

September 8, 2023

Steven Zibell
City Engineer/Public Works Director
Public Works – City of Reedsburg Wisconsin
134 S Locust Street
Reedsburg, WI 53959

SUBJECT: Vapor Sampling Results - Contaminant Detection Below DNR Screening Level
PROPERTY: Reedsburg Cleaners, Manhole Sewers Right-Of-Way (PSI R); BRRTS # 02-57-001682

Dear Steven Zibell,

Included are the findings of a recent investigation of two select sanitary sewers along N. Locust Street conducted by Bay West, LLC (Bay West), an environmental consultant hired by the Wisconsin Department of Natural Resources (WDNR).

Background:

As you are aware, this investigation was conducted to determine if chlorinated solvent vapors were present in the sanitary sewer and which could pose a risk of vapor intrusion into nearby buildings. The contaminants of concern at the Reedsburg Cleaners property are tetrachloroethylene (PCE) and trichloroethylene (TCE). The history of this site and the potential concerns to neighboring residents are available on Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW) under BRRTS #02-57-001682 and is the focus of this phase of investigation.

Sampling:

On July 18, 2023, Bay West deployed passive vapor sampling devices in two manhole sewers located along N. Locust Street between 2nd Street and E. Main Street for the collection of sanitary sewer manhole air samples. On August 1, 2023, the sample devices were retrieved then submitted to Beacon Environmental, where they underwent laboratory analysis of 35 different volatile organic compounds (VOCs) including the drycleaning solvent PCE and associated breakdown compounds TCE, cis-1,2-dichloroethene (DCE), trans-1,2-dichloroethene (DCE) and vinyl chloride (VC).

Your Test Results:

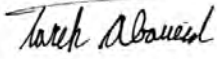
Attached are copies of the laboratory report for the passive vapor sewer samples. The results of this first round of sampling shows that a limited concentration of PCE was detected in one of the samples collected. Although PCE was detected in sewer vapors, the level at which it was detected is such that it does not pose a threat to the sanitary sewer or nearby building occupants. This is called “a detection below screening level” and is explained in the enclosed fact sheet.

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 reporting limits. Of these, chloroform detected at 63.0 µg/m³ was above the DNR residential Sanitary Sewer Gas Screening Level (SSGSL) of 41 µg/m³ but below the commercial SSGSL of 180 µg/m³. The chloroform and other detections appear unrelated to the dry-cleaning activities that took place at Reedsburg Cleaners.

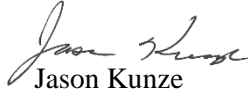
At this time, the past operations and release from the dry cleaners do not appear to have impacted the sanitary sewer and no further testing is warranted at this time. Should additional information be found to change this, Bay West or the WDNR will contact you.

We appreciate the opportunity to assist you with this vapor investigation effort. Please feel free to contact us if you have any questions about these results.

Sincerely,



Tarek Aboueid
Environmental Scientist
651.724.9757
taboueid@baywest.com



Jason Kunze
Senior Project Manager
651.291.3438
Jkunze@baywest.com

Copy: Rob Hoverman, PG, WDNR, 414.497.0896, Robert.Hoverman@wisconsin.gov
Jeff Ackerman, WDNR PM, 608.275.3323, jeff.ackerman@wisconsin.gov
Jeremiah Yee, Wisconsin Dept of Health Services, 608-266-1865, dhsdphoperations@dhs.wisconsin.gov

Attachments:

TABLE

Table – Tabulated vapor analytical results with the sample dates, sample type (sub-slab or indoor air), and location.

FIGURES

Figure 1 – Property Location Map

Figure 2 – Building Map showing sampling locations.

