<i>50.0</i>		<i>75.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040303.D**
**24D0009-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.613	0.613	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.936	0.936	µg/m <sup>3</sup>							U
Trichloroethene	<1.50	1.50	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.21	1.21	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	99.9		ng	100		99.9	70-130			
<i>Surrogate: Toluene-d8</i>	99.2		ng	100		99.2	70-130			
<i>Surrogate: Bromofluorobenzene</i>	83.5		ng	100		83.5	70-130			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040303.D**
**24D0009-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	99.9		ng	100		99.9	70-130			
<i>Surrogate: Toluene-d8</i>	99.2		ng	100		99.2	70-130			
<i>Surrogate: Bromofluorobenzene</i>	83.5		ng	100		83.5	70-130			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040304.D**
***B24D010-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	46.5	10	ng	50.0		93.1	70-130			
trans-1,2-Dichloroethene	47.9	10	ng	50.0		95.7	70-130			
cis-1,2-Dichloroethene	49.7	10	ng	50.0		99.5	70-130			
Trichloroethene	51.9	10	ng	50.0		104	70-130			
Tetrachloroethene	47.4	10	ng	50.0		94.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.1</i>		<i>ng</i>	<i>50.0</i>		<i>98.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.8</i>		<i>ng</i>	<i>50.0</i>		<i>97.5</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>40.4</i>		<i>ng</i>	<i>50.0</i>		<i>80.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040312.D**
***B24D010-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	ng	50.0		79.4	70-130			
trans-1,2-Dichloroethene	47.3	10	ng	50.0		94.5	70-130			
cis-1,2-Dichloroethene	48.4	10	ng	50.0		96.9	70-130			
Trichloroethene	48.7	10	ng	50.0		97.4	70-130			
Tetrachloroethene	45.9	10	ng	50.0		91.8	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.1</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.1</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.4</i>		<i>ng</i>	<i>50.0</i>		<i>84.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040313.D**
***B24D010-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>102</i>		<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>84.6</i>		<i>ng</i>	<i>100</i>		<i>84.6</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007649 <b>Reported:</b> 04/09/2024
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 24D0009-BS1 File ID: Ka24040302.D**

Analyzed: 4/3/24 10:30

**LCSD: B24D010-ICV1 File ID: Ka24040304.D**

Analyzed: 4/3/24 9:26

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	41.15	82.3	50	46.54	93.10	70-130	12.29	30	
trans-1,2-Dichloroethene	156-60-5	46.27	92.54	50	47.85	95.70	70-130	3.36	30	
cis-1,2-Dichloroethene	156-59-2	48.33	96.66	50	49.73	99.50	70-130	2.86	30	
Trichloroethene	79-01-6	49.52	99.04	50	51.86	104.00	70-130	4.62	30	
Tetrachloroethene	127-18-4	41.77	83.54	50	47.36	94.70	70-130	12.54	30	



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007649 <b>Reported:</b> 04/09/2024
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---------------------------------	---------

**Lab ID:** 0007649-01      **Sample Name:** 08B\_SSV\_02\_20240328

Vinyl Chloride	20,150	1.00	0.810	U	U	Ka24040309.D
trans-1,2-Dichloroethene	20,150	1.00	0.440	U	U	Ka24040309.D
cis-1,2-Dichloroethene	20,150	1.00	0.530	U	U	Ka24040309.D
Trichloroethene	20,150	1.00	0.330	U	U	Ka24040309.D
Tetrachloroethene	20,150	1.00	0.410	37.25	4.51	Ka24040309.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where:
- C = concentration (µg/m³)
  - M = mass (ng)
  - DF = dilution factor
  - Uc = uptake rate (ml/min), corrected
  - t = sampling time (minutes)
  - U = compound specific uptake rate
  - Tu = uptake rate study temperature
  - Ts = sample average temperature

**Note:** Tu is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007649 <b>Reported:</b> 04/09/2024
---	--	--

**Method Detection and Reporting Limit Calculations (Concentration)**

**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007649-01      **Sample Name:** 08B\_SSV\_02\_20240328

Vinyl Chloride	20,150	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,150	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,150	1.00	0.530	10.0	0.936
Trichloroethene	20,150	1.00	0.330	10.0	1.50
Tetrachloroethene	20,150	1.00	0.410	10.0	1.21

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2025	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007649  
**Reported:** 04/09/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007649  
Reported: 04/09/2024

## *Sample Management Records*

j.kunze@baywest.com

Project Information				Client Information			
Site Name: <i>Reckburg Cleaners</i>				Company Name: <i>Bay West LLC</i>		Project Manager: <i>Jason Kunze</i>	
ERP <i>0257001692</i>				Office Location: <i>5 Empire Dr, St. Paul, MN, 55103</i>		Client PO: <i>J230392 / P01309</i>	
Site Location: <i>125 N Locust Street (PSI B)</i>				Submitted by: <i>Anders Santelman</i>		Turn around time (check one):	
				Email: <i>asantelman@Baywest.com</i>		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) _____ days	
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth <input type="checkbox"/> cm <input checked="" type="checkbox"/> inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
<del><i>B-55V-02-20240328</i></del>							<del><i>B-55V-02</i></del>
<i>B-55V-02-20240328</i>	<i>3/14/24</i>	<i>1005</i>	<i>3/28/24</i>	<i>0955</i>	<i>5 inches</i>	<i>Concrete</i>	<i>B-55V-02</i>
<i>[Large handwritten signature]</i>							
Special Instructions: <i>Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, + vinyl chloride</i>							
Relinquished by (signature): <i>[Signature]</i>		Date / Time: <i>3/28/24 1100</i>		Received by (signature): <i>[Signature]</i>		Date / Time: <del><i>3/29/24 11:00</i></del> <i>9:30 3/29/24</i>	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
<b>For Lab Use Only</b>		Beacon Job No: <i>7649</i>		Beacon Proposal: <i>230427H01</i>		Analytical Method:	
Courier Name: <i>FedEx</i>		Shipment Condition: <i>Good</i>		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: <i>6047395</i>	



Beacon Environmental

526 Underwood Lane  
Bel Air, MD 21014 USA  
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H02

Laboratory Work Order: 0007650

**Project Description:**

Reedsburg Cleaners

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

April 09, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager



# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table	7
Detailed Analytical Results	8
0007650-01 - 08B_IAB_04_20240328	9
0007650-02 - 08B_IA1_05_20240328	10
0007650-03 - 08B_IA2_06_20240328	11
0007650-04 - 08B_OA_02_20240328	12
QC Summaries	13
Additional QC Information	30
Sample Result Calculations	31
Equation	32
LOD/MRL Calculation Table	33
Certifications	34
Notes and Definitions	35
Sample Management Records	36
Chain of Custody	37

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007650-01 Sampler Type:	08B_IAB_04_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Indoor Air
0007650-02 Sampler Type:	08B_IA1_05_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Indoor Air
0007650-03 Sampler Type:	08B_IA2_06_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Indoor Air
0007650-04 Sampler Type:	08B_OA_02_20240328 Beacon Passive Sampler	03/29/2024	TO-17 (Passive)	Ambient Air

#### Project Completeness

**Samples Received:** 4  
**Samples Analyzed:** 4

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs) for EPA Method TO-17**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### *Summary of Compound Detections- Concentration*

Lab Sample ID: 0007650-02	<b>08B_IA1_05_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>0.628</b>	J	8.074	1.20	0.601	Kb24040222.D

Lab Sample ID: 0007650-03	<b>08B_IA2_06_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>1.04</b>	J	8.071	1.20	0.601	Ka24040307.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOD (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Tetrachloroethene	2	0.601	1.04

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

*Detailed Analytical Results*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

Lab Sample ID: 0007650-01	<b>08B_IAB_04_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.304	U	0.304	0.608	04/03/2024 07:29	Kb24040229.D
trans-1,2-Dichloroethene	156-60-5	<0.560	U	0.560	1.12	04/03/2024 07:29	Kb24040229.D
cis-1,2-Dichloroethene	156-59-2	<0.465	U	0.465	0.929	04/03/2024 07:29	Kb24040229.D
Trichloroethene	79-01-6	<0.746	U	0.746	1.49	04/03/2024 07:29	Kb24040229.D
Tetrachloroethene	127-18-4	<0.601	U	0.601	1.20	04/03/2024 07:29	Kb24040229.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	99.2%	70-130			04/03/2024 07:29	Kb24040229.D
Surrogate: Toluene-d8	2037-26-5	97.6%	70-130			04/03/2024 07:29	Kb24040229.D
Surrogate: Bromofluorobenzene	460-00-4	88.6%	70-130			04/03/2024 07:29	Kb24040229.D



<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

Lab Sample ID: 0007650-02	<b>08B_IA1_05_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.304	U	0.304	0.608	04/03/2024 01:51	Kb24040222.D
trans-1,2-Dichloroethene	156-60-5	<0.560	U	0.560	1.12	04/03/2024 01:51	Kb24040222.D
cis-1,2-Dichloroethene	156-59-2	<0.465	U	0.465	0.930	04/03/2024 01:51	Kb24040222.D
Trichloroethene	79-01-6	<0.746	U	0.746	1.49	04/03/2024 01:51	Kb24040222.D
<b>Tetrachloroethene</b>	127-18-4	<b>0.628</b>	J	0.601	1.20	04/03/2024 01:51	Kb24040222.D
<i>Analyte</i>	<i>CAS#</i>	<i>% Recovery</i>		<i>Recovery Limits</i>	<i>Q</i>	<i>Analyzed</i>	<i>File ID</i>
<i>Surrogate: 1,2-DCA-d4</i>	17060-07-0	96.4%		70-130		04/03/2024 01:51	Kb24040222.D
<i>Surrogate: Toluene-d8</i>	2037-26-5	91.9%		70-130		04/03/2024 01:51	Kb24040222.D
<i>Surrogate: Bromofluorobenzene</i>	460-00-4	86.3%		70-130		04/03/2024 01:51	Kb24040222.D

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

Lab Sample ID: 0007650-03	<b>08B_IA2_06_20240328</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.304	U	0.304	0.608	04/03/2024 12:04	Ka24040307.D
trans-1,2-Dichloroethene	156-60-5	<0.560	U	0.560	1.12	04/03/2024 12:04	Ka24040307.D
cis-1,2-Dichloroethene	156-59-2	<0.465	U	0.465	0.930	04/03/2024 12:04	Ka24040307.D
Trichloroethene	79-01-6	<0.747	U	0.747	1.49	04/03/2024 12:04	Ka24040307.D
<b>Tetrachloroethene</b>	127-18-4	<b>1.04</b>	J	0.601	1.20	04/03/2024 12:04	Ka24040307.D
<i>Analyte</i>	<i>CAS#</i>	<i>% Recovery</i>		<i>Recovery Limits</i>	<i>Q</i>	<i>Analyzed</i>	<i>File ID</i>
<i>Surrogate: 1,2-DCA-d4</i>	17060-07-0	98.8%		70-130		04/03/2024 12:04	Ka24040307.D
<i>Surrogate: Toluene-d8</i>	2037-26-5	87.1%		70-130		04/03/2024 12:04	Ka24040307.D
<i>Surrogate: Bromofluorobenzene</i>	460-00-4	93.3%		70-130		04/03/2024 12:04	Ka24040307.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

Lab Sample ID: 0007650-04

**08B\_OA\_02\_20240328**

Method: TO-17 (Passive)

Ambient Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOD (µg/m <sup>3</sup> )	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.315	U	0.315	0.629	04/03/2024 02:48	Kb24040224.D
trans-1,2-Dichloroethene	156-60-5	<0.579	U	0.579	1.16	04/03/2024 02:48	Kb24040224.D
cis-1,2-Dichloroethene	156-59-2	<0.481	U	0.481	0.962	04/03/2024 02:48	Kb24040224.D
Trichloroethene	79-01-6	<0.772	U	0.772	1.54	04/03/2024 02:48	Kb24040224.D
Tetrachloroethene	127-18-4	<0.622	U	0.622	1.24	04/03/2024 02:48	Kb24040224.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	90.8%	70-130			04/03/2024 02:48	Kb24040224.D
Surrogate: Toluene-d8	2037-26-5	90.9%	70-130			04/03/2024 02:48	Kb24040224.D
Surrogate: Bromofluorobenzene	460-00-4	89.4%	70-130			04/03/2024 02:48	Kb24040224.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24A120 - Instrument: K System - File ID: Kb24013016.D**
***B24A120-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.7	10	5	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	52.6	10	5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	50.6	10	5	ng	50.0		101	70-130			
Trichloroethene	49.6	10	5	ng	50.0		99.2	70-130			
Tetrachloroethene	46.3	10	5	ng	50.0		92.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.5</i>			<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.1</i>			<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.9</i>			<i>ng</i>	<i>50.0</i>		<i>91.9</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24A120 - Instrument: K System - File ID: Kb24013020.D**
***B24A120-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>			<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>			<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.4</i>			<i>ng</i>	<i>100</i>		<i>91.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040302.D**
**24D0009-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.2	10	5	ng	50.0		82.3	70-130			
trans-1,2-Dichloroethene	46.3	10	5	ng	50.0		92.5	70-130			
cis-1,2-Dichloroethene	48.3	10	5	ng	50.0		96.7	70-130			
Trichloroethene	49.5	10	5	ng	50.0		99.0	70-130			
Tetrachloroethene	41.8	10	5	ng	50.0		83.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>			<i>ng</i>	<i>50.0</i>		<i>99.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>45.0</i>			<i>ng</i>	<i>50.0</i>		<i>90.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>37.7</i>			<i>ng</i>	<i>50.0</i>		<i>75.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Batch: 24D0009 - Instrument: K System - File ID: Ka24040303.D**
**24D0009-BLK1 (Lab Blank)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.304	0.608	0.304	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<0.559	1.12	0.559	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.464	0.929	0.464	µg/m <sup>3</sup>							U
Trichloroethene	<0.746	1.49	0.746	µg/m <sup>3</sup>							U
Tetrachloroethene	<0.600	1.20	0.600	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	99.9			ng	100		99.9	70-130			
<i>Surrogate: Toluene-d8</i>	99.2			ng	100		99.2	70-130			
<i>Surrogate: Bromofluorobenzene</i>	83.5			ng	100		83.5	70-130			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040304.D**
***B24D010-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	46.5	10	5	ng	50.0		93.1	70-130			
trans-1,2-Dichloroethene	47.9	10	5	ng	50.0		95.7	70-130			
cis-1,2-Dichloroethene	49.7	10	5	ng	50.0		99.5	70-130			
Trichloroethene	51.9	10	5	ng	50.0		104	70-130			
Tetrachloroethene	47.4	10	5	ng	50.0		94.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.1</i>			<i>ng</i>	<i>50.0</i>		<i>98.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.8</i>			<i>ng</i>	<i>50.0</i>		<i>97.5</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>40.4</i>			<i>ng</i>	<i>50.0</i>		<i>80.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040312.D**
***B24D010-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	5	ng	50.0		79.4	70-130			
trans-1,2-Dichloroethene	47.3	10	5	ng	50.0		94.5	70-130			
cis-1,2-Dichloroethene	48.4	10	5	ng	50.0		96.9	70-130			
Trichloroethene	48.7	10	5	ng	50.0		97.4	70-130			
Tetrachloroethene	45.9	10	5	ng	50.0		91.8	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.1</i>			<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.1</i>			<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.4</i>			<i>ng</i>	<i>50.0</i>		<i>84.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D010 - Instrument: K System - File ID: Ka24040313.D**
***B24D010-CCB1 (Lab Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>102</i>			<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>			<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>84.6</i>			<i>ng</i>	<i>100</i>		<i>84.6</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Batch: 24D0008 - Instrument: K System - File ID: Kb24040202.D**
**24D0008-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	40.5	10	5	ng	50.0		81.0	70-130			
trans-1,2-Dichloroethene	45.5	10	5	ng	50.0		91.0	70-130			
cis-1,2-Dichloroethene	47.3	10	5	ng	50.0		94.5	70-130			
Trichloroethene	48.0	10	5	ng	50.0		96.1	70-130			
Tetrachloroethene	42.3	10	5	ng	50.0		84.6	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.0</i>			<i>ng</i>	<i>50.0</i>		<i>97.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>43.4</i>			<i>ng</i>	<i>50.0</i>		<i>86.8</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>37.1</i>			<i>ng</i>	<i>50.0</i>		<i>74.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Batch: 24D0008 - Instrument: K System - File ID: Kb24040203.D**
**24D0008-BLK1 (Lab Blank)**

