

September 22, 2023  
File No. 25222269.02

Ms. Jennifer Borski  
Wisconsin Department of Natural Resources  
625 E. County Road Y, STE. 700  
Oshkosh, WI 54901-9731

Subject: Site Investigation Status Report  
Sandie's Dry Cleaner & Laundry (Former) – BRRTS #02-45-55222  
513 Grand Avenue  
Little Chute, Wisconsin

Dear Ms. Borski:

SCS Engineers (SCS) has prepared this Site Investigation Status Report for the Wisconsin Department of Natural Resources (WDNR) to present results for the vapor investigation activities related to the chlorinated volatile organic compound (CVOC) release at the former Sandie's Dry Cleaner & Laundry (Former) (Sandie's) site (the site). The sampling was completed at the request of WDNR through the Vapor Intrusion Zone Contract (VIZC). Laboratory results indicate that while CVOC vapors were detected, the reported concentrations are less than Sanitary Sewer Gas Screening Levels (SSGSLs).

## **BACKGROUND**

The Sandie's site was historically occupied by a dry cleaning business. Historic dry cleaning operations have resulted in CVOC impacts to soil, groundwater, and vapor/air. WDNR requested evaluation of potential CVOC vapors within sanitary sewers, which have the potential to act as conduits for vapor migration. The sanitary sewer that serves the former Sandie's property also serves the surrounding area, which is developed with commercial and residential properties.

## **SANITARY SEWER INFORMATION**

SCS obtained information regarding the sanitary sewers near the Sandie's site from the Village of Little Chute. Three sanitary sewer manhole structures along Grand Avenue were identified as sampling locations, including the structures identified on Village plans as "NMH0673/MH5," located up-flow from the Sandie's site, and "NMH0645/MH4" and "NMH0656/MH3" located in a down-flow direction. In addition, manhole structures "NHM0735/MH5" and "NHM0729/MH4" were identified along West Lincoln Avenue southwest of the Sandie's site, in the area where the groundwater plume originating at the Sandie's site intersects the sanitary sewer line. Village plans indicate the sewer along West Lincoln Ave is not directly connected to the sewer that serves the former Sandie's property, however CVOC vapors previously identified at the 135 W. Lincoln Avenue residence suggest a vapor intrusion risk along West Lincoln Avenue. Based on information received from the Village of Little Chute, the current sanitary sewers along Grand Avenue and West Lincoln Ave were constructed in 1995 and 2001, respectively. The sanitary sewer sampling locations are shown on **Figure 2**.



## **PASSIVE SEWER VAPOR SAMPLING**

On May 9, 2023, SCS placed Beacon Environmental (Beacon) passive samplers in each sanitary manhole structure. Prior to sampler placement within each, the liquid level was measured and recorded. The samplers were then suspended with braided mason line approximately 1 foot above the measured liquid level using neodymium magnets to secure the string to the manhole structure. The manhole lid was then replaced. The ambient temperature was approximately 60 degrees Fahrenheit during sampler placement. Traffic control and manhole access assistance was provided by Village of Little Chute staff.

Samplers were retrieved on May 23, 2023, and were immediately placed in the return shipment packaging provided by Beacon. The ambient temperature was approximately 65 degrees during sampler retrieval. Very little precipitation fell during the period of sample collection and samplers showed no signs of inundation. Samplers were returned to Beacon along with a completed chain-of-custody form for analysis of tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (DCE), trans-1,2-DCE, and vinyl chloride by EPA Method TO-17.

A copy of WDNR's Vapor Intrusion Sample Log is included as **Appendix A**. Photographs of the sample deployment are included as **Appendix B**.

## **RESULTS**

Analytical results are summarized in **Table 1**. The Beacon laboratory analytical report is included in **Appendix C**.

PCE was detected within manholes NMH0645/MH4, NMH0656/MH3, NHM0735/MH5, and NHM0729/MH4, with concentrations generally decreasing down-flow and with distance from the Sandie's site. A detection of TCE was reported for manhole NMH0735/MH5 at a concentration only slightly greater than the laboratory limit of detection. The remaining CVOC constituents were not detected within the samples. The trip blank analyzed as a quality control measure was not found to contain CVOCs at concentrations greater than the laboratory detection limits.

The analytical results were compared to SSGSLs, and no SSGSLs were exceeded. Furthermore, the reported concentrations were less than 10 percent of their respective SSGSLs.

## **RECOMMENDATIONS**

Concentrations of CVOCs in the sewer vapor samples were not reported to exceed 10 percent of SSGSLs, and therefore no additional sewer vapor sampling is recommended based on WDNR guidance document RR-649.

## CLOSING

SCS appreciates the opportunity to assist WDNR with this important VIZC project. Please contact Robert Langdon at (608) 212-3995 or [rlangdon@scsengineers.com](mailto:rlangdon@scsengineers.com) with any questions regarding this report or its findings.