APPENDIX

Appendix A – Access Agreement

Appendix B – Laboratory Analytical Results with Chain of Custody

Appendix C – Vapor Sampling Field Checklist and Photo Log

TABLE

Table 1R
Sewer Gas Analytical Results

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



Location Sample ID Date Sampled	SSGSL Residential	SSGSL Commercial	South manhole (12.10.4)	North manhole (12.5.4)	
			08R_SSG_01_20230801 7/18 to 8/1/2023	08R_SSG_02_20230801 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	1.54
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	8.29
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	5.49	3.08
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	18.2	63.0
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	2.64
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	1.58	4.09
Toluene	108-88-3	170000	730000	12.1	29.6
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
 WIDNR – Wisconsin Department of Natural Resources
 SSGSL – WIDNR Sanitary Sewer Gas Screening Level, calculated using USEPA VISLs published May 2023
 — – 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

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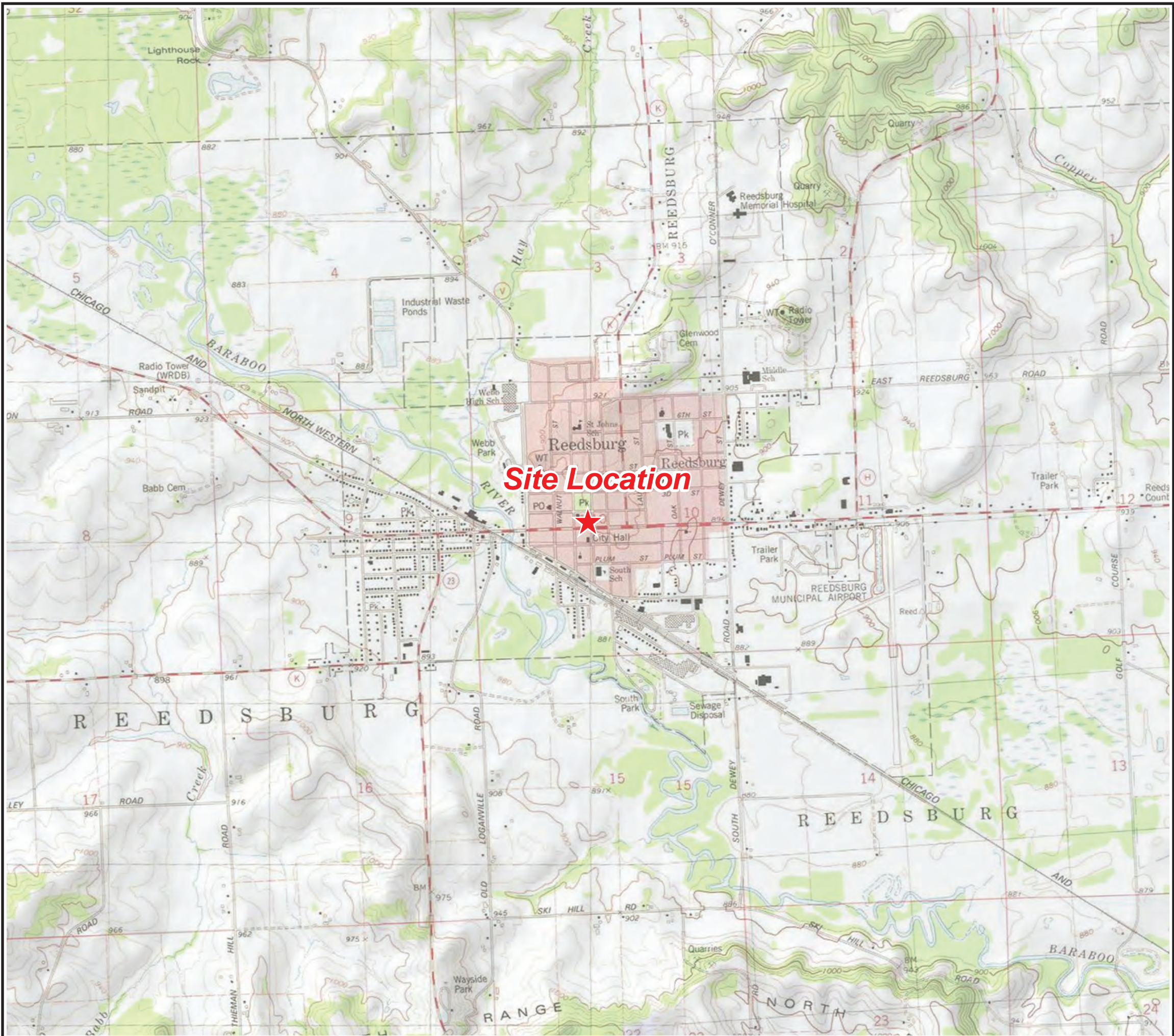
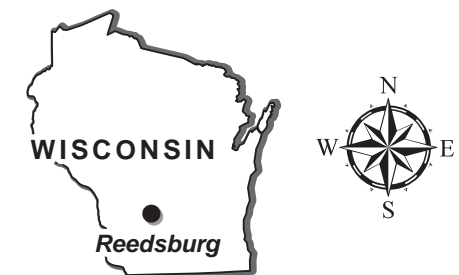