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.304	0.608	0.304	µg/m³							U
trans-1,2-Dichloroethene	<0.559	1.12	0.559	µg/m³							U
cis-1,2-Dichloroethene	<0.464	0.929	0.464	µg/m³							U
Trichloroethene	<0.746	1.49	0.746	µg/m³							U
Tetrachloroethene	<0.600	1.20	0.600	µg/m³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>99.6</i>			<i>ng</i>	<i>100</i>		<i>99.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>100</i>			<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>82.3</i>			<i>ng</i>	<i>100</i>		<i>82.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040204.D**
***B24D009-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	5	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	48.2	10	5	ng	50.0		96.4	70-130			
cis-1,2-Dichloroethene	49.3	10	5	ng	50.0		98.5	70-130			
Trichloroethene	50.1	10	5	ng	50.0		100	70-130			
Tetrachloroethene	48.5	10	5	ng	50.0		97.0	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.9</i>			<i>ng</i>	<i>50.0</i>		<i>99.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.3</i>			<i>ng</i>	<i>50.0</i>		<i>96.7</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>40.5</i>			<i>ng</i>	<i>50.0</i>		<i>81.1</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040215.D**
***B24D009-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.4	10	5	ng	50.0		82.9	70-130			
trans-1,2-Dichloroethene	47.0	10	5	ng	50.0		94.1	70-130			
cis-1,2-Dichloroethene	47.7	10	5	ng	50.0		95.4	70-130			
Trichloroethene	48.9	10	5	ng	50.0		97.9	70-130			
Tetrachloroethene	46.4	10	5	ng	50.0		92.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.8</i>			<i>ng</i>	<i>50.0</i>		<i>99.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.6</i>			<i>ng</i>	<i>50.0</i>		<i>97.2</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.1</i>			<i>ng</i>	<i>50.0</i>		<i>84.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040216.D**
***B24D009-CCB1 (Lab Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>102</i>			<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>98.7</i>			<i>ng</i>	<i>100</i>		<i>98.7</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>80.7</i>			<i>ng</i>	<i>100</i>		<i>80.7</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040230.D**
***B24D009-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.3	10	5	ng	50.0		82.6	70-130			
trans-1,2-Dichloroethene	47.7	10	5	ng	50.0		95.4	70-130			
cis-1,2-Dichloroethene	48.9	10	5	ng	50.0		97.8	70-130			
Trichloroethene	49.2	10	5	ng	50.0		98.5	70-130			
Tetrachloroethene	45.8	10	5	ng	50.0		91.6	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.5</i>			<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.2</i>			<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>42.2</i>			<i>ng</i>	<i>50.0</i>		<i>84.4</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24D009 - Instrument: K System - File ID: Kb24040231.D**
***B24D009-CCB2 (Lab Blank)***

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	99.2			ng	100		99.2	70-130			
<i>Surrogate: Toluene-d8</i>	102			ng	100		102	70-130			
<i>Surrogate: Bromofluorobenzene</i>	85.3			ng	100		85.3	70-130			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 24D0009-BS1 File ID: Ka24040302.D**

Analyzed: 4/3/24 10:30

**LCSD: B24D010-ICV1 File ID: Ka24040304.D**

Analyzed: 4/3/24 9:26

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	41.15	82.3	50	46.54	93.10	70-130	12.29	30	
trans-1,2-Dichloroethene	156-60-5	46.27	92.54	50	47.85	95.70	70-130	3.36	30	
cis-1,2-Dichloroethene	156-59-2	48.33	96.66	50	49.73	99.50	70-130	2.86	30	
Trichloroethene	79-01-6	49.52	99.04	50	51.86	104.00	70-130	4.62	30	
Tetrachloroethene	127-18-4	41.77	83.54	50	47.36	94.70	70-130	12.54	30	

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners <b>Site Location:</b> Wisconsin <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007650 <b>Reported:</b> 04/09/2024
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 24D0008-BS1 File ID: Kb24040202.D**

Analyzed: 4/2/24 17:57

**LCSD: B24D009-ICV1 File ID: Kb24040204.D**

Analyzed: 4/2/24 17:08

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	40.48	80.96	50	51.54	103.00	70-130	24.04	30	
trans-1,2-Dichloroethene	156-60-5	45.48	90.96	50	48.18	96.40	70-130	5.77	30	
cis-1,2-Dichloroethene	156-59-2	47.25	94.5	50	49.26	98.50	70-130	4.17	30	
Trichloroethene	79-01-6	48.03	96.06	50	50.05	100.00	70-130	4.12	30	
Tetrachloroethene	127-18-4	42.30	84.6	50	48.51	97.00	70-130	13.68	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007650-01	<b>Sample Name:</b> 08B_IAB_04_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,137	1.00	0.817	U	U	Kb24040229.D
trans-1,2-Dichloroethene	20,137	1.00	0.444	U	U	Kb24040229.D
cis-1,2-Dichloroethene	20,137	1.00	0.535	U	U	Kb24040229.D
Trichloroethene	20,137	1.00	0.333	U	U	Kb24040229.D
Tetrachloroethene	20,137	1.00	0.413	U	U	Kb24040229.D

<b>Lab ID:</b> 0007650-02	<b>Sample Name:</b> 08B_IA1_05_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,126	1.00	0.817	U	U	Kb24040222.D
trans-1,2-Dichloroethene	20,126	1.00	0.444	U	U	Kb24040222.D
cis-1,2-Dichloroethene	20,126	1.00	0.535	U	U	Kb24040222.D
Trichloroethene	20,126	1.00	0.333	U	U	Kb24040222.D
Tetrachloroethene	20,126	1.00	0.413	5.23	0.628	Kb24040222.D

<b>Lab ID:</b> 0007650-03	<b>Sample Name:</b> 08B_IA2_06_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,120	1.00	0.817	U	U	Ka24040307.D
trans-1,2-Dichloroethene	20,120	1.00	0.444	U	U	Ka24040307.D
cis-1,2-Dichloroethene	20,120	1.00	0.535	U	U	Ka24040307.D
Trichloroethene	20,120	1.00	0.333	U	U	Ka24040307.D
Tetrachloroethene	20,120	1.00	0.413	8.67	1.04	Ka24040307.D

<b>Lab ID:</b> 0007650-04	<b>Sample Name:</b> 08B_OA_02_20240328	<b>̄ Temp (°C):</b> 1.67
---------------------------	--	--------------------------

Vinyl Chloride	20,146	1.00	0.789	U	U	Kb24040224.D
trans-1,2-Dichloroethene	20,146	1.00	0.428	U	U	Kb24040224.D
cis-1,2-Dichloroethene	20,146	1.00	0.516	U	U	Kb24040224.D
Trichloroethene	20,146	1.00	0.321	U	U	Kb24040224.D
Tetrachloroethene	20,146	1.00	0.399	U	U	Kb24040224.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

**Method Detection and Reporting Limit Calculations (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

<b>Lab ID:</b> 0007650-01	<b>Sample Name:</b> 08B_IAB_04_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,137	1.00	0.817	10.00	5.00	0.608	0.304
trans-1,2-Dichloroethene	20,137	1.00	0.444	10.00	5.00	1.12	0.560
cis-1,2-Dichloroethene	20,137	1.00	0.535	10.00	5.00	0.929	0.465
Trichloroethene	20,137	1.00	0.333	10.00	5.00	1.49	0.746
Tetrachloroethene	20,137	1.00	0.413	10.00	5.00	1.20	0.601

<b>Lab ID:</b> 0007650-02	<b>Sample Name:</b> 08B_IA1_05_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,126	1.00	0.817	10.00	5.00	0.608	0.304
trans-1,2-Dichloroethene	20,126	1.00	0.444	10.00	5.00	1.12	0.560
cis-1,2-Dichloroethene	20,126	1.00	0.535	10.00	5.00	0.930	0.465
Trichloroethene	20,126	1.00	0.333	10.00	5.00	1.49	0.746
Tetrachloroethene	20,126	1.00	0.413	10.00	5.00	1.20	0.601

<b>Lab ID:</b> 0007650-03	<b>Sample Name:</b> 08B_IA2_06_20240328	<b>̄ Temp (°C):</b> 21.60
---------------------------	---	---------------------------

Vinyl Chloride	20,120	1.00	0.817	10.00	5.00	0.608	0.304
trans-1,2-Dichloroethene	20,120	1.00	0.444	10.00	5.00	1.12	0.560
cis-1,2-Dichloroethene	20,120	1.00	0.535	10.00	5.00	0.930	0.465
Trichloroethene	20,120	1.00	0.333	10.00	5.00	1.49	0.747
Tetrachloroethene	20,120	1.00	0.413	10.00	5.00	1.20	0.601

<b>Lab ID:</b> 0007650-04	<b>Sample Name:</b> 08B_OA_02_20240328	<b>̄ Temp (°C):</b> 1.67
---------------------------	--	--------------------------

Vinyl Chloride	20,146	1.00	0.789	10.00	5.00	0.629	0.315
trans-1,2-Dichloroethene	20,146	1.00	0.428	10.00	5.00	1.16	0.579
cis-1,2-Dichloroethene	20,146	1.00	0.516	10.00	5.00	0.962	0.481
Trichloroethene	20,146	1.00	0.321	10.00	5.00	1.54	0.772
Tetrachloroethene	20,146	1.00	0.399	10.00	5.00	1.24	0.622



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners  
**Site Location:** Wisconsin  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007650  
**Reported:** 04/09/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2025	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

### Qualifiers/Notes and Definitions

#### General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

#### Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners  
Site Location: Wisconsin  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007650  
Reported: 04/09/2024

## *Sample Management Records*

j.kunze@baywest.com

(ERP 0257001682)

<b>Client Information</b>		Project Manager: Jason Kunze		Client PO: J2303821 P01309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company: Bay West LLC		Project Name: Reedsburg Cleaners		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days					
Address: 5 Empire Dr.		Location: 125 N Locust Street (PSIB)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C					
City / State / Zip: St. Paul / MN / 55103		Submitted by: Anders Santelman		Email: asantelman@baywest.com					
Phone: 651-724-9757		Email: asantelman@baywest.com							
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes			
08B-IAB-04-20240328	3/14/24	1016	3/28/24	0953	21.6	B-IAB-04	X		
08B-IA1-05-20240328	3/14/24	1022	3/28/24	0948	21.6	B-IA1-05	X		
08B-IA2-06-20240328	3/14/24	1025	3/28/24	0945	21.6	B-IA2-06	X		
08B-OA-02-20240328	3/14/24	1033	3/28/24	1019	1.667°	B-OA-02		X	
Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE and vinyl chloride									
Relinquished by (signature):		Date / Time: 3/28/24 1100		Received by (signature):		Date / Time: <del>4/1/24 9:30</del> 3/29/24 11:00			
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time: <del>4/1/24</del>			
<b>For Lab Use Only</b>		Beacon Job No: 7650		Beacon Proposal: 230427H02					
Courier Name: FedEx		Shipment Condition: Good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 6047395			

***335 E Main Street***



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007118

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table-Mass	8
Data Summary Table-Concentration	9
Detailed Analytical Results	10
- Mass	11
0007118-01 - 08C_SSV_03_20230801	12
- Concentration	13
0007118-01 - 08C_SSV_03_20230801	14
QC Summaries	15
Additional QC Information	28
Sample Result Calculations	29
Equation	29
MRL Calculation Table	30
Certifications	31
Notes and Definitions	32
Sample Management Records	33
Chain of Custody	34

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007118-01	08C_SSV_03_20230801	08/03/2023	TO-17 (Passive)	Soil Gas
Sampler Type:	Beacon Passive Sampler			

#### Project Completeness

Samples Received: 1  
Samples Analyzed: 1



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

### *Summary of Compound Detections- Mass*

Lab Sample ID: 0007118-01	<b>08C_SSV_03_20230801</b>	Method: TO-17 (Passive)
Soil Gas		

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
<b>Trichloroethene</b>	79-01-6	<b>106</b>		5.911	10.0	Ka23080719.D
<b>Tetrachloroethene</b>	127-18-4	<b>1,700</b>		8.157	10.0	Ka23080719.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0007118-01	<b>08C_SSV_03_20230801</b>	Method: TO-17 (Passive)
Soil Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Trichloroethene</b>	79-01-6	<b>16.1</b>		5.911	1.52	Ka23080719.D
<b>Tetrachloroethene</b>	127-18-4	<b>208</b>		8.157	1.22	Ka23080719.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023*Data Summary Table- Mass*

<b>Compound</b>	<b>Frequency</b>	<b>LOQ (ng)</b>	<b>Max Value (ng)</b>
Trichloroethene	1	10	106
Tetrachloroethene	1	10	1,700

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOQ (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Trichloroethene	1	1.52	16.1
Tetrachloroethene	1	1.22	208

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

*Detailed Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

*Detailed Analytical Results- Mass*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

Lab Sample ID: 0007118-01

**08C\_SSV\_03\_20230801**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	08/07/2023 23:06	Ka23080719.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	08/07/2023 23:06	Ka23080719.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	08/07/2023 23:06	Ka23080719.D	
<b>Trichloroethene</b>	79-01-6	<b>106</b>	10.0	08/07/2023 23:06	Ka23080719.D	
<b>Tetrachloroethene</b>	127-18-4	<b>1,700</b>	10.0	08/07/2023 23:06	Ka23080719.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	92.9%	70-130		08/07/2023 23:06	Ka23080719.D
Surrogate: Toluene-d8	2037-26-5	95.8%	70-130		08/07/2023 23:06	Ka23080719.D
Surrogate: Bromofluorobenzene	460-00-4	93.4%	70-130		08/07/2023 23:06	Ka23080719.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

*Detailed Analytical Results- Concentration*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