Figure 1

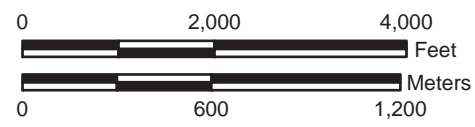
Site Location Map

Reedsburg Cleaners
WDNR ERP Case #: 02-57-001682
WDNR PS Act. ID: VIZC_REEDSBURG

Reedsburg, WI 53959



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



1:24,000

★ Site Location



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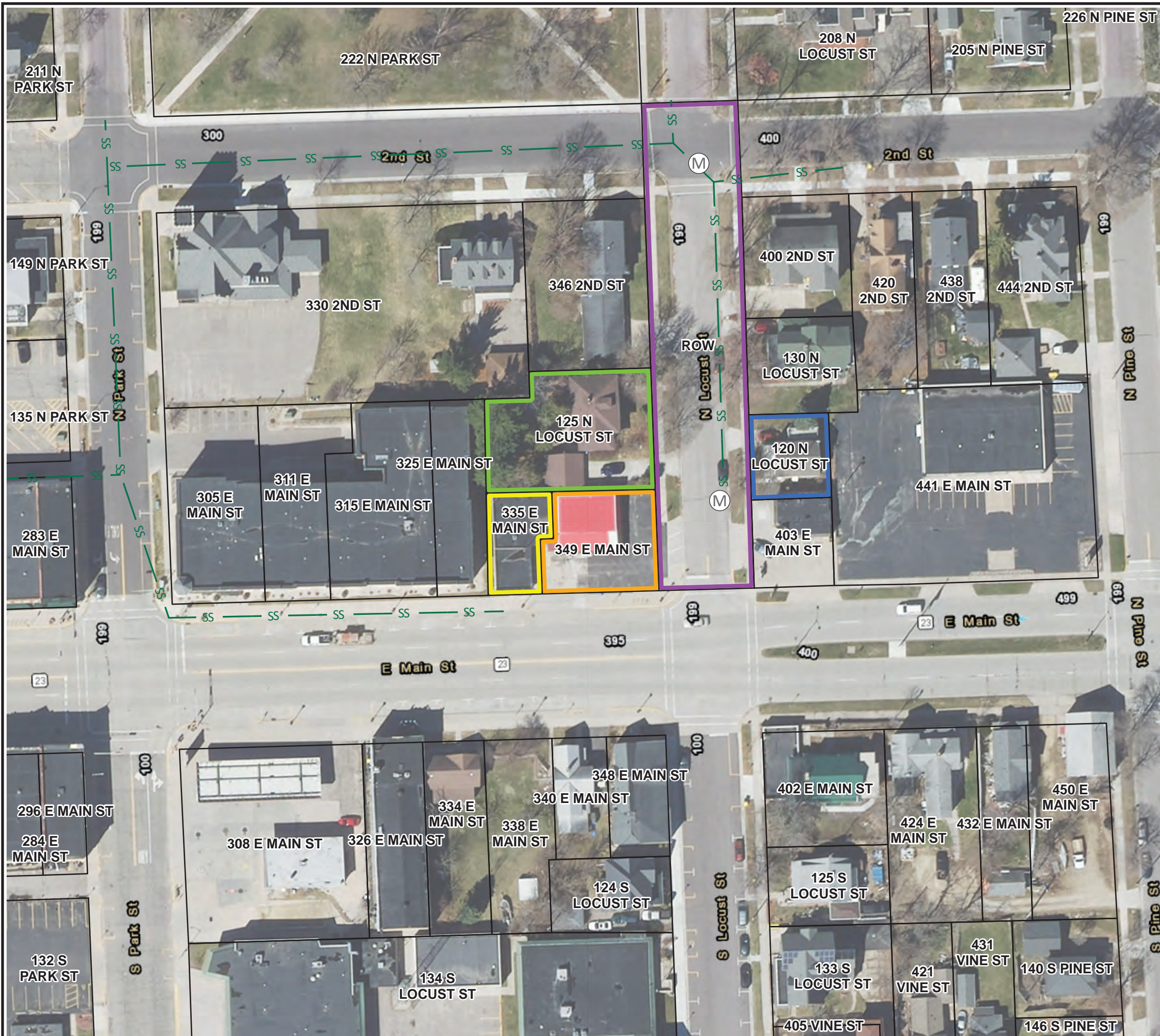


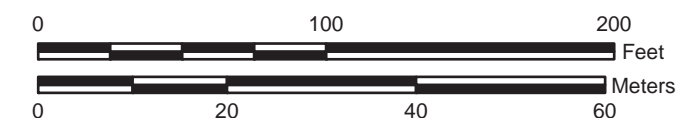
Figure 2 Site Map

Reedsburg Cleaners
 WDNR ERP Case #: 02-57-001682
 WDNR PS Act. ID: VIZC_REEDSBURG

Reedsburg, WI 53959



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



- (M) Manhole
- SS 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



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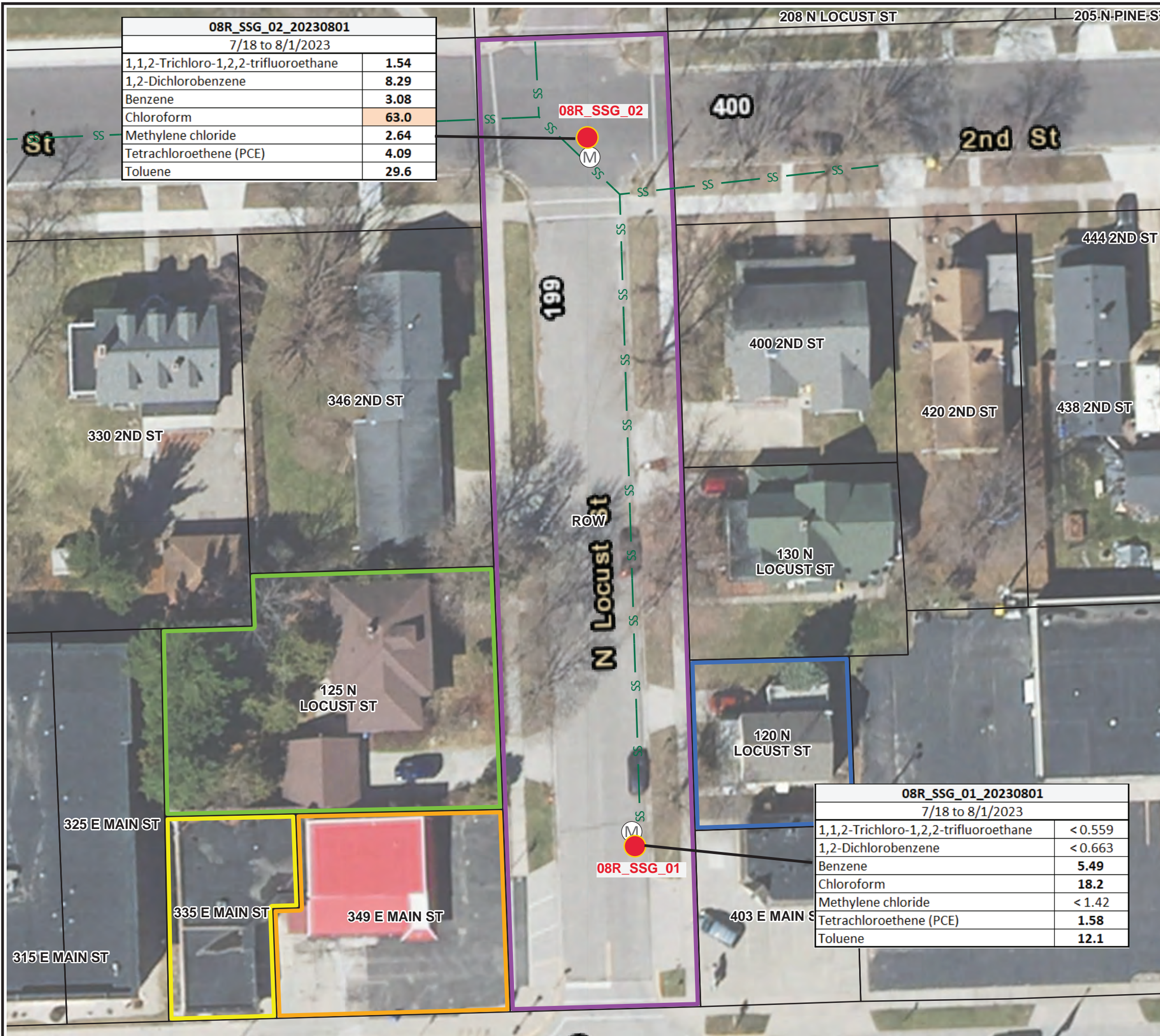