Lab Sample ID: 0007118-01

**08C\_SSV\_03\_20230801**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.619		0.619	08/07/2023 23:06	Ka23080719.D
trans-1,2-Dichloroethene	156-60-5	<1.14		1.14	08/07/2023 23:06	Ka23080719.D
cis-1,2-Dichloroethene	156-59-2	<0.946		0.946	08/07/2023 23:06	Ka23080719.D
<b>Trichloroethene</b>	79-01-6	<b>16.1</b>		1.52	08/07/2023 23:06	Ka23080719.D
<b>Tetrachloroethene</b>	127-18-4	<b>208</b>		1.22	08/07/2023 23:06	Ka23080719.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	92.9%	70-130		08/07/2023 23:06	Ka23080719.D
Surrogate: Toluene-d8	2037-26-5	95.8%	70-130		08/07/2023 23:06	Ka23080719.D
Surrogate: Bromofluorobenzene	460-00-4	93.4%	70-130		08/07/2023 23:06	Ka23080719.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**
***B23G105-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**
***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**
**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**
***B23H016-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.2</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.8</i>		<i>ng</i>	<i>50.0</i>		<i>87.5</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.619	0.619	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.14	1.14	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.946	0.946	µg/m <sup>3</sup>							U
Trichloroethene	<1.52	1.52	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.22	1.22	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**
***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080723.D**
***B23H016-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	35.0	10	ng	50.0		70.0	70-130			
trans-1,2-Dichloroethene	48.5	10	ng	50.0		96.9	70-130			
cis-1,2-Dichloroethene	48.6	10	ng	50.0		97.2	70-130			
Trichloroethene	46.9	10	ng	50.0		93.7	70-130			
Tetrachloroethene	47.2	10	ng	50.0		94.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.2</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.9</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.1</i>		<i>ng</i>	<i>50.0</i>		<i>90.1</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**
***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23H0012-BS1 File ID: Ka23080702.D**

Analyzed: 8/7/23 12:49

**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007118 <b>Reported:</b> 08/14/2023
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

**Lab ID:** 0007118-01      **Sample Name:** 08C\_SSV\_03\_20230801

Vinyl Chloride	19,937	1.00	0.810	U	U	Ka23080719.D
trans-1,2-Dichloroethene	19,937	1.00	0.440	U	U	Ka23080719.D
cis-1,2-Dichloroethene	19,937	1.00	0.530	U	U	Ka23080719.D
Trichloroethene	19,937	1.00	0.330	106.03	16.1	Ka23080719.D
Tetrachloroethene	19,937	1.00	0.410	1703.99	208	Ka23080719.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where:
- C = concentration (µg/m<sup>3</sup>)
  - M = mass (ng)
  - DF = dilution factor
  - Uc = uptake rate (ml/min), corrected
  - t = sampling time (minutes)
  - U = compound specific uptake rate
  - Tu = uptake rate study temperature
  - Ts = sample average temperature

**Note:** Tu is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007118-01

**Sample Name:** 08C\_SSV\_03\_20230801

Vinyl Chloride	19,937	1.00	0.810	10.0	0.619
trans-1,2-Dichloroethene	19,937	1.00	0.440	10.0	1.14
cis-1,2-Dichloroethene	19,937	1.00	0.530	10.0	0.946
Trichloroethene	19,937	1.00	0.330	10.0	1.52
Tetrachloroethene	19,937	1.00	0.410	10.0	1.22

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007118  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

### Qualifiers/Notes and Definitions

*General Definitions:*

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007118  
Reported: 08/14/2023

## *Sample Management Records*

Project Information			Client Information				
Site Name: Reedsburg Cleaners (ERP 0257001682)			Company Name: Bay West LLC		Project Manager: Jason Kunze (jkunze@baywest.com)		
Site Location: 335 E Main St (PSI C)			Office Location: 5 Empire Drive, St. Paul, MN 55103		Client PO: J230382 / PO1309		
			Submitted by: Anders Santelman		Turn around time (check one):		
			Email: asantelman@baywest.com		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days		
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ■ cm ■ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08C_SSV_03_20230801	7/18/23	1425	8/1/23	1042	5 inches	Concrete	C_SSV_03
Special Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride							
Relinquished by (signature): <i>ch</i>		Date / Time: 08.02.2023/1000		Received by (signature): <i>Nicole Kup</i>		Date / Time: 8/3/23 12:42	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
<b>For Lab Use Only</b>		Beacon Job No: 7118		Beacon Proposal: 230427H01		Analytical Method:	
Courier Name: FedEx		Shipment Condition: Good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5504084	



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007119

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager



# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table	7
Detailed Analytical Results	8
0007119-01 - 08C_Sump_01_20230801	9
0007119-02 - 08C_IA1_07_20230801	10
0007119-03 - 08C_OA_01_20230801	11
QC Summaries	12
Additional QC Information	23
Sample Result Calculations	24
Equation	25
MRL Calculation Table	26
Certifications	27
Notes and Definitions	28
Sample Management Records	29
Chain of Custody	30

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007119-01 Sampler Type:	08C_Sump_01_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Crawl Space Air
0007119-02 Sampler Type:	08C_IA1_07_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Indoor Air
0007119-03 Sampler Type:	08C_OA_01_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Ambient Air

**Project Completeness**
**Samples Received: 3**  
**Samples Analyzed: 3**

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007119  
Reported: 08/14/2023

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007119  
Reported: 08/14/2023

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

### *Summary of Compound Detections- Concentration*

Lab Sample ID: 0007119-01	<b>08C_Sump_01_20230801</b> Crawl Space Air	Method: TO-17 (Passive)
---------------------------	--	-------------------------

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>4.94</b>		8.157	1.21	Ka23080720.D

Lab Sample ID: 0007119-02	<b>08C_IA1_07_20230801</b> Indoor Air	Method: TO-17 (Passive)
---------------------------	--	-------------------------

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>4.66</b>		8.157	1.21	Ka23080721.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOQ (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Tetrachloroethene	2	1.21	4.94

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007119  
Reported: 08/14/2023

*Detailed Analytical Results*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007119 <b>Reported:</b> 08/14/2023
---	--	--

Lab Sample ID: 0007119-01	<b>08C_Sump_01_20230801</b>	Method: TO-17 (Passive)
Crawl Space Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.614		0.614	08/07/2023 23:34	Ka23080720.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/07/2023 23:34	Ka23080720.D
cis-1,2-Dichloroethene	156-59-2	<0.939		0.939	08/07/2023 23:34	Ka23080720.D
Trichloroethene	79-01-6	<1.51		1.51	08/07/2023 23:34	Ka23080720.D
<b>Tetrachloroethene</b>	127-18-4	<b>4.94</b>		1.21	08/07/2023 23:34	Ka23080720.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.5%	70-130		08/07/2023 23:34	Ka23080720.D
Surrogate: Toluene-d8	2037-26-5	98.1%	70-130		08/07/2023 23:34	Ka23080720.D
Surrogate: Bromofluorobenzene	460-00-4	94.1%	70-130		08/07/2023 23:34	Ka23080720.D



<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007119 <b>Reported:</b> 08/14/2023
---	--	--

Lab Sample ID: 0007119-02	<b>08C_IA1_07_20230801</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.615		0.615	08/08/2023 00:03	Ka23080721.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/08/2023 00:03	Ka23080721.D
cis-1,2-Dichloroethene	156-59-2	<0.940		0.940	08/08/2023 00:03	Ka23080721.D
Trichloroethene	79-01-6	<1.51		1.51	08/08/2023 00:03	Ka23080721.D
<b>Tetrachloroethene</b>	127-18-4	<b>4.66</b>		1.21	08/08/2023 00:03	Ka23080721.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130		08/08/2023 00:03	Ka23080721.D
Surrogate: Toluene-d8	2037-26-5	94.7%	70-130		08/08/2023 00:03	Ka23080721.D
Surrogate: Bromofluorobenzene	460-00-4	92.4%	70-130		08/08/2023 00:03	Ka23080721.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

Lab Sample ID: 0007119-03

**08C\_OA\_01\_20230801**

Method: TO-17 (Passive)

Ambient Air

Analyte	CAS#	Result ( $\mu\text{g}/\text{m}^3$ )	Q	LOQ ( $\mu\text{g}/\text{m}^3$ )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.616		0.616	08/08/2023 00:33	Ka23080722.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/08/2023 00:33	Ka23080722.D
cis-1,2-Dichloroethene	156-59-2	<0.941		0.941	08/08/2023 00:33	Ka23080722.D
Trichloroethene	79-01-6	<1.51		1.51	08/08/2023 00:33	Ka23080722.D
Tetrachloroethene	127-18-4	<1.22		1.22	08/08/2023 00:33	Ka23080722.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.1%	70-130		08/08/2023 00:33	Ka23080722.D
Surrogate: Toluene-d8	2037-26-5	95.3%	70-130		08/08/2023 00:33	Ka23080722.D
Surrogate: Bromofluorobenzene	460-00-4	90.9%	70-130		08/08/2023 00:33	Ka23080722.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007119  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**
***B23G105-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**
***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**
**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**
***B23H016-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.2</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.8</i>		<i>ng</i>	<i>50.0</i>		<i>87.5</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**
**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.614	0.614	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.939	0.939	µg/m <sup>3</sup>							U
Trichloroethene	<1.51	1.51	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.21	1.21	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>106</i>		<i>ng</i>	<i>100</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>85.2</i>		<i>ng</i>	<i>100</i>		<i>85.2</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**
***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**
***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080723.D**
***B23H016-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	35.0	10	ng	50.0		70.0	70-130			
trans-1,2-Dichloroethene	48.5	10	ng	50.0		96.9	70-130			
cis-1,2-Dichloroethene	48.6	10	ng	50.0		97.2	70-130			
Trichloroethene	46.9	10	ng	50.0		93.7	70-130			
Tetrachloroethene	47.2	10	ng	50.0		94.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.2</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.9</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.1</i>		<i>ng</i>	<i>50.0</i>		<i>90.1</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**
***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23H0012-BS1 File ID: Ka23080702.D**

Analyzed: 8/7/23 12:49

**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007119  
Reported: 08/14/2023

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007119-01	<b>Sample Name:</b> 08C_Sump_01_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	--	---------------------------

Vinyl Chloride	19,924	1.00	0.817	U	U	Ka23080720.D
trans-1,2-Dichloroethene	19,924	1.00	0.444	U	U	Ka23080720.D
cis-1,2-Dichloroethene	19,924	1.00	0.535	U	U	Ka23080720.D
Trichloroethene	19,924	1.00	0.333	U	U	Ka23080720.D
Tetrachloroethene	19,924	1.00	0.414	40.68	4.94	Ka23080720.D

<b>Lab ID:</b> 0007119-02	<b>Sample Name:</b> 08C_IA1_07_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	---	---------------------------

Vinyl Chloride	19,910	1.00	0.817	U	U	Ka23080721.D
trans-1,2-Dichloroethene	19,910	1.00	0.444	U	U	Ka23080721.D
cis-1,2-Dichloroethene	19,910	1.00	0.535	U	U	Ka23080721.D
Trichloroethene	19,910	1.00	0.333	U	U	Ka23080721.D
Tetrachloroethene	19,910	1.00	0.414	38.40	4.66	Ka23080721.D

<b>Lab ID:</b> 0007119-03	<b>Sample Name:</b> 08C_OA_01_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	--	---------------------------

Vinyl Chloride	19,871	1.00	0.817	U	U	Ka23080722.D
trans-1,2-Dichloroethene	19,871	1.00	0.444	U	U	Ka23080722.D
cis-1,2-Dichloroethene	19,871	1.00	0.535	U	U	Ka23080722.D
Trichloroethene	19,871	1.00	0.333	U	U	Ka23080722.D
Tetrachloroethene	19,871	1.00	0.414	U	U	Ka23080722.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007119-01      **Sample Name:** 08C\_Sump\_01\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	19,924	1.00	0.817	10.0	0.614
trans-1,2-Dichloroethene	19,924	1.00	0.444	10.0	1.13
cis-1,2-Dichloroethene	19,924	1.00	0.535	10.0	0.939
Trichloroethene	19,924	1.00	0.333	10.0	1.51
Tetrachloroethene	19,924	1.00	0.414	10.0	1.21

**Lab ID:** 0007119-02      **Sample Name:** 08C\_IA1\_07\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	19,910	1.00	0.817	10.0	0.615
trans-1,2-Dichloroethene	19,910	1.00	0.444	10.0	1.13
cis-1,2-Dichloroethene	19,910	1.00	0.535	10.0	0.940
Trichloroethene	19,910	1.00	0.333	10.0	1.51
Tetrachloroethene	19,910	1.00	0.414	10.0	1.21

**Lab ID:** 0007119-03      **Sample Name:** 08C\_OA\_01\_20230801      **̄ Temp (°C):** 21.66

Vinyl Chloride	19,871	1.00	0.817	10.0	0.616
trans-1,2-Dichloroethene	19,871	1.00	0.444	10.0	1.13
cis-1,2-Dichloroethene	19,871	1.00	0.535	10.0	0.941
Trichloroethene	19,871	1.00	0.333	10.0	1.51
Tetrachloroethene	19,871	1.00	0.414	10.0	1.22

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007119  
**Reported:** 08/14/2023

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007119  
Reported: 08/14/2023

## *Sample Management Records*

<b>Client Information</b>		Project Manager: Jason Kunze (jkunze@baywest.com)			Client PO: J230382 / PO1309		INDOOR AIR AMBIENT AIR CRAWL SPACE SEWER GAS					
Company: Bay West LLC		Project Name: Reedsburg Cleaners (ERP 0257001682)			Turn around time (check one):							
Address: 5 Empire Dr.		Location: 335 E Main St (PSIC)			<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) _____ days							
City / State / Zip: St. Paul, MN, 55103		Submitted by: Anders Santelman			Analysis:							
Phone: 651-724-9757		Email: asantelman@baywest.com			<input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C							
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes						
08C_Sump_01_20230801	7/18/2023	1433	8/1/2023	1037	21.66	C_Sump_01					X	
08C_IA1_07_20230801	7/18/2023	1442	8/1/2023	1032	21.66	C_IA1_07	X					
08C_OA_01_20230801	7/18/2023	1510	8/1/2023	1021	21.66	C_OA_01		X				
Special Notes / Instructions: <span style="float: right;"><b>Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</b></span>												
Relinquished by (signature): <i>oh</i>	Date / Time: 04.02.2023/1000	Received by (signature): <i>Mirko Ruff</i>	Date / Time: 8/3/23 12:42									
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:									
<b>For Lab Use Only</b>	Beacon Job No: 7119			Beacon Proposal: 230427H01 & 230427H02								
Courier Name: FedEx	Shipment Condition: Good			Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a				Custody Seal No: 5504084				



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007391

### Project Description:

Reedsburg Cleaners (PSI C)

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

January 02, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table-Concentration	8
Detailed Analytical Results	9
- Mass	10
0007391-01 - 08C_SSV_03_20231219	11
- Concentration	12
0007391-01 - 08C_SSV_03_20231219	13
QC Summaries	14
Additional QC Information	22
Sample Result Calculations	23
Equation	23
MRL Calculation Table	24
Certifications	25
Notes and Definitions	26
Sample Management Records	27
Chain of Custody	28

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007391-01	08C_SSV_03_20231219	12/20/2023	TO-17 (Passive)	Soil Gas
Sampler Type: Beacon Passive Sampler				

#### Project Completeness

**Samples Received:** 1  
**Samples Analyzed:** 1



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007391  
Reported: 01/02/2024

### *Case Narrative*

#### **U.S. EPA Method TO-17**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

#### **Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

#### **Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Summary of Compound Detections- Mass*

Lab Sample ID: 0007391-01	<b>08C_SSV_03_20231219</b>	Method: TO-17 (Passive)
Soil Gas		