Figure 2R

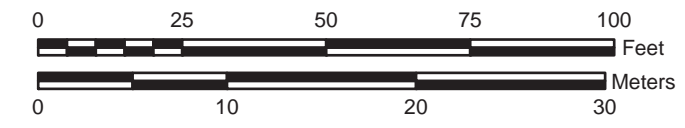
Site Map

Reedsburg Cleaners
 WDNR ERP Case #: 02-57-001682
 WDNR PS Act. ID: VIZC_REEDSBURG

ROW
 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)
- 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

From: [Steve Zibell](#)
To: [Tarek Aboueid](#)
Cc: [Hoverman, Robert R - DNR \(Rob\)](#); [Borski, Jennifer - DNR](#); [Walden, James E -DNR](#); [Jason Kunze](#)
Subject: Re: Reedsburg Cleaners - Sanitary Sewer Information
Date: Friday, July 7, 2023 11:18:25 AM
Attachments: [image001.png](#)

This will be fine.

Sent from Steven Zibell iPhone

On Jul 7, 2023, at 10:57 AM, Tarek Aboueid <taboueid@baywest.com> wrote:

Thanks Rob, I'll see if we can map out the laterals and gather additional utility data during the field work.

Steve, can you let me know about access to the manholes for Tuesday 7/18?

Thanks!

Tarek Aboueid
Environmental Professional III | Bay West LLC
direct: 651-724-9757|cell: 224-425-0917
24-hr Emergency: 1-800-279-0456

From: Hoverman, Robert R - DNR (Rob) <robert.hoverman@wisconsin.gov>
Sent: Thursday, July 6, 2023 10:19 AM
To: Tarek Aboueid <taboueid@BAYWEST.com>; szibell@reedsburgwi.gov
Cc: Borski, Jennifer - DNR <Jennifer.Borski@wisconsin.gov>; Walden, James E -DNR <jamese.walden@wisconsin.gov>; Jason Kunze <jkunze@BAYWEST.com>
Subject: RE: Reedsburg Cleaners - Sanitary Sewer Information

I will save Steve the trouble. Mark already was looped in on this.

We are committed to service excellence.
Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Rob Hoverman, PG
414.497.0896
Robert Hoverman@wisconsin.gov<<mailto:Robert.Hoverman@wisconsin.gov>>

From: Tarek Aboueid <taboueid@BAYWEST.com<<mailto:taboueid@BAYWEST.com>>>
Sent: Thursday, July 6, 2023 10:10 AM
To: szibell@reedsburgwi.gov<<mailto:szibell@reedsburgwi.gov>>
Cc: Hoverman, Robert R - DNR (Rob) <robert.hoverman@wisconsin.gov<<mailto:robert.hoverman@wisconsin.gov>>>>; Borski, Jennifer - DNR <Jennifer.Borski@wisconsin.gov<<mailto:Jennifer.Borski@wisconsin.gov>>>>; Walden, James E -DNR <jamese.walden@wisconsin.gov<<mailto:jamese.walden@wisconsin.gov>>>>; Jason Kunze <jkunze@BAYWEST.com<<mailto:jkunze@BAYWEST.com>>>>
Subject: Reedsburg Cleaners - Sanitary Sewer Information

CAUTION: This email originated from outside the organization.
Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Steve,

I got your information from Robert Hoverman at the Wisconsin DNR, regarding a vapor intrusion investigation we are conducting at the Reedsburg Cleaners facility (WDNR ERP Case #: 02-57-001682) located at 349 E. Main Street, Reedsburg, WI <https://www.google.com/maps/place/349+E+Main+St,+Reedsburg,+WI+53959/data=!4m2!3m1!1s0x87fd58f46997ed1:0xef5e0e89a981dbf9?sa=X&ved=2ahUKFwjLml7Lvvi_AhUcATQIHwKbBE0Q8gF6BAgVEAA&ved=2ahUKFwjLml7Lvvi_AhUcATQIHwKbBE0Q8gF6BAgYEA>. As part of the investigation, we are evaluating if solvent vapors are migrating into sanitary sewers that may pose a risk to nearby residences.

During the week of July 17, we'll be collecting vapor samples at a few residences. In addition we are proposing to collect samples from 2 manhole locations along Locust Street on Tuesday 7/18 using the WNDR passive vapor sampling techniques (attached). Would the City be able to provide us access to the two manholes along Locust that day? We would also need to return to collect our equipment after 2 weeks?

Would you also be able to provide me with any as-built information for the sanitary sewers for along Main Street, North Locust Street, and North Pearl Street (see attached figure). The as-built information we are looking for includes:

- * Plan views / location of manholes / location and dates of laterals (existing and abandoned) / location of drop structures
- * depths (profile),
- * dates of construction and repair
- * pipe material and size
- * bedding materials
- * whether manhole covers have vent holes
- * history of cleaning or video-logging
- * estimated variation of liquid elevation
- * flow velocity in area and flow direction
- * results of any previous sampling.

Thank you,

Tarek Aboueid
Environmental Professional III | Bay West LLC
direct: 651-724-9757|cell: 224-425-0917

APPENDIX B



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

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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	08R_SSG_01_20230801	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Chloroform	67-66-3	18.2		4.096	1.42	Ka23080707.D
Benzene	71-43-2	5.49		4.800	2.35	Ka23080707.D
Toluene	108-88-3	12.1		7.630	3.11	Ka23080707.D
Tetrachloroethene	127-18-4	1.58		8.157	1.21	Ka23080707.D

Lab Sample ID: 0007112-02	08R_SSG_02_20230801	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Methylene Chloride	75-09-2	2.64		2.545	1.42	Ka23080708.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	1.54		2.224	0.560	Ka23080708.D
Chloroform	67-66-3	63.0		4.099	1.42	Ka23080708.D
Benzene	71-43-2	3.08		4.804	2.35	Ka23080708.D
Toluene	108-88-3	29.6		7.630	3.12	Ka23080708.D
Tetrachloroethene	127-18-4	4.09		8.157	1.22	Ka23080708.D
1,2-Dichlorobenzene	95-50-1	8.29		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
Chloroform	67-66-3	18.2		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
Benzene	71-43-2	5.49		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
Toluene	108-88-3	12.1		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
Tetrachloroethene	127-18-4	1.58		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
Methylene Chloride	75-09-2	2.64		1.42	08/07/2023 16:12	Ka23080708.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	1.54		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
Chloroform	67-66-3	63.0		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
Benzene	71-43-2	3.08		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
Toluene	108-88-3	29.6		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
Tetrachloroethene	127-18-4	4.09		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
1,2-Dichlorobenzene	95-50-1	8.29		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
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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>			

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
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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			

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
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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>			

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
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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			

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
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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			

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
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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>			

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
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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>			

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
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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			

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: 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>	107		ng	100		107	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			

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
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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