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
<b>Trichloroethene</b>	79-01-6	<b>58.2</b>		4.277	10.0	C23122111.D
<b>Tetrachloroethene</b>	127-18-4	<b>1,090</b>		5.918	10.0	C23122111.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0007391-01	<b>08C_SSV_03_20231219</b>	Method: TO-17 (Passive)
Soil Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Trichloroethene</b>	79-01-6	<b>8.75</b>		4.277	1.50	C23122111.D
<b>Tetrachloroethene</b>	127-18-4	<b>132</b>		5.918	1.21	C23122111.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007391  
Reported: 01/02/2024

*Data Summary Table- Concentration*

Compound	Frequency	LOQ ( $\mu\text{g}/\text{m}^3$ )	Max Value ( $\mu\text{g}/\text{m}^3$ )
Trichloroethene	1	1.50	8.75
Tetrachloroethene	1	1.21	132

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

## *Detailed Analytical Results*

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007391  
Reported: 01/02/2024

*Detailed Analytical Results- Mass*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

Lab Sample ID: 0007391-01

**08C\_SSV\_03\_20231219**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10.0	10.0	12/21/2023 19:05	C23122111.D	
trans-1,2-Dichloroethene	156-60-5	<10.0	10.0	12/21/2023 19:05	C23122111.D	
cis-1,2-Dichloroethene	156-59-2	<10.0	10.0	12/21/2023 19:05	C23122111.D	
<b>Trichloroethene</b>	79-01-6	<b>58.2</b>	10.0	12/21/2023 19:05	C23122111.D	
<b>Tetrachloroethene</b>	127-18-4	<b>1,090</b>	10.0	12/21/2023 19:05	C23122111.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	86.5%	70-130		12/21/2023 19:05	C23122111.D
Surrogate: Toluene-d8	2037-26-5	98.8%	70-130		12/21/2023 19:05	C23122111.D
Surrogate: Bromofluorobenzene	460-00-4	94.0%	70-130		12/21/2023 19:05	C23122111.D



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007391  
Reported: 01/02/2024

*Detailed Analytical Results- Concentration*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

Lab Sample ID: 0007391-01

**08C\_SSV\_03\_20231219**

Method: TO-17 (Passive)

Soil Gas

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.612		0.612	12/21/2023 19:05	C23122111.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	12/21/2023 19:05	C23122111.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	12/21/2023 19:05	C23122111.D
<b>Trichloroethene</b>	79-01-6	<b>8.75</b>		1.50	12/21/2023 19:05	C23122111.D
<b>Tetrachloroethene</b>	127-18-4	<b>132</b>		1.21	12/21/2023 19:05	C23122111.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	86.5%	70-130		12/21/2023 19:05	C23122111.D
Surrogate: Toluene-d8	2037-26-5	98.8%	70-130		12/21/2023 19:05	C23122111.D
Surrogate: Bromofluorobenzene	460-00-4	94.0%	70-130		12/21/2023 19:05	C23122111.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007391  
Reported: 01/02/2024

## *QC Information/Summary*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122102.D**

*23L0060-BS1 (LCS, Calibration Source Verification)*

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.3	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	48.8	10	ng	50.0		97.6	70-130			
cis-1,2-Dichloroethene	48.0	10	ng	50.0		96.1	70-130			
Trichloroethene	50.4	10	ng	50.0		101	70-130			
Tetrachloroethene	44.6	10	ng	50.0		89.3	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>47.2</i>		<i>ng</i>	<i>50.0</i>		<i>94.4</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.9</i>		<i>ng</i>	<i>50.0</i>		<i>99.9</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>47.9</i>		<i>ng</i>	<i>50.0</i>		<i>95.7</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D**
**23L0060-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.613	0.613	µg/m <sup>3</sup>							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m <sup>3</sup>							U
cis-1,2-Dichloroethene	<0.936	0.936	µg/m <sup>3</sup>							U
Trichloroethene	<1.50	1.50	µg/m <sup>3</sup>							U
Tetrachloroethene	<1.21	1.21	µg/m <sup>3</sup>							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>91.7</i>		<i>ng</i>	<i>100</i>		<i>91.7</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>90.0</i>		<i>ng</i>	<i>100</i>		<i>90.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D**
**23L0060-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>91.7</i>		<i>ng</i>	<i>100</i>		<i>91.7</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>90.0</i>		<i>ng</i>	<i>100</i>		<i>90.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122104.D**
***B23L064-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.4	10	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	51.1	10	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	49.2	10	ng	50.0		98.3	70-130			
Trichloroethene	49.7	10	ng	50.0		99.5	70-130			
Tetrachloroethene	49.6	10	ng	50.0		99.1	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>46.2</i>		<i>ng</i>	<i>50.0</i>		<i>92.5</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>54.7</i>		<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>46.3</i>		<i>ng</i>	<i>50.0</i>		<i>92.6</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler (mass) - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122124.D**
***B23L064-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	ng	50.0		79.5	70-130			
trans-1,2-Dichloroethene	49.3	10	ng	50.0		98.6	70-130			
cis-1,2-Dichloroethene	48.7	10	ng	50.0		97.4	70-130			
Trichloroethene	49.9	10	ng	50.0		99.8	70-130			
Tetrachloroethene	47.3	10	ng	50.0		94.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>45.0</i>		<i>ng</i>	<i>50.0</i>		<i>90.0</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.3</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.8</i>		<i>ng</i>	<i>50.0</i>		<i>91.7</i>	<i>70-130</i>			



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23L064 - Instrument: C System - File ID: C23122125.D**
***B23L064-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>89.6</i>		<i>ng</i>	<i>100</i>		<i>89.6</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>99.0</i>		<i>ng</i>	<i>100</i>		<i>99.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.0</i>		<i>ng</i>	<i>100</i>		<i>91.0</i>	<i>70-130</i>			

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23L0060-BS1 File ID: C23122102.D**

Analyzed: 12/21/23 16:06

**LCSD: B23L064-ICV1 File ID: C23122104.D**

Analyzed: 12/21/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	50.31	100.62	50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56	50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06	50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74	50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26	50	49.56	99.10	70-130	10.47	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI C) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007391 <b>Reported:</b> 01/02/2024
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
<b>Lab ID:</b> 0007391-01 <b>Sample Name:</b> 08C_SSV_03_20231219						
Vinyl Chloride	20,157	1.00	0.810	U	U	C23122111.D
trans-1,2-Dichloroethene	20,157	1.00	0.440	U	U	C23122111.D
cis-1,2-Dichloroethene	20,157	1.00	0.530	U	U	C23122111.D
Trichloroethene	20,157	1.00	0.330	58.18	8.75	C23122111.D
Tetrachloroethene	20,157	1.00	0.410	1093.77	132	C23122111.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

- where:
- C = concentration (µg/m³)
  - M = mass (ng)
  - DF = dilution factor
  - Uc = uptake rate (ml/min), corrected
  - t = sampling time (minutes)
  - U = compound specific uptake rate
  - Tu = uptake rate study temperature
  - Ts = sample average temperature

**Note:** Tu is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI C) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007391 <b>Reported:</b> 01/02/2024
---	--	--

**Method Detection and Reporting Limit Calculations (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

<b>Lab ID:</b> 0007391-01	<b>Sample Name:</b> 08C_SSV_03_20231219
---------------------------	---

Vinyl Chloride	20,157	1.00	0.810	10.0	0.612
trans-1,2-Dichloroethene	20,157	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,157	1.00	0.530	10.0	0.936
Trichloroethene	20,157	1.00	0.330	10.0	1.50
Tetrachloroethene	20,157	1.00	0.410	10.0	1.21

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007391  
**Reported:** 01/02/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007391  
Reported: 01/02/2024

## *Sample Management Records*



Project Information				Client Information			
Site Name: Reedsburg Cleaners (ERP 0257001682)		Company Name: Bay West LLC		Project Manager: Jason Kunze (jkunze@baywest.com)			
Site Location: 335 E Main St (PSI C)		Office Location: 5 Empire Drive, St. Paul, MN 55103		Client PO: J230382 / PO1309			
		Submitted by: Anders Santelman		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days			
		Email: asantelman@baywest.com					
Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth <input type="checkbox"/> cm <input type="checkbox"/> inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08C_SSV_03_20231219	12/5/23	1045	12/19/23	1042	5 inches	Concrete	C_SSV_03
Special Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride							
Relinquished by (signature): <i>ch</i>		Date / Time: 12/19/23 1300		Received by (signature): <i>[Signature]</i>		Date / Time: 12.20.23 1456	
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:	
For Lab Use Only		Beacon Job No: 7391		Beacon Proposal: 230427H01		Analytical Method:	
Courier Name: FedEx		Shipment Condition: good		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5722455	



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007394

### Project Description:

Reedsburg Cleaners (PSI C)

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

January 02, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager

# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table	7
Detailed Analytical Results	8
0007394-01 - 08C_IA1_07_20231219	9
0007394-02 - 08C_Sump_01_20231219	10
0007394-03 - 08C_OA_01_20231219	11
Additional QC Information	14
Sample Result Calculations	15
Equation	16
MRL Calculation Table	17
Certifications	18
Notes and Definitions	19
Sample Management Records	20
Chain of Custody	21

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007394-01 Sampler Type: Beacon Passive Sampler	08C_IA1_07_20231219 Beacon Passive Sampler	12/20/2023	TO-17 (Passive)	Indoor Air
0007394-02 Sampler Type: Beacon Passive Sampler	08C_Sump_01_20231219 Beacon Passive Sampler	12/20/2023	TO-17 (Passive)	Indoor Air
0007394-03 Sampler Type: Beacon Passive Sampler	08C_OA_01_20231219 Beacon Passive Sampler	12/20/2023	TO-17 (Passive)	Ambient Air

**Project Completeness**
**Samples Received: 3**  
**Samples Analyzed: 3**

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

### *Summary of Compound Detections- Concentration*

Lab Sample ID: 0007394-01	<b>08C_IA1_07_20231219</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>1.47</b>		5.918	1.20	C23122123.D

Lab Sample ID: 0007394-02	<b>08C_Sump_01_20231219</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>1.69</b>		5.921	1.20	C23122205.D



**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024***Data Summary Table- Concentration***

<b>Compound</b>	<b>Frequency</b>	<b>LOQ (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Max Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Tetrachloroethene	2	1.20	1.69



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007394  
Reported: 01/02/2024

## *Detailed Analytical Results*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI C) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007394 <b>Reported:</b> 01/02/2024
---	--	--

Lab Sample ID: 0007394-01	<b>08C_IA1_07_20231219</b>	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 14:37	C23122123.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 14:37	C23122123.D
cis-1,2-Dichloroethene	156-59-2	<0.930		0.930	12/22/2023 14:37	C23122123.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 14:37	C23122123.D
<b>Tetrachloroethene</b>	127-18-4	<b>1.47</b>		1.20	12/22/2023 14:37	C23122123.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	91.4%	70-130		12/22/2023 14:37	C23122123.D
Surrogate: Toluene-d8	2037-26-5	96.6%	70-130		12/22/2023 14:37	C23122123.D
Surrogate: Bromofluorobenzene	460-00-4	97.6%	70-130		12/22/2023 14:37	C23122123.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

Lab Sample ID: 0007394-02

**08C\_Sump\_01\_20231219**

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 18:32	C23122205.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 18:32	C23122205.D
cis-1,2-Dichloroethene	156-59-2	<0.930		0.930	12/22/2023 18:32	C23122205.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 18:32	C23122205.D
<b>Tetrachloroethene</b>	127-18-4	<b>1.69</b>		1.20	12/22/2023 18:32	C23122205.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	85.9%	70-130		12/22/2023 18:32	C23122205.D
Surrogate: Toluene-d8	2037-26-5	94.8%	70-130		12/22/2023 18:32	C23122205.D
Surrogate: Bromofluorobenzene	460-00-4	95.3%	70-130		12/22/2023 18:32	C23122205.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

Lab Sample ID: 0007394-03

**08C\_OA\_01\_20231219**

Method: TO-17 (Passive)

Ambient Air

Analyte	CAS#	Result (µg/m <sup>3</sup> )	Q	LOQ (µg/m <sup>3</sup> )	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.629		0.629	12/22/2023 19:00	C23122206.D
trans-1,2-Dichloroethene	156-60-5	<1.16		1.16	12/22/2023 19:00	C23122206.D
cis-1,2-Dichloroethene	156-59-2	<0.961		0.961	12/22/2023 19:00	C23122206.D
Trichloroethene	79-01-6	<1.54		1.54	12/22/2023 19:00	C23122206.D
Tetrachloroethene	127-18-4	<1.24		1.24	12/22/2023 19:00	C23122206.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	77.8%	70-130		12/22/2023 19:00	C23122206.D
Surrogate: Toluene-d8	2037-26-5	93.8%	70-130		12/22/2023 19:00	C23122206.D
Surrogate: Bromofluorobenzene	460-00-4	87.9%	70-130		12/22/2023 19:00	C23122206.D

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23L0060-BS1 File ID: C23122102.D**

Analyzed: 12/21/23 16:06

**LCSD: B23L064-ICV1 File ID: C23122104.D**

Analyzed: 12/21/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	50.31	100.62	50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56	50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06	50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74	50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26	50	49.56	99.10	70-130	10.47	30	

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> Reedsburg Cleaners (PSI C) <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H01 <b>Lab Work Order:</b> 0007394 <b>Reported:</b> 01/02/2024
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 23L0069-BS1 File ID: C23122202.D**

Analyzed: 12/22/23 18:04

**LCSD: B23L073-ICV1 File ID: C23122204.D**

Analyzed: 12/22/23 17:18

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	58.49	116.98	50	46.44	92.90	70-130	22.97	30	
trans-1,2-Dichloroethene	156-60-5	53.76	107.52	50	48.54	97.10	70-130	10.21	30	
cis-1,2-Dichloroethene	156-59-2	46.88	93.76	50	45.98	92.00	70-130	1.94	30	
Trichloroethene	79-01-6	51.04	102.08	50	50.85	102.00	70-130	0.37	30	
Tetrachloroethene	127-18-4	42.65	85.3	50	47.51	95.00	70-130	10.78	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

*Additional QC Information*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

### Sample Result Calculation Summary (Concentration)

#### TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007394-01	<b>Sample Name:</b> 08C_IA1_07_20231219	<b>̄ Temp (°C):</b> 21.10
---------------------------	---	---------------------------

Vinyl Chloride	20,142	1.00	0.816	U	U	C23122123.D
trans-1,2-Dichloroethene	20,142	1.00	0.443	U	U	C23122123.D
cis-1,2-Dichloroethene	20,142	1.00	0.534	U	U	C23122123.D
Trichloroethene	20,142	1.00	0.333	U	U	C23122123.D
Tetrachloroethene	20,142	1.00	0.413	12.20	1.47	C23122123.D

<b>Lab ID:</b> 0007394-02	<b>Sample Name:</b> 08C_Sump_01_20231219	<b>̄ Temp (°C):</b> 21.10
---------------------------	--	---------------------------

Vinyl Chloride	20,137	1.00	0.816	U	U	C23122205.D
trans-1,2-Dichloroethene	20,137	1.00	0.443	U	U	C23122205.D
cis-1,2-Dichloroethene	20,137	1.00	0.534	U	U	C23122205.D
Trichloroethene	20,137	1.00	0.333	U	U	C23122205.D
Tetrachloroethene	20,137	1.00	0.413	14.10	1.69	C23122205.D

<b>Lab ID:</b> 0007394-03	<b>Sample Name:</b> 08C_OA_01_20231219	<b>̄ Temp (°C):</b> 2.00
---------------------------	--	--------------------------

Vinyl Chloride	20,143	1.00	0.789	U	U	C23122206.D
trans-1,2-Dichloroethene	20,143	1.00	0.429	U	U	C23122206.D
cis-1,2-Dichloroethene	20,143	1.00	0.516	U	U	C23122206.D
Trichloroethene	20,143	1.00	0.322	U	U	C23122206.D
Tetrachloroethene	20,143	1.00	0.400	U	U	C23122206.D



Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007394  
Reported: 01/02/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007394-01      **Sample Name:** 08C\_IA1\_07\_20231219      **̄ Temp (°C):** 21.10

Vinyl Chloride	20,142	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,142	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,142	1.00	0.534	10.0	0.930
Trichloroethene	20,142	1.00	0.333	10.0	1.49
Tetrachloroethene	20,142	1.00	0.413	10.0	1.20

**Lab ID:** 0007394-02      **Sample Name:** 08C\_Sump\_01\_20231219      **̄ Temp (°C):** 21.10

Vinyl Chloride	20,137	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,137	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,137	1.00	0.534	10.0	0.930
Trichloroethene	20,137	1.00	0.333	10.0	1.49
Tetrachloroethene	20,137	1.00	0.413	10.0	1.20

**Lab ID:** 0007394-03      **Sample Name:** 08C\_OA\_01\_20231219      **̄ Temp (°C):** 2.00

Vinyl Chloride	20,143	1.00	0.789	10.0	0.629
trans-1,2-Dichloroethene	20,143	1.00	0.429	10.0	1.16
cis-1,2-Dichloroethene	20,143	1.00	0.516	10.0	0.961
Trichloroethene	20,143	1.00	0.322	10.0	1.54
Tetrachloroethene	20,143	1.00	0.400	10.0	1.24

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** Reedsburg Cleaners (PSI C)  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H01  
**Lab Work Order:** 0007394  
**Reported:** 01/02/2024

### *Laboratory Certification List*

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007394  
Reported: 01/02/2024

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: Reedsburg Cleaners (PSI C)  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H01  
Lab Work Order: 0007394  
Reported: 01/02/2024

## *Sample Management Records*

<b>Client Information</b>		Project Manager: Jason Kunze (jkunze@baywest.com)		Client PO: J230382 / PO1309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS	
Company: Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days							
Address: 5 Empire Dr.	Location: 335 E Main St (PSI C)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C							
City / State / Zip: St. Paul, MN 55103	Submitted by: Anders Santelman		Email: asantelman@baywest.com							
Phone: 651-724-9757	Email: asantelman@baywest.com									
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
08C_IA1_07_20231219	12/5/23	1123	12/19/23	1105	21.1	C_IA1_07	X			
08C_Sump_01_20231219	12/5/23	1113	12/19/23	1050	21.1	C_Sump_01	X			
08C_OA_01_20231219	12/5/23	1019	12/19/23	1002	<del>20</del> 2.0	C_OA_01	<input checked="" type="checkbox"/>	X		
<p>Special Notes / Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride</p>										
Relinquished by (signature): <i>[Signature]</i>		Date / Time: 12/19/23 : 1300		Received by (signature): <i>[Signature]</i>		Date / Time: 12-20-23 1452				
Relinquished by (signature):		Date / Time:		Received by (signature):		Date / Time:				
<b>For Lab Use Only</b>		Beacon Job No: 7394		Beacon Proposal: 230427H01						
Courier Name: <i>Fedex</i>		Shipment Condition: <i>good</i>		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a		Custody Seal No: 5722455				

*Sanitary Sewer ROW*



Beacon Environmental

2203A Commerce Road, Suite 1

Forest Hill, MD 21050 USA

1.410.838.8780

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H02

Laboratory Work Order: 0007112

### Project Description:

0257001682

Reedsburg, WI

Prepared for:

Jason Kunze

**Bay West LLC**

5 Empire Drive

St. Paul, MN 55103

---

Ryan W. Schneider  
Senior Project Manager

August 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

---

Steven C. Thornley  
Laboratory Director

---

Peter B. Kelly  
Quality Manager



# Table of Contents

Cover Page	1
Sample Summary	3
Case Narrative	4
Analytical Results	5
Summary of Compound Detections	6
Data Summary Table	7
Detailed Analytical Results	8
0007112-01 - 08R_SSG_01_20230801	9
0007112-02 - 08R_SSG_02_20230801	10
QC Summaries	11
Additional QC Information	22
Sample Result Calculations	23
Equation	25
MRL Calculation Table	26
Certifications	28
Notes and Definitions	29
Sample Management Records	30
Chain of Custody	31

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007112-01 Sampler Type:	08R_SSG_01_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Sewer Gas
0007112-02 Sampler Type:	08R_SSG_02_20230801 Beacon Passive Sampler	08/03/2023	TO-17 (Passive)	Sewer Gas

**Project Completeness**
**Samples Received:** 2  
**Samples Analyzed:** 2

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

### *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in  $\mu\text{g}/\text{m}^3$ . Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

#### **Reporting Limits (RLs)**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

#### **Calibration Verification**

All continuing calibration verification (CCV) values are within  $\pm 30\%$  of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

#### **Internal Standards and Surrogates**

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Blank Contamination**

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

#### **Laboratory Control Samples**

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

#### **Discussion**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

## *Analytical Results*

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

### *Summary of Compound Detections- Concentration*

Lab Sample ID: 0007112-01	<b>08R_SSG_01_20230801</b>	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Chloroform</b>	67-66-3	<b>18.2</b>		4.096	1.42	Ka23080707.D
<b>Benzene</b>	71-43-2	<b>5.49</b>		4.800	2.35	Ka23080707.D
<b>Toluene</b>	108-88-3	<b>12.1</b>		7.630	3.11	Ka23080707.D
<b>Tetrachloroethene</b>	127-18-4	<b>1.58</b>		8.157	1.21	Ka23080707.D

Lab Sample ID: 0007112-02	<b>08R_SSG_02_20230801</b>	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Methylene Chloride</b>	75-09-2	<b>2.64</b>		2.545	1.42	Ka23080708.D
<b>1,1,2-Trichlorotrifluoroethane (Fr.113)</b>	76-13-1	<b>1.54</b>		2.224	0.560	Ka23080708.D
<b>Chloroform</b>	67-66-3	<b>63.0</b>		4.099	1.42	Ka23080708.D
<b>Benzene</b>	71-43-2	<b>3.08</b>		4.804	2.35	Ka23080708.D
<b>Toluene</b>	108-88-3	<b>29.6</b>		7.630	3.12	Ka23080708.D
<b>Tetrachloroethene</b>	127-18-4	<b>4.09</b>		8.157	1.22	Ka23080708.D
<b>1,2-Dichlorobenzene</b>	95-50-1	<b>8.29</b>		10.705	0.665	Ka23080708.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason KunzeBeacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023*Data Summary Table- Concentration*

Compound	Frequency	LOQ ( $\mu\text{g}/\text{m}^3$ )	Max Value ( $\mu\text{g}/\text{m}^3$ )
Methylene Chloride	1	1.42	2.64
1,1,2-Trichlorotrifluoroethane (Fr.113)	1	0.560	1.54
Chloroform	2	1.42	63.0
Benzene	2	2.35	5.49
Toluene	2	3.11	29.6
Tetrachloroethene	2	1.21	4.09
1,2-Dichlorobenzene	1	0.665	8.29

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

*Detailed Analytical Results*

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

Lab Sample ID: 0007112-01

**08R\_SSG\_01\_20230801**

Method: TO-17 (Passive)

Sewer Gas

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.614		0.614	08/07/2023 15:43	Ka23080707.D
1,1-Dichloroethene	75-35-4	<1.51		1.51	08/07/2023 15:43	Ka23080707.D
Methylene Chloride	75-09-2	<1.42		1.42	08/07/2023 15:43	Ka23080707.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	<0.559		0.559	08/07/2023 15:43	Ka23080707.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/07/2023 15:43	Ka23080707.D
Methyl-t-butyl ether	1634-04-4	<2.49		2.49	08/07/2023 15:43	Ka23080707.D
1,1-Dichloroethane	75-34-3	<0.585		0.585	08/07/2023 15:43	Ka23080707.D
cis-1,2-Dichloroethene	156-59-2	<0.938		0.938	08/07/2023 15:43	Ka23080707.D
<b>Chloroform</b>	67-66-3	<b>18.2</b>		1.42	08/07/2023 15:43	Ka23080707.D
1,2-Dichloroethane	107-06-2	<0.888		0.888	08/07/2023 15:43	Ka23080707.D
1,1,1-Trichloroethane	71-55-6	<0.474		0.474	08/07/2023 15:43	Ka23080707.D
Carbon Tetrachloride	56-23-5	<1.16		1.16	08/07/2023 15:43	Ka23080707.D
<b>Benzene</b>	71-43-2	<b>5.49</b>		2.35	08/07/2023 15:43	Ka23080707.D
Trichloroethene	79-01-6	<1.51		1.51	08/07/2023 15:43	Ka23080707.D
1,4-Dioxane	123-91-1	<1.21		1.21	08/07/2023 15:43	Ka23080707.D
1,1,2-Trichloroethane	79-00-5	<1.51		1.51	08/07/2023 15:43	Ka23080707.D
<b>Toluene</b>	108-88-3	<b>12.1</b>		3.11	08/07/2023 15:43	Ka23080707.D
1,2-Dibromoethane (EDB)	106-93-4	<1.28		1.28	08/07/2023 15:43	Ka23080707.D
<b>Tetrachloroethene</b>	127-18-4	<b>1.58</b>		1.21	08/07/2023 15:43	Ka23080707.D
1,1,1,2-Tetrachloroethane	630-20-6	<1.21		1.21	08/07/2023 15:43	Ka23080707.D
Chlorobenzene	108-90-7	<0.585		0.585	08/07/2023 15:43	Ka23080707.D
Ethylbenzene	100-41-4	<1.46		1.46	08/07/2023 15:43	Ka23080707.D
p & m-Xylene	179601-23-1	<1.41		1.41	08/07/2023 15:43	Ka23080707.D
o-Xylene	95-47-6	<1.41		1.41	08/07/2023 15:43	Ka23080707.D
1,2,3-Trichloropropane	96-18-4	<0.663		0.663	08/07/2023 15:43	Ka23080707.D
Isopropylbenzene	98-82-8	<1.50		1.50	08/07/2023 15:43	Ka23080707.D
1,3,5-Trimethylbenzene	108-67-8	<1.50		1.50	08/07/2023 15:43	Ka23080707.D
1,2,4-Trimethylbenzene	95-63-6	<1.50		1.50	08/07/2023 15:43	Ka23080707.D
1,3-Dichlorobenzene	541-73-1	<0.663		0.663	08/07/2023 15:43	Ka23080707.D
1,4-Dichlorobenzene	106-46-7	<0.663		0.663	08/07/2023 15:43	Ka23080707.D
1,2-Dichlorobenzene	95-50-1	<0.663		0.663	08/07/2023 15:43	Ka23080707.D
1,2,4-Trichlorobenzene	120-82-1	<1.28		1.28	08/07/2023 15:43	Ka23080707.D
Naphthalene	91-20-3	<1.55		1.55	08/07/2023 15:43	Ka23080707.D
1,2,3-Trichlorobenzene	87-61-6	<1.28		1.28	08/07/2023 15:43	Ka23080707.D
2-Methylnaphthalene	91-57-6	<1.64		1.64	08/07/2023 15:43	Ka23080707.D
<i>Analyte</i>	<i>CAS#</i>	<i>% Recovery</i>	<i>Recovery Limits</i>	<i>Q</i>	<i>Analyzed</i>	<i>File ID</i>
Surrogate: 1,2-DCA-d4	17060-07-0	99.4%	70-130		08/07/2023 15:43	Ka23080707.D
Surrogate: Toluene-d8	2037-26-5	93.5%	70-130		08/07/2023 15:43	Ka23080707.D
Surrogate: Bromofluorobenzene	460-00-4	91.9%	70-130		08/07/2023 15:43	Ka23080707.D



**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

Lab Sample ID: 0007112-02

**08R\_SSG\_02\_20230801**

Method: TO-17 (Passive)

Sewer Gas

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.616		0.616	08/07/2023 16:12	Ka23080708.D
1,1-Dichloroethene	75-35-4	<1.51		1.51	08/07/2023 16:12	Ka23080708.D
<b>Methylene Chloride</b>	75-09-2	<b>2.64</b>		1.42	08/07/2023 16:12	Ka23080708.D
<b>1,1,2-Trichlorotrifluoroethane (Fr.113)</b>	76-13-1	<b>1.54</b>		0.560	08/07/2023 16:12	Ka23080708.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	08/07/2023 16:12	Ka23080708.D
Methyl-t-butyl ether	1634-04-4	<2.49		2.49	08/07/2023 16:12	Ka23080708.D
1,1-Dichloroethane	75-34-3	<0.587		0.587	08/07/2023 16:12	Ka23080708.D
cis-1,2-Dichloroethene	156-59-2	<0.941		0.941	08/07/2023 16:12	Ka23080708.D
<b>Chloroform</b>	67-66-3	<b>63.0</b>		1.42	08/07/2023 16:12	Ka23080708.D
1,2-Dichloroethane	107-06-2	<0.890		0.890	08/07/2023 16:12	Ka23080708.D
1,1,1-Trichloroethane	71-55-6	<0.475		0.475	08/07/2023 16:12	Ka23080708.D
Carbon Tetrachloride	56-23-5	<1.16		1.16	08/07/2023 16:12	Ka23080708.D
<b>Benzene</b>	71-43-2	<b>3.08</b>		2.35	08/07/2023 16:12	Ka23080708.D
Trichloroethene	79-01-6	<1.51		1.51	08/07/2023 16:12	Ka23080708.D
1,4-Dioxane	123-91-1	<1.22		1.22	08/07/2023 16:12	Ka23080708.D
1,1,2-Trichloroethane	79-00-5	<1.51		1.51	08/07/2023 16:12	Ka23080708.D
<b>Toluene</b>	108-88-3	<b>29.6</b>		3.12	08/07/2023 16:12	Ka23080708.D
1,2-Dibromoethane (EDB)	106-93-4	<1.28		1.28	08/07/2023 16:12	Ka23080708.D
<b>Tetrachloroethene</b>	127-18-4	<b>4.09</b>		1.22	08/07/2023 16:12	Ka23080708.D
1,1,1,2-Tetrachloroethane	630-20-6	<1.22		1.22	08/07/2023 16:12	Ka23080708.D
Chlorobenzene	108-90-7	<0.587		0.587	08/07/2023 16:12	Ka23080708.D
Ethylbenzene	100-41-4	<1.47		1.47	08/07/2023 16:12	Ka23080708.D
p & m-Xylene	179601-23-1	<1.42		1.42	08/07/2023 16:12	Ka23080708.D
o-Xylene	95-47-6	<1.42		1.42	08/07/2023 16:12	Ka23080708.D
1,2,3-Trichloropropane	96-18-4	<0.665		0.665	08/07/2023 16:12	Ka23080708.D
Isopropylbenzene	98-82-8	<1.50		1.50	08/07/2023 16:12	Ka23080708.D
1,3,5-Trimethylbenzene	108-67-8	<1.50		1.50	08/07/2023 16:12	Ka23080708.D
1,2,4-Trimethylbenzene	95-63-6	<1.50		1.50	08/07/2023 16:12	Ka23080708.D
1,3-Dichlorobenzene	541-73-1	<0.665		0.665	08/07/2023 16:12	Ka23080708.D
1,4-Dichlorobenzene	106-46-7	<0.665		0.665	08/07/2023 16:12	Ka23080708.D
<b>1,2-Dichlorobenzene</b>	95-50-1	<b>8.29</b>		0.665	08/07/2023 16:12	Ka23080708.D
1,2,4-Trichlorobenzene	120-82-1	<1.28		1.28	08/07/2023 16:12	Ka23080708.D
Naphthalene	91-20-3	<1.56		1.56	08/07/2023 16:12	Ka23080708.D
1,2,3-Trichlorobenzene	87-61-6	<1.28		1.28	08/07/2023 16:12	Ka23080708.D
2-Methylnaphthalene	91-57-6	<1.64		1.64	08/07/2023 16:12	Ka23080708.D
<i>Analyte</i>	<i>CAS#</i>	<i>% Recovery</i>	<i>Recovery Limits</i>	<i>Q</i>	<i>Analyzed</i>	<i>File ID</i>
<i>Surrogate: 1,2-DCA-d4</i>	17060-07-0	100%	70-130		08/07/2023 16:12	Ka23080708.D
<i>Surrogate: Toluene-d8</i>	2037-26-5	95.4%	70-130		08/07/2023 16:12	Ka23080708.D
<i>Surrogate: Bromofluorobenzene</i>	460-00-4	92.0%	70-130		08/07/2023 16:12	Ka23080708.D