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
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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 ³	File ID
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Lab ID: 0007112-01	Sample Name: 08R_SSG_01_20230801	̄ Temp (°C): 21.66
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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 ^g	U	U	Ka23080707.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,939	1.00	0.898 ^g	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 ^g	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 ^g	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 ^g	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 ^g	U	U	Ka23080707.D
1,1,2-Trichloroethane	19,939	1.00	0.333 ^g	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 ^g	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 ^g	U	U	Ka23080707.D
Chlorobenzene	19,939	1.00	0.857 ^g	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 ^g	U	U	Ka23080707.D
Isopropylbenzene	19,939	1.00	0.837 ^g	U	U	Ka23080707.D
1,3,5-Trimethylbenzene	19,939	1.00	0.837 ^g	U	U	Ka23080707.D
1,2,4-Trimethylbenzene	19,939	1.00	0.837 ^g	U	U	Ka23080707.D
1,3-Dichlorobenzene	19,939	1.00	0.756 ^g	U	U	Ka23080707.D
1,4-Dichlorobenzene	19,939	1.00	0.756 ^g	U	U	Ka23080707.D
1,2-Dichlorobenzene	19,939	1.00	0.756 ^g	U	U	Ka23080707.D
1,2,4-Trichlorobenzene	19,939	1.00	0.393 ^g	U	U	Ka23080707.D
Naphthalene	19,939	1.00	0.807 ^g	U	U	Ka23080707.D
1,2,3-Trichlorobenzene	19,939	1.00	0.393 ^g	U	U	Ka23080707.D
2-Methylnaphthalene	19,939	1.00	0.767 ^g	U	U	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
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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 ³	File ID
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Lab ID: 0007112-02	Sample Name: 08R_SSG_02_20230801	̄ Temp (°C): 21.66
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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 ^g	18.52	2.64	Ka23080708.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,886	1.00	0.898 ^g	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 ^g	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 ^g	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 ^g	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 ^g	U	U	Ka23080708.D
1,1,2-Trichloroethane	19,886	1.00	0.333 ^g	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 ^g	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 ^g	U	U	Ka23080708.D
Chlorobenzene	19,886	1.00	0.857 ^g	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 ^g	U	U	Ka23080708.D
Isopropylbenzene	19,886	1.00	0.837 ^g	U	U	Ka23080708.D
1,3,5-Trimethylbenzene	19,886	1.00	0.837 ^g	U	U	Ka23080708.D
1,2,4-Trimethylbenzene	19,886	1.00	0.837 ^g	U	U	Ka23080708.D
1,3-Dichlorobenzene	19,886	1.00	0.756 ^g	U	U	Ka23080708.D
1,4-Dichlorobenzene	19,886	1.00	0.756 ^g	U	U	Ka23080708.D
1,2-Dichlorobenzene	19,886	1.00	0.756 ^g	124.66	8.29	Ka23080708.D
1,2,4-Trichlorobenzene	19,886	1.00	0.393 ^g	U	U	Ka23080708.D
Naphthalene	19,886	1.00	0.807 ^g	U	U	Ka23080708.D
1,2,3-Trichlorobenzene	19,886	1.00	0.393 ^g	U	U	Ka23080708.D
2-Methylnaphthalene	19,886	1.00	0.767 ^g	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_c = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
T_u = uptake rate study temperature
T_s = sample average temperature

Note: T_u 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 ³
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Lab ID: 0007112-01

Sample Name: 08R_SSG_01_20230801

̄ 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 [§]	10.0	1.42
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,939	1.00	0.898 [§]	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 [§]	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 [§]	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 [§]	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 [§]	10.0	1.21
1,1,2-Trichloroethane	19,939	1.00	0.333 [§]	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 [§]	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 [§]	10.0	1.21
Chlorobenzene	19,939	1.00	0.857 [§]	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 [§]	10.0	0.663
Isopropylbenzene	19,939	1.00	0.837 [§]	25.0	1.50
1,3,5-Trimethylbenzene	19,939	1.00	0.837 [§]	25.0	1.50
1,2,4-Trimethylbenzene	19,939	1.00	0.837 [§]	25.0	1.50
1,3-Dichlorobenzene	19,939	1.00	0.756 [§]	10.0	0.663
1,4-Dichlorobenzene	19,939	1.00	0.756 [§]	10.0	0.663
1,2-Dichlorobenzene	19,939	1.00	0.756 [§]	10.0	0.663
1,2,4-Trichlorobenzene	19,939	1.00	0.393 [§]	10.0	1.28
Naphthalene	19,939	1.00	0.807 [§]	25.0	1.55
1,2,3-Trichlorobenzene	19,939	1.00	0.393 [§]	10.0	1.28
2-Methylnaphthalene	19,939	1.00	0.767 [§]	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 ³
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Lab ID: 0007112-02

Sample Name: 08R_SSG_02_20230801

x̄ 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 ^g	10.0	1.42
1,1,2-Trichlorotrifluoroethane (Fr.113)	19,886	1.00	0.898 ^g	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 ^g	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 ^g	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 ^g	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 ^g	10.0	1.22
1,1,2-Trichloroethane	19,886	1.00	0.333 ^g	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 ^g	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 ^g	10.0	1.22
Chlorobenzene	19,886	1.00	0.857 ^g	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 ^g	10.0	0.665
Isopropylbenzene	19,886	1.00	0.837 ^g	25.0	1.50
1,3,5-Trimethylbenzene	19,886	1.00	0.837 ^g	25.0	1.50
1,2,4-Trimethylbenzene	19,886	1.00	0.837 ^g	25.0	1.50
1,3-Dichlorobenzene	19,886	1.00	0.756 ^g	10.0	0.665
1,4-Dichlorobenzene	19,886	1.00	0.756 ^g	10.0	0.665
1,2-Dichlorobenzene	19,886	1.00	0.756 ^g	10.0	0.665
1,2,4-Trichlorobenzene	19,886	1.00	0.393 ^g	10.0	1.28
Naphthalene	19,886	1.00	0.807 ^g	25.0	1.56
1,2,3-Trichlorobenzene	19,886	1.00	0.393 ^g	10.0	1.28
2-Methylnaphthalene	19,886	1.00	0.767 ^g	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

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

Beacon Proposal: 230427H02
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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 ± 0.06 control limits)
3σ	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

APPENDIX C

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

Sample ID: 08R_SSG_01_20230801
 Passive Sampler Type: Passive Sewer Air Sampler
 Sample Location: ROW 12.10.4
 Duration of Test: 2 weeks
 Analysis: Extended VOCS and PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride
 Laboratory: Beacon



Photo 1: Inside Manhole



Photo 2: Sampler in place

Start (or Grab) Sample

Date: 7/18/2023
 Time: 1535
 Static Pressure: NA
 PID (ppm): 0.0 Top, 0.0 Bottom

End (or Grab) Sample

Date: 8/01/2023
 Time: 1154
 Static Pressure: NA
 PID (ppm): 0.0 Top, 0.0 Bottom



Photo 3: Manhole as left

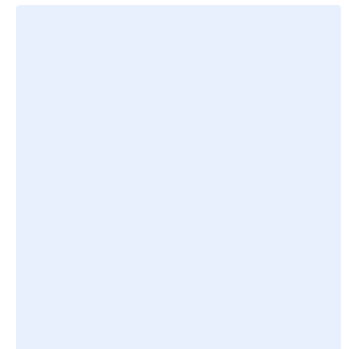


Photo 4: _____

#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

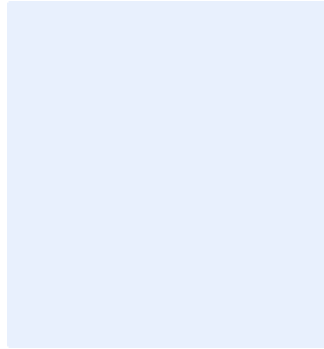


Photo 3: _____

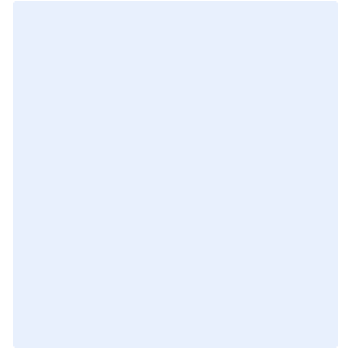


Photo 4: _____