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

## *QC Information/Summary*

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072721.D**

*B23G105-ICV1 (LCSD/Second Source Verification/CALV)*

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.5	10	ng	50.0		103	70-130			
1,1-Dichloroethene	47.7	10	ng	50.0		95.4	70-130			
Methylene Chloride	49.7	10	ng	50.0		99.4	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	50.2	10	ng	50.0		100	70-130			
trans-1,2-Dichloroethene	50.4	10	ng	50.0		101	70-130			
Methyl-t-butyl ether	46.6	25	ng	50.0		93.2	70-130			
1,1-Dichloroethane	50.6	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.4	10	ng	50.0		98.8	70-130			
Chloroform	49.9	10	ng	50.0		99.7	70-130			
1,2-Dichloroethane	51.5	10	ng	50.0		103	70-130			
1,1,1-Trichloroethane	51.0	10	ng	50.0		102	70-130			
Carbon Tetrachloride	52.7	10	ng	50.0		105	70-130			
Benzene	48.4	25	ng	50.0		96.9	70-130			
Trichloroethene	49.4	10	ng	50.0		98.8	70-130			
1,4-Dioxane	48.5	10	ng	50.0		97.0	70-130			
1,1,2-Trichloroethane	49.1	10	ng	50.0		98.1	70-130			
Toluene	52.4	25	ng	50.0		105	70-130			
1,2-Dibromoethane (EDB)	52.0	10	ng	50.0		104	70-130			
Tetrachloroethene	48.2	10	ng	50.0		96.4	70-130			
1,1,1,2-Tetrachloroethane	49.5	10	ng	50.0		99.1	70-130			
Chlorobenzene	49.4	10	ng	50.0		98.8	70-130			
Ethylbenzene	49.4	25	ng	50.0		98.9	70-130			
p & m-Xylene	51.6	25	ng	50.0		103	70-130			
o-Xylene	48.9	25	ng	50.0		97.7	70-130			
1,2,3-Trichloropropane	50.7	10	ng	50.0		101	70-130			
Isopropylbenzene	51.5	25	ng	50.0		103	70-130			
1,3,5-Trimethylbenzene	50.5	25	ng	50.0		101	70-130			
1,2,4-Trimethylbenzene	49.0	25	ng	50.0		98.0	70-130			
1,3-Dichlorobenzene	50.1	10	ng	50.0		100	70-130			
1,4-Dichlorobenzene	50.3	10	ng	50.0		101	70-130			
1,2-Dichlorobenzene	49.2	10	ng	50.0		98.3	70-130			
1,2,4-Trichlorobenzene	48.0	10	ng	50.0		96.0	70-130			
Naphthalene	50.9	25	ng	50.0		102	70-130			
1,2,3-Trichlorobenzene	52.1	10	ng	50.0		104	70-130			
2-Methylnaphthalene	41.6	25	ng	50.0		83.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.4</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23G105 - Instrument: K System - File ID: Ka23072724.D**

***B23G105-ICB1 (Lab Blank/Initial Calibration Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
1,1-Dichloroethene	<5	10	ng							U
Methylene Chloride	<5	10	ng							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
Methyl-t-butyl ether	<10	25	ng							U
1,1-Dichloroethane	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Chloroform	<5	10	ng							U
1,2-Dichloroethane	<5	10	ng							U
1,1,1-Trichloroethane	<5	10	ng							U
Carbon Tetrachloride	<5	10	ng							U
Benzene	<10	25	ng							U
Trichloroethene	<5	10	ng							U
1,4-Dioxane	<5	10	ng							U
1,1,2-Trichloroethane	<5	10	ng							U
Toluene	<10	25	ng							U
1,2-Dibromoethane (EDB)	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
1,1,1,2-Tetrachloroethane	<5	10	ng							U
Chlorobenzene	<5	10	ng							U
Ethylbenzene	<10	25	ng							U
p & m-Xylene	<10	25	ng							U
o-Xylene	<10	25	ng							U
1,2,3-Trichloropropane	<5	10	ng							U
Isopropylbenzene	<10	25	ng							U
1,3,5-Trimethylbenzene	<10	25	ng							U
1,2,4-Trimethylbenzene	<10	25	ng							U
1,3-Dichlorobenzene	<5	10	ng							U
1,4-Dichlorobenzene	<5	10	ng							U
1,2-Dichlorobenzene	<5	10	ng							U
1,2,4-Trichlorobenzene	<5	10	ng							U
Naphthalene	<5	25	ng							U
1,2,3-Trichlorobenzene	<5	10	ng							U
2-Methylnaphthalene	<5	25	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	100		ng	100		100	70-130			
<i>Surrogate: Toluene-d8</i>	103		ng	100		103	70-130			
<i>Surrogate: Bromofluorobenzene</i>	88.2		ng	100		88.2	70-130			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080702.D**

**23H0012-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.0	10	ng	50.0		77.9	70-130			
1,1-Dichloroethene	41.8	10	ng	50.0		83.7	70-130			
Methylene Chloride	47.3	10	ng	50.0		94.5	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	47.0	10	ng	50.0		94.0	70-130			
trans-1,2-Dichloroethene	46.8	10	ng	50.0		93.7	70-130			
Methyl-t-butyl ether	47.2	25	ng	50.0		94.3	70-130			
1,1-Dichloroethane	47.6	10	ng	50.0		95.2	70-130			
cis-1,2-Dichloroethene	46.7	10	ng	50.0		93.5	70-130			
Chloroform	48.4	10	ng	50.0		96.9	70-130			
1,2-Dichloroethane	48.8	10	ng	50.0		97.6	70-130			
1,1,1-Trichloroethane	48.1	10	ng	50.0		96.1	70-130			
Carbon Tetrachloride	49.7	10	ng	50.0		99.3	70-130			
Benzene	47.9	25	ng	50.0		95.9	70-130			
Trichloroethene	46.1	10	ng	50.0		92.2	70-130			
1,4-Dioxane	55.5	10	ng	50.0		111	70-130			
1,1,2-Trichloroethane	50.7	10	ng	50.0		101	70-130			
Toluene	53.3	25	ng	50.0		107	70-130			
1,2-Dibromoethane (EDB)	51.0	10	ng	50.0		102	70-130			
Tetrachloroethene	46.6	10	ng	50.0		93.3	70-130			
1,1,1,2-Tetrachloroethane	47.5	10	ng	50.0		95.0	70-130			
Chlorobenzene	48.4	10	ng	50.0		96.9	70-130			
Ethylbenzene	46.3	25	ng	50.0		92.6	70-130			
p & m-Xylene	50.4	25	ng	50.0		101	70-130			
o-Xylene	45.7	25	ng	50.0		91.5	70-130			
1,2,3-Trichloropropane	49.5	10	ng	50.0		99.0	70-130			
Isopropylbenzene	50.8	25	ng	50.0		102	70-130			
1,3,5-Trimethylbenzene	49.6	25	ng	50.0		99.3	70-130			
1,2,4-Trimethylbenzene	48.5	25	ng	50.0		96.9	70-130			
1,3-Dichlorobenzene	48.7	10	ng	50.0		97.4	70-130			
1,4-Dichlorobenzene	48.9	10	ng	50.0		97.8	70-130			
1,2-Dichlorobenzene	48.1	10	ng	50.0		96.3	70-130			
1,2,4-Trichlorobenzene	45.7	10	ng	50.0		91.4	70-130			
Naphthalene	48.4	25	ng	50.0		96.9	70-130			
1,2,3-Trichlorobenzene	47.9	10	ng	50.0		95.8	70-130			
2-Methylnaphthalene	56.7	25	ng	50.0		113	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.5</i>		<i>ng</i>	<i>50.0</i>		<i>98.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.3</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.8</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080704.D**

*B23H016-ICV1 (LCSD/Second Source Verification/CALV)*

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.9	10	ng	50.0		87.8	70-130			
1,1-Dichloroethene	45.1	10	ng	50.0		90.1	70-130			
Methylene Chloride	51.1	10	ng	50.0		102	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	49.6	10	ng	50.0		99.2	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.6	70-130			
Methyl-t-butyl ether	48.2	25	ng	50.0		96.4	70-130			
1,1-Dichloroethane	50.9	10	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.9	70-130			
Chloroform	49.7	10	ng	50.0		99.4	70-130			
1,2-Dichloroethane	51.2	10	ng	50.0		102	70-130			
1,1,1-Trichloroethane	50.4	10	ng	50.0		101	70-130			
Carbon Tetrachloride	51.1	10	ng	50.0		102	70-130			
Benzene	52.5	25	ng	50.0		105	70-130			
Trichloroethene	47.8	10	ng	50.0		95.5	70-130			
1,4-Dioxane	57.0	10	ng	50.0		114	70-130			
1,1,2-Trichloroethane	50.8	10	ng	50.0		102	70-130			
Toluene	54.7	25	ng	50.0		109	70-130			
1,2-Dibromoethane (EDB)	51.5	10	ng	50.0		103	70-130			
Tetrachloroethene	48.4	10	ng	50.0		96.9	70-130			
1,1,1,2-Tetrachloroethane	47.8	10	ng	50.0		95.6	70-130			
Chlorobenzene	49.9	10	ng	50.0		99.9	70-130			
Ethylbenzene	46.9	25	ng	50.0		93.8	70-130			
p & m-Xylene	51.1	25	ng	50.0		102	70-130			
o-Xylene	46.9	25	ng	50.0		93.8	70-130			
1,2,3-Trichloropropane	50.3	10	ng	50.0		101	70-130			
Isopropylbenzene	52.0	25	ng	50.0		104	70-130			
1,3,5-Trimethylbenzene	50.4	25	ng	50.0		101	70-130			
1,2,4-Trimethylbenzene	48.4	25	ng	50.0		96.9	70-130			
1,3-Dichlorobenzene	48.9	10	ng	50.0		97.7	70-130			
1,4-Dichlorobenzene	48.9	10	ng	50.0		97.9	70-130			
1,2-Dichlorobenzene	48.9	10	ng	50.0		97.7	70-130			
1,2,4-Trichlorobenzene	46.3	10	ng	50.0		92.5	70-130			
Naphthalene	49.0	25	ng	50.0		98.0	70-130			
1,2,3-Trichlorobenzene	48.0	10	ng	50.0		96.1	70-130			
2-Methylnaphthalene	56.5	25	ng	50.0		113	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	50.2		ng	50.0		100	70-130			
<i>Surrogate: Toluene-d8</i>	50.7		ng	50.0		101	70-130			
<i>Surrogate: Bromofluorobenzene</i>	43.8		ng	50.0		87.5	70-130			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Batch: 23H0012 - Instrument: K System - File ID: Ka23080705.D**

**23H0012-BLK1 (Lab Blank)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.614	0.614	µg/m³							U
1,1-Dichloroethene	<1.51	1.51	µg/m³							U
Methylene Chloride	<1.42	1.42	µg/m³							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<0.559	0.559	µg/m³							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m³							U
Methyl-t-butyl ether	<2.49	2.49	µg/m³							U
1,1-Dichloroethane	<0.585	0.585	µg/m³							U
cis-1,2-Dichloroethene	<0.938	0.938	µg/m³							U
Chloroform	<1.42	1.42	µg/m³							U
1,2-Dichloroethane	<0.888	0.888	µg/m³							U
1,1,1-Trichloroethane	<0.474	0.474	µg/m³							U
Carbon Tetrachloride	<1.16	1.16	µg/m³							U
Benzene	<2.35	2.35	µg/m³							U
Trichloroethene	<1.51	1.51	µg/m³							U
1,4-Dioxane	<1.21	1.21	µg/m³							U
1,1,2-Trichloroethane	<1.51	1.51	µg/m³							U
Toluene	<3.11	3.11	µg/m³							U
1,2-Dibromoethane (EDB)	<1.28	1.28	µg/m³							U
Tetrachloroethene	<1.21	1.21	µg/m³							U
1,1,1,2-Tetrachloroethane	<1.21	1.21	µg/m³							U
Chlorobenzene	<0.585	0.585	µg/m³							U
Ethylbenzene	<1.46	1.46	µg/m³							U
p & m-Xylene	<1.41	1.41	µg/m³							U
o-Xylene	<1.41	1.41	µg/m³							U
1,2,3-Trichloropropane	<0.663	0.663	µg/m³							U
Isopropylbenzene	<1.50	1.50	µg/m³							U
1,3,5-Trimethylbenzene	<1.50	1.50	µg/m³							U
1,2,4-Trimethylbenzene	<1.50	1.50	µg/m³							U
1,3-Dichlorobenzene	<0.663	0.663	µg/m³							U
1,4-Dichlorobenzene	<0.663	0.663	µg/m³							U
1,2-Dichlorobenzene	<0.663	0.663	µg/m³							U
1,2,4-Trichlorobenzene	<1.28	1.28	µg/m³							U
Naphthalene	<1.55	1.55	µg/m³							U
1,2,3-Trichlorobenzene	<1.28	1.28	µg/m³							U
2-Methylnaphthalene	<1.64	1.64	µg/m³							U
Surrogate: 1,2-DCA-d4	101		ng	100		101	70-130			
Surrogate: Toluene-d8	106		ng	100		106	70-130			
Surrogate: Bromofluorobenzene	85.2		ng	100		85.2	70-130			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080714.D**

***B23H016-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	36.3	10	ng	50.0		72.6	70-130			
1,1-Dichloroethene	43.5	10	ng	50.0		87.0	70-130			
Methylene Chloride	49.9	10	ng	50.0		99.8	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	48.1	10	ng	50.0		96.2	70-130			
trans-1,2-Dichloroethene	49.6	10	ng	50.0		99.1	70-130			
Methyl-t-butyl ether	49.3	25	ng	50.0		98.5	70-130			
1,1-Dichloroethane	50.3	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	47.9	10	ng	50.0		95.8	70-130			
Chloroform	50.0	10	ng	50.0		100	70-130			
1,2-Dichloroethane	50.8	10	ng	50.0		102	70-130			
1,1,1-Trichloroethane	48.3	10	ng	50.0		96.6	70-130			
Carbon Tetrachloride	50.2	10	ng	50.0		100	70-130			
Benzene	48.6	25	ng	50.0		97.3	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
1,4-Dioxane	50.5	10	ng	50.0		101	70-130			
1,1,2-Trichloroethane	50.0	10	ng	50.0		100	70-130			
Toluene	51.6	25	ng	50.0		103	70-130			
1,2-Dibromoethane (EDB)	51.5	10	ng	50.0		103	70-130			
Tetrachloroethene	45.1	10	ng	50.0		90.2	70-130			
1,1,1,2-Tetrachloroethane	46.8	10	ng	50.0		93.5	70-130			
Chlorobenzene	48.0	10	ng	50.0		96.0	70-130			
Ethylbenzene	45.9	25	ng	50.0		91.8	70-130			
p & m-Xylene	49.7	25	ng	50.0		99.3	70-130			
o-Xylene	46.1	25	ng	50.0		92.2	70-130			
1,2,3-Trichloropropane	49.2	10	ng	50.0		98.5	70-130			
Isopropylbenzene	49.9	25	ng	50.0		99.8	70-130			
1,3,5-Trimethylbenzene	49.4	25	ng	50.0		98.7	70-130			
1,2,4-Trimethylbenzene	48.7	25	ng	50.0		97.4	70-130			
1,3-Dichlorobenzene	48.7	10	ng	50.0		97.4	70-130			
1,4-Dichlorobenzene	48.9	10	ng	50.0		97.7	70-130			
1,2-Dichlorobenzene	49.1	10	ng	50.0		98.3	70-130			
1,2,4-Trichlorobenzene	46.0	10	ng	50.0		91.9	70-130			
Naphthalene	48.9	25	ng	50.0		97.8	70-130			
1,2,3-Trichlorobenzene	48.4	10	ng	50.0		96.7	70-130			
2-Methylnaphthalene	59.2	25	ng	50.0		118	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.9</i>		<i>ng</i>	<i>50.0</i>		<i>89.7</i>	<i>70-130</i>			



<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080715.D**

***B23H016-CCB1 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
1,1-Dichloroethene	<5	10	ng							U
Methylene Chloride	<5	10	ng							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
Methyl-t-butyl ether	<10	25	ng							U
1,1-Dichloroethane	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Chloroform	<5	10	ng							U
1,2-Dichloroethane	<5	10	ng							U
1,1,1-Trichloroethane	<5	10	ng							U
Carbon Tetrachloride	<5	10	ng							U
Benzene	<10	25	ng							U
Trichloroethene	<5	10	ng							U
1,4-Dioxane	<5	10	ng							U
1,1,2-Trichloroethane	<5	10	ng							U
Toluene	<10	25	ng							U
1,2-Dibromoethane (EDB)	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
1,1,1,2-Tetrachloroethane	<5	10	ng							U
Chlorobenzene	<5	10	ng							U
Ethylbenzene	<10	25	ng							U
p & m-Xylene	<10	25	ng							U
o-Xylene	<10	25	ng							U
1,2,3-Trichloropropane	<5	10	ng							U
Isopropylbenzene	<10	25	ng							U
1,3,5-Trimethylbenzene	<10	25	ng							U
1,2,4-Trimethylbenzene	<10	25	ng							U
1,3-Dichlorobenzene	<5	10	ng							U
1,4-Dichlorobenzene	<5	10	ng							U
1,2-Dichlorobenzene	<5	10	ng							U
1,2,4-Trichlorobenzene	<5	10	ng							U
Naphthalene	<5	25	ng							U
1,2,3-Trichlorobenzene	<5	10	ng							U
2-Methylnaphthalene	<5	25	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.3</i>		<i>ng</i>	<i>100</i>		<i>86.3</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080723.D**

***B23H016-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	35.0	10	ng	50.0		70.0	70-130			
1,1-Dichloroethene	39.2	10	ng	50.0		78.3	70-130			
Methylene Chloride	50.8	10	ng	50.0		102	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	50.3	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	48.5	10	ng	50.0		96.9	70-130			
Methyl-t-butyl ether	50.8	25	ng	50.0		102	70-130			
1,1-Dichloroethane	50.7	10	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	48.6	10	ng	50.0		97.2	70-130			
Chloroform	50.6	10	ng	50.0		101	70-130			
1,2-Dichloroethane	53.2	10	ng	50.0		106	70-130			
1,1,1-Trichloroethane	50.0	10	ng	50.0		99.9	70-130			
Carbon Tetrachloride	50.6	10	ng	50.0		101	70-130			
Benzene	44.7	25	ng	50.0		89.4	70-130			
Trichloroethene	46.9	10	ng	50.0		93.7	70-130			
1,4-Dioxane	57.7	10	ng	50.0		115	70-130			
1,1,2-Trichloroethane	51.4	10	ng	50.0		103	70-130			
Toluene	51.8	25	ng	50.0		104	70-130			
1,2-Dibromoethane (EDB)	50.6	10	ng	50.0		101	70-130			
Tetrachloroethene	47.2	10	ng	50.0		94.4	70-130			
1,1,1,2-Tetrachloroethane	46.8	10	ng	50.0		93.5	70-130			
Chlorobenzene	48.2	10	ng	50.0		96.5	70-130			
Ethylbenzene	47.7	25	ng	50.0		95.3	70-130			
p & m-Xylene	48.5	25	ng	50.0		97.1	70-130			
o-Xylene	45.3	25	ng	50.0		90.7	70-130			
1,2,3-Trichloropropane	50.3	10	ng	50.0		101	70-130			
Isopropylbenzene	50.2	25	ng	50.0		100	70-130			
1,3,5-Trimethylbenzene	49.3	25	ng	50.0		98.5	70-130			
1,2,4-Trimethylbenzene	49.6	25	ng	50.0		99.2	70-130			
1,3-Dichlorobenzene	48.7	10	ng	50.0		97.4	70-130			
1,4-Dichlorobenzene	48.9	10	ng	50.0		97.8	70-130			
1,2-Dichlorobenzene	48.6	10	ng	50.0		97.2	70-130			
1,2,4-Trichlorobenzene	46.3	10	ng	50.0		92.6	70-130			
Naphthalene	49.3	25	ng	50.0		98.6	70-130			
1,2,3-Trichlorobenzene	48.0	10	ng	50.0		96.0	70-130			
2-Methylnaphthalene	42.5	25	ng	50.0		85.0	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	53.2		ng	50.0		106	70-130			
<i>Surrogate: Toluene-d8</i>	50.9		ng	50.0		102	70-130			
<i>Surrogate: Bromofluorobenzene</i>	45.1		ng	50.0		90.1	70-130			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B23H016 - Instrument: K System - File ID: Ka23080724.D**

***B23H016-CCB2 (Lab Blank)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
1,1-Dichloroethene	<5	10	ng							U
Methylene Chloride	<5	10	ng							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
Methyl-t-butyl ether	<10	25	ng							U
1,1-Dichloroethane	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Chloroform	<5	10	ng							U
1,2-Dichloroethane	<5	10	ng							U
1,1,1-Trichloroethane	<5	10	ng							U
Carbon Tetrachloride	<5	10	ng							U
Benzene	<10	25	ng							U
Trichloroethene	<5	10	ng							U
1,4-Dioxane	7.16	10	ng							
1,1,2-Trichloroethane	<5	10	ng							U
Toluene	<10	25	ng							U
1,2-Dibromoethane (EDB)	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
1,1,1,2-Tetrachloroethane	<5	10	ng							U
Chlorobenzene	<5	10	ng							U
Ethylbenzene	<10	25	ng							U
p & m-Xylene	<10	25	ng							U
o-Xylene	<10	25	ng							U
1,2,3-Trichloropropane	<5	10	ng							U
Isopropylbenzene	<10	25	ng							U
1,3,5-Trimethylbenzene	<10	25	ng							U
1,2,4-Trimethylbenzene	<10	25	ng							U
1,3-Dichlorobenzene	<5	10	ng							U
1,4-Dichlorobenzene	<5	10	ng							U
1,2-Dichlorobenzene	<5	10	ng							U
1,2,4-Trichlorobenzene	<5	10	ng							U
Naphthalene	<5	25	ng							U
1,2,3-Trichlorobenzene	<5	10	ng							U
2-Methylnaphthalene	<5	25	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>88.2</i>		<i>ng</i>	<i>100</i>		<i>88.2</i>	<i>70-130</i>			

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

**LCS: 23H0012-BS1 File ID: Ka23080702.D**

Analyzed: 8/7/23 12:49

**LCSD: B23H016-ICV1 File ID: Ka23080704.D**

Analyzed: 8/7/23 11:59

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	38.97	77.94	50	43.92	87.80	70-130	11.94	30	
1,1-Dichloroethene	75-35-4	41.84	83.68	50	45.05	90.10	70-130	7.39	30	
Methylene Chloride	75-09-2	47.26	94.52	50	51.08	102.00	70-130	7.77	30	
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	46.99	93.98	50	49.58	99.20	70-130	5.36	30	
trans-1,2-Dichloroethene	156-60-5	46.84	93.68	50	49.8	99.60	70-130	6.13	30	
Methyl-t-butyl ether	1634-04-4	47.16	94.32	50	48.2	96.40	70-130	2.18	30	
1,1-Dichloroethane	75-34-3	47.61	95.22	50	50.87	102.00	70-130	6.62	30	
cis-1,2-Dichloroethene	156-59-2	46.73	93.46	50	48.93	97.90	70-130	4.60	30	
Chloroform	67-66-3	48.44	96.88	50	49.7	99.40	70-130	2.57	30	
1,2-Dichloroethane	107-06-2	48.82	97.64	50	51.19	102.00	70-130	4.74	30	
1,1,1-Trichloroethane	71-55-6	48.06	96.12	50	50.36	101.00	70-130	4.67	30	
Carbon Tetrachloride	56-23-5	49.66	99.32	50	51.14	102.00	70-130	2.94	30	
Benzene	71-43-2	47.94	95.88	50	52.46	105.00	70-130	9.00	30	
Trichloroethene	79-01-6	46.11	92.22	50	47.76	95.50	70-130	3.52	30	
1,4-Dioxane	123-91-1	55.48	110.96	50	57.03	114.00	70-130	2.76	30	
1,1,2-Trichloroethane	79-00-5	50.73	101.46	50	50.77	102.00	70-130	0.08	30	
Toluene	108-88-3	53.26	106.52	50	54.7	109.00	70-130	2.67	30	
1,2-Dibromoethane (EDB)	106-93-4	51.03	102.06	50	51.54	103.00	70-130	0.99	30	
Tetrachloroethene	127-18-4	46.63	93.26	50	48.44	96.90	70-130	3.81	30	
1,1,1,2-Tetrachloroethane	630-20-6	47.50	95	50	47.81	95.60	70-130	0.65	30	
Chlorobenzene	108-90-7	48.44	96.88	50	49.94	99.90	70-130	3.05	30	
Ethylbenzene	100-41-4	46.29	92.58	50	46.92	93.80	70-130	1.35	30	
p & m-Xylene	179601-23-1	50.37	100.74	50	51.11	102.00	70-130	1.46	30	
o-Xylene	95-47-6	45.73	91.46	50	46.9	93.80	70-130	2.53	30	
1,2,3-Trichloropropane	96-18-4	49.48	98.96	50	50.25	101.00	70-130	1.54	30	
Isopropylbenzene	98-82-8	50.75	101.5	50	52.02	104.00	70-130	2.47	30	
1,3,5-Trimethylbenzene	108-67-8	49.63	99.26	50	50.4	101.00	70-130	1.54	30	
1,2,4-Trimethylbenzene	95-63-6	48.46	96.92	50	48.44	96.90	70-130	0.04	30	
1,3-Dichlorobenzene	541-73-1	48.72	97.44	50	48.86	97.70	70-130	0.29	30	
1,4-Dichlorobenzene	106-46-7	48.88	97.76	50	48.94	97.90	70-130	0.12	30	
1,2-Dichlorobenzene	95-50-1	48.13	96.26	50	48.86	97.70	70-130	1.51	30	
1,2,4-Trichlorobenzene	120-82-1	45.68	91.36	50	46.26	92.50	70-130	1.26	30	
Naphthalene	91-20-3	48.43	96.86	50	49.02	98.00	70-130	1.21	30	
1,2,3-Trichlorobenzene	87-61-6	47.91	95.82	50	48.04	96.10	70-130	0.27	30	
2-Methylnaphthalene	91-57-6	56.74	113.48	50	56.52	113.00	70-130	0.39	30	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

*Additional QC Information*

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m <sup>3</sup>	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---	---------

<b>Lab ID:</b> 0007112-01	<b>Sample Name:</b> 08R_SSG_01_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	---	---------------------------

Vinyl Chloride	19,939	1.00	0.817	U	U	Ka23080707.D
1,1-Dichloroethene	19,939	1.00	0.333	U	U	Ka23080707.D
Methylene Chloride	19,939	1.00	0.353 <sup>g</sup>	U	U	Ka23080707.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,939	1.00	0.898 <sup>g</sup>	U	U	Ka23080707.D
trans-1,2-Dichloroethene	19,939	1.00	0.444	U	U	Ka23080707.D
Methyl-t-butyl ether	19,939	1.00	0.504 <sup>g</sup>	U	U	Ka23080707.D
1,1-Dichloroethane	19,939	1.00	0.857	U	U	Ka23080707.D
cis-1,2-Dichloroethene	19,939	1.00	0.535	U	U	Ka23080707.D
Chloroform	19,939	1.00	0.353 <sup>g</sup>	127.81	18.2	Ka23080707.D
1,2-Dichloroethane	19,939	1.00	0.565	U	U	Ka23080707.D
1,1,1-Trichloroethane	19,939	1.00	1.059	U	U	Ka23080707.D
Carbon Tetrachloride	19,939	1.00	0.434 <sup>g</sup>	U	U	Ka23080707.D
Benzene	19,939	1.00	0.535	58.48	5.49	Ka23080707.D
Trichloroethene	19,939	1.00	0.333	U	U	Ka23080707.D
1,4-Dioxane	19,939	1.00	0.414 <sup>g</sup>	U	U	Ka23080707.D
1,1,2-Trichloroethane	19,939	1.00	0.333 <sup>g</sup>	U	U	Ka23080707.D
Toluene	19,939	1.00	0.403	97.28	12.1	Ka23080707.D
1,2-Dibromoethane (EDB)	19,939	1.00	0.393 <sup>g</sup>	U	U	Ka23080707.D
Tetrachloroethene	19,939	1.00	0.414	13.03	1.58	Ka23080707.D
1,1,1,2-Tetrachloroethane	19,939	1.00	0.414 <sup>g</sup>	U	U	Ka23080707.D
Chlorobenzene	19,939	1.00	0.857 <sup>g</sup>	U	U	Ka23080707.D
Ethylbenzene	19,939	1.00	0.857	U	U	Ka23080707.D
p & m-Xylene	19,939	1.00	0.888	U	U	Ka23080707.D
o-Xylene	19,939	1.00	0.888	U	U	Ka23080707.D
1,2,3-Trichloropropane	19,939	1.00	0.756 <sup>g</sup>	U	U	Ka23080707.D
Isopropylbenzene	19,939	1.00	0.837 <sup>g</sup>	U	U	Ka23080707.D
1,3,5-Trimethylbenzene	19,939	1.00	0.837 <sup>g</sup>	U	U	Ka23080707.D
1,2,4-Trimethylbenzene	19,939	1.00	0.837 <sup>g</sup>	U	U	Ka23080707.D
1,3-Dichlorobenzene	19,939	1.00	0.756 <sup>g</sup>	U	U	Ka23080707.D
1,4-Dichlorobenzene	19,939	1.00	0.756 <sup>g</sup>	U	U	Ka23080707.D
1,2-Dichlorobenzene	19,939	1.00	0.756 <sup>g</sup>	U	U	Ka23080707.D
1,2,4-Trichlorobenzene	19,939	1.00	0.393 <sup>g</sup>	U	U	Ka23080707.D
Naphthalene	19,939	1.00	0.807 <sup>g</sup>	U	U	Ka23080707.D
1,2,3-Trichlorobenzene	19,939	1.00	0.393 <sup>g</sup>	U	U	Ka23080707.D
2-Methylnaphthalene	19,939	1.00	0.767 <sup>g</sup>	U	U	Ka23080707.D

<b>Bay West LLC</b> 5 Empire Drive St. Paul, MN 55103	<b>Site Name:</b> 0257001682 <b>Site Location:</b> Reedsburg, WI <b>Project Manager:</b> Jason Kunze	<b>Beacon Proposal:</b> 230427H02 <b>Lab Work Order:</b> 0007112 <b>Reported:</b> 08/14/2023
---	--	--

**Sample Result Calculation Summary (Concentration)**  
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
---------	-------------------------------	--------------------------	----------------------	---------------------------	---------------------------------	---------

<b>Lab ID:</b> 0007112-02	<b>Sample Name:</b> 08R_SSG_02_20230801	<b>̄ Temp (°C):</b> 21.66
---------------------------	---	---------------------------

Vinyl Chloride	19,886	1.00	0.817	U	U	Ka23080708.D
1,1-Dichloroethene	19,886	1.00	0.333	U	U	Ka23080708.D
Methylene Chloride	19,886	1.00	0.353 <sup>g</sup>	18.52	2.64	Ka23080708.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,886	1.00	0.898 <sup>g</sup>	27.57	1.54	Ka23080708.D
trans-1,2-Dichloroethene	19,886	1.00	0.444	U	U	Ka23080708.D
Methyl-t-butyl ether	19,886	1.00	0.504 <sup>g</sup>	U	U	Ka23080708.D
1,1-Dichloroethane	19,886	1.00	0.857	U	U	Ka23080708.D
cis-1,2-Dichloroethene	19,886	1.00	0.535	U	U	Ka23080708.D
Chloroform	19,886	1.00	0.353 <sup>g</sup>	441.93	63.0	Ka23080708.D
1,2-Dichloroethane	19,886	1.00	0.565	U	U	Ka23080708.D
1,1,1-Trichloroethane	19,886	1.00	1.059	U	U	Ka23080708.D
Carbon Tetrachloride	19,886	1.00	0.434 <sup>g</sup>	U	U	Ka23080708.D
Benzene	19,886	1.00	0.535	32.75	3.08	Ka23080708.D
Trichloroethene	19,886	1.00	0.333	U	U	Ka23080708.D
1,4-Dioxane	19,886	1.00	0.414 <sup>g</sup>	U	U	Ka23080708.D
1,1,2-Trichloroethane	19,886	1.00	0.333 <sup>g</sup>	U	U	Ka23080708.D
Toluene	19,886	1.00	0.403	237.25	29.6	Ka23080708.D
1,2-Dibromoethane (EDB)	19,886	1.00	0.393 <sup>g</sup>	U	U	Ka23080708.D
Tetrachloroethene	19,886	1.00	0.414	33.67	4.09	Ka23080708.D
1,1,1,2-Tetrachloroethane	19,886	1.00	0.414 <sup>g</sup>	U	U	Ka23080708.D
Chlorobenzene	19,886	1.00	0.857 <sup>g</sup>	U	U	Ka23080708.D
Ethylbenzene	19,886	1.00	0.857	U	U	Ka23080708.D
p & m-Xylene	19,886	1.00	0.888	U	U	Ka23080708.D
o-Xylene	19,886	1.00	0.888	U	U	Ka23080708.D
1,2,3-Trichloropropane	19,886	1.00	0.756 <sup>g</sup>	U	U	Ka23080708.D
Isopropylbenzene	19,886	1.00	0.837 <sup>g</sup>	U	U	Ka23080708.D
1,3,5-Trimethylbenzene	19,886	1.00	0.837 <sup>g</sup>	U	U	Ka23080708.D
1,2,4-Trimethylbenzene	19,886	1.00	0.837 <sup>g</sup>	U	U	Ka23080708.D
1,3-Dichlorobenzene	19,886	1.00	0.756 <sup>g</sup>	U	U	Ka23080708.D
1,4-Dichlorobenzene	19,886	1.00	0.756 <sup>g</sup>	U	U	Ka23080708.D
1,2-Dichlorobenzene	19,886	1.00	0.756 <sup>g</sup>	124.66	8.29	Ka23080708.D
1,2,4-Trichlorobenzene	19,886	1.00	0.393 <sup>g</sup>	U	U	Ka23080708.D
Naphthalene	19,886	1.00	0.807 <sup>g</sup>	U	U	Ka23080708.D
1,2,3-Trichlorobenzene	19,886	1.00	0.393 <sup>g</sup>	U	U	Ka23080708.D
2-Methylnaphthalene	19,886	1.00	0.767 <sup>g</sup>	U	U	Ka23080708.D

**Bay West LLC**  
5 Empire Drive  
St. Paul, MN 55103**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left( \frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ( $\mu\text{g}/\text{m}^3$ )  
M = mass (ng)  
DF = dilution factor  
U<sub>c</sub> = uptake rate (ml/min), corrected  
t = sampling time (minutes)  
U = compound specific uptake rate  
T<sub>u</sub> = uptake rate study temperature  
T<sub>s</sub> = sample average temperature

**Note:** T<sub>u</sub> is 16.65°C

g = Uptake rate determined using Graham's Law of Diffusion.

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014



**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

**Lab ID:** 0007112-01

**Sample Name:** 08R\_SSG\_01\_20230801

 **$\bar{x}$  Temp (°C):** 21.66

Vinyl Chloride	19,939	1.00	0.817	10.0	0.614
1,1-Dichloroethene	19,939	1.00	0.333	10.0	1.51
Methylene Chloride	19,939	1.00	0.353 <sup>§</sup>	10.0	1.42
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,939	1.00	0.898 <sup>§</sup>	10.0	0.559
trans-1,2-Dichloroethene	19,939	1.00	0.444	10.0	1.13
Methyl-t-butyl ether	19,939	1.00	0.504 <sup>§</sup>	25.0	2.49
1,1-Dichloroethane	19,939	1.00	0.857	10.0	0.585
cis-1,2-Dichloroethene	19,939	1.00	0.535	10.0	0.938
Chloroform	19,939	1.00	0.353 <sup>§</sup>	10.0	1.42
1,2-Dichloroethane	19,939	1.00	0.565	10.0	0.888
1,1,1-Trichloroethane	19,939	1.00	1.059	10.0	0.474
Carbon Tetrachloride	19,939	1.00	0.434 <sup>§</sup>	10.0	1.16
Benzene	19,939	1.00	0.535	25.0	2.35
Trichloroethene	19,939	1.00	0.333	10.0	1.51
1,4-Dioxane	19,939	1.00	0.414 <sup>§</sup>	10.0	1.21
1,1,2-Trichloroethane	19,939	1.00	0.333 <sup>§</sup>	10.0	1.51
Toluene	19,939	1.00	0.403	25.0	3.11
1,2-Dibromoethane (EDB)	19,939	1.00	0.393 <sup>§</sup>	10.0	1.28
Tetrachloroethene	19,939	1.00	0.414	10.0	1.21
1,1,1,2-Tetrachloroethane	19,939	1.00	0.414 <sup>§</sup>	10.0	1.21
Chlorobenzene	19,939	1.00	0.857 <sup>§</sup>	10.0	0.585
Ethylbenzene	19,939	1.00	0.857	25.0	1.46
p & m-Xylene	19,939	1.00	0.888	25.0	1.41
o-Xylene	19,939	1.00	0.888	25.0	1.41
1,2,3-Trichloropropane	19,939	1.00	0.756 <sup>§</sup>	10.0	0.663
Isopropylbenzene	19,939	1.00	0.837 <sup>§</sup>	25.0	1.50
1,3,5-Trimethylbenzene	19,939	1.00	0.837 <sup>§</sup>	25.0	1.50
1,2,4-Trimethylbenzene	19,939	1.00	0.837 <sup>§</sup>	25.0	1.50
1,3-Dichlorobenzene	19,939	1.00	0.756 <sup>§</sup>	10.0	0.663
1,4-Dichlorobenzene	19,939	1.00	0.756 <sup>§</sup>	10.0	0.663
1,2-Dichlorobenzene	19,939	1.00	0.756 <sup>§</sup>	10.0	0.663
1,2,4-Trichlorobenzene	19,939	1.00	0.393 <sup>§</sup>	10.0	1.28
Naphthalene	19,939	1.00	0.807 <sup>§</sup>	25.0	1.55
1,2,3-Trichlorobenzene	19,939	1.00	0.393 <sup>§</sup>	10.0	1.28
2-Methylnaphthalene	19,939	1.00	0.767 <sup>§</sup>	25.0	1.64

Bay West LLC  
 5 Empire Drive  
 St. Paul, MN 55103

 Site Name: 0257001682  
 Site Location: Reedsburg, WI  
 Project Manager: Jason Kunze

 Beacon Proposal: 230427H02  
 Lab Work Order: 0007112  
 Reported: 08/14/2023

**Method Detection and Reporting Limit Calculations (Concentration)**
**TO-17 (Passive)**

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m <sup>3</sup>
---------	-------------------------------	--------------------------	----------------------	------------------------	--

Lab ID: 0007112-02

Sample Name: 08R\_SSG\_02\_20230801

 $\bar{x}$  Temp (°C): 21.66

Vinyl Chloride	19,886	1.00	0.817	10.0	0.616
1,1-Dichloroethene	19,886	1.00	0.333	10.0	1.51
Methylene Chloride	19,886	1.00	0.353 <sup>g</sup>	10.0	1.42
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,886	1.00	0.898 <sup>g</sup>	10.0	0.560
trans-1,2-Dichloroethene	19,886	1.00	0.444	10.0	1.13
Methyl-t-butyl ether	19,886	1.00	0.504 <sup>g</sup>	25.0	2.49
1,1-Dichloroethane	19,886	1.00	0.857	10.0	0.587
cis-1,2-Dichloroethene	19,886	1.00	0.535	10.0	0.941
Chloroform	19,886	1.00	0.353 <sup>g</sup>	10.0	1.42
1,2-Dichloroethane	19,886	1.00	0.565	10.0	0.890
1,1,1-Trichloroethane	19,886	1.00	1.059	10.0	0.475
Carbon Tetrachloride	19,886	1.00	0.434 <sup>g</sup>	10.0	1.16
Benzene	19,886	1.00	0.535	25.0	2.35
Trichloroethene	19,886	1.00	0.333	10.0	1.51
1,4-Dioxane	19,886	1.00	0.414 <sup>g</sup>	10.0	1.22
1,1,2-Trichloroethane	19,886	1.00	0.333 <sup>g</sup>	10.0	1.51
Toluene	19,886	1.00	0.403	25.0	3.12
1,2-Dibromoethane (EDB)	19,886	1.00	0.393 <sup>g</sup>	10.0	1.28
Tetrachloroethene	19,886	1.00	0.414	10.0	1.22
1,1,1,2-Tetrachloroethane	19,886	1.00	0.414 <sup>g</sup>	10.0	1.22
Chlorobenzene	19,886	1.00	0.857 <sup>g</sup>	10.0	0.587
Ethylbenzene	19,886	1.00	0.857	25.0	1.47
p & m-Xylene	19,886	1.00	0.888	25.0	1.42
o-Xylene	19,886	1.00	0.888	25.0	1.42
1,2,3-Trichloropropane	19,886	1.00	0.756 <sup>g</sup>	10.0	0.665
Isopropylbenzene	19,886	1.00	0.837 <sup>g</sup>	25.0	1.50
1,3,5-Trimethylbenzene	19,886	1.00	0.837 <sup>g</sup>	25.0	1.50
1,2,4-Trimethylbenzene	19,886	1.00	0.837 <sup>g</sup>	25.0	1.50
1,3-Dichlorobenzene	19,886	1.00	0.756 <sup>g</sup>	10.0	0.665
1,4-Dichlorobenzene	19,886	1.00	0.756 <sup>g</sup>	10.0	0.665
1,2-Dichlorobenzene	19,886	1.00	0.756 <sup>g</sup>	10.0	0.665
1,2,4-Trichlorobenzene	19,886	1.00	0.393 <sup>g</sup>	10.0	1.28
Naphthalene	19,886	1.00	0.807 <sup>g</sup>	25.0	1.56
1,2,3-Trichlorobenzene	19,886	1.00	0.393 <sup>g</sup>	10.0	1.28
2-Methylnaphthalene	19,886	1.00	0.767 <sup>g</sup>	25.0	1.64

**Bay West LLC**  
 5 Empire Drive  
 St. Paul, MN 55103

**Site Name:** 0257001682  
**Site Location:** Reedsburg, WI  
**Project Manager:** Jason Kunze

**Beacon Proposal:** 230427H02  
**Lab Work Order:** 0007112  
**Reported:** 08/14/2023

### *Laboratory Certification List*

<b>Certification ID</b>	<b>Certification No.</b>	<b>Description</b>	<b>Expires</b>	<b>Project Required</b>
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

### Qualifiers/Notes and Definitions

**General Definitions:**

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm 0.06$ control limits)
$3\sigma$	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Bay West LLC  
5 Empire Drive  
St. Paul, MN 55103

Site Name: 0257001682  
Site Location: Reedsburg, WI  
Project Manager: Jason Kunze

Beacon Proposal: 230427H02  
Lab Work Order: 0007112  
Reported: 08/14/2023

## *Sample Management Records*

## PASSIVE AIR SAMPLING - BEACON SAMPLER CHAIN-OF-CUSTODY

Client Information		Project Manager: Jason Kunze (jkunze@baywest.com)		Client PO: J230382 / PO1309		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company:	Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ____ days					
Address:	5 Empire Dr.	Location: Sanitary Sewer Gas (ROW)		Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C					
City / State / Zip:	St. Paul, MN, 55103	Submitted by: Anders Santelman							
Phone:	651-724-9757	Email: asantelman@baywest.com							
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes			
08R_SSG_01_20230801	7/18/2023	1535	8/1/2023	1154	21.66	R_SSG_01			X
08R_SSG_02_20230801	7/18/2023	1604	8/1/2023	1130	21.66	R_SSG_02			X
Special Notes / Instructions: <b>**Extended VOC list - including VOCs (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride)</b>									
Relinquished by (signature):	Date / Time: 08.02.2023 / 1000	Received by (signature):	Date / Time: 8/3/23 12:42						
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:						
<b>For Lab Use Only</b>	Beacon Job No: 7112	Beacon Proposal: 230427H01 & 230427H02							
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a				Custody Seal No: 5504084			