Sincerely,



Jacob Krause, PG  
Hydrogeologist  
SCS Engineers



Robert Langdon  
Senior Project Manager  
SCS Engineers

JJK/REO\_AJR/REL/RT

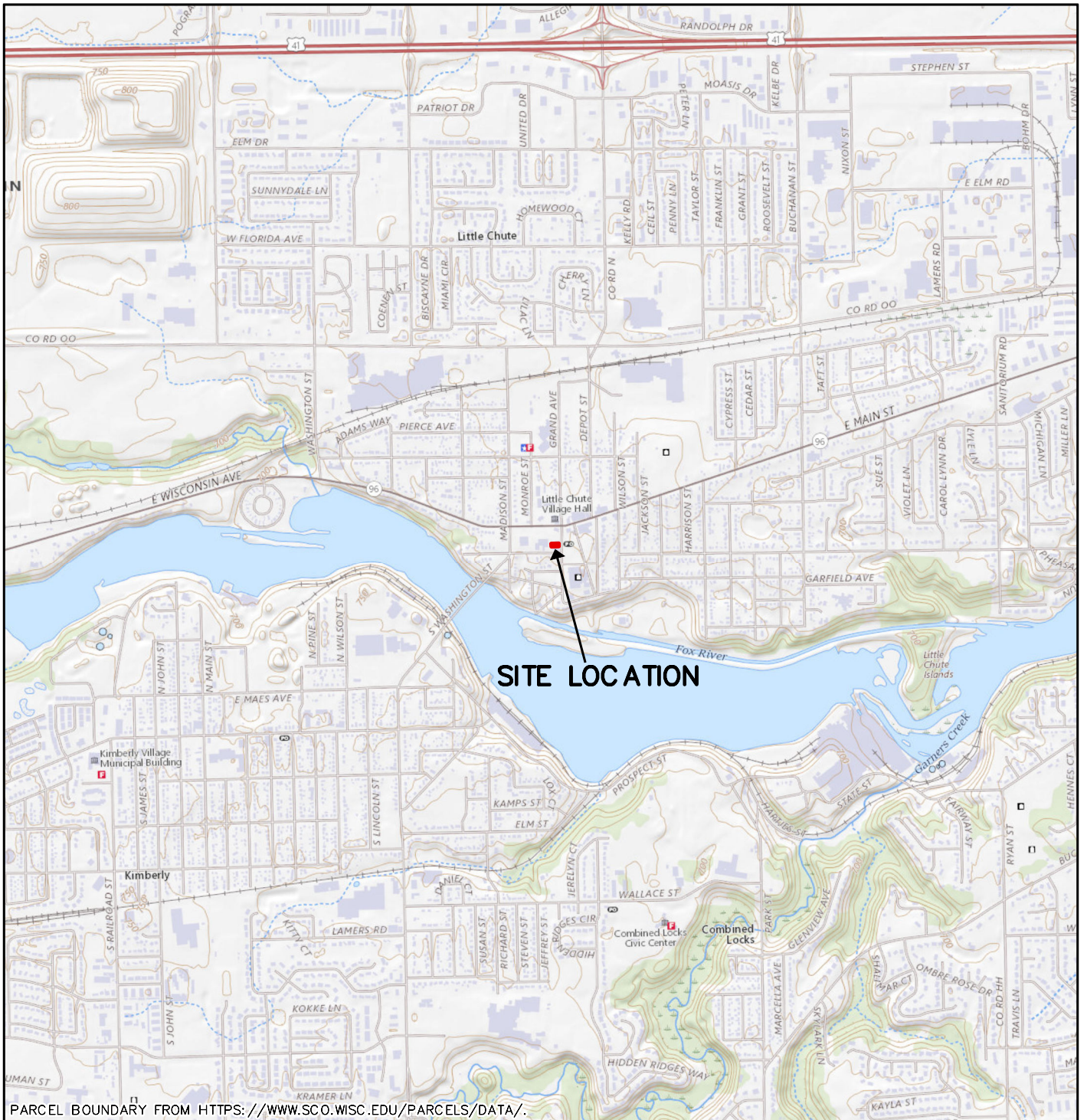
- Encl. Figure 1. Site Location  
Figure 2. Sanitary Sewer Vapor Analytical Results  
Table 1. Sanitary Sewer Gas Analytical Results Summary  
Appendix A. WDNR Vapor Intrusion Sample Log  
Appendix B. Vapor Sample Deployment Photographs  
Appendix C. Laboratory Analytical Report

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## Figures

- 1 Site Location
- 2 Sanitary Sewer Vapor Analytical Results





PARCEL BOUNDARY FROM [HTTPS://WWW.SCO.WISC.EDU/PARCELS/DATA/](https://www.sco.wisc.edu/parcels/data/).




USGS THE NATIONAL MAP  
APRIL 2023

2,000 0 2,000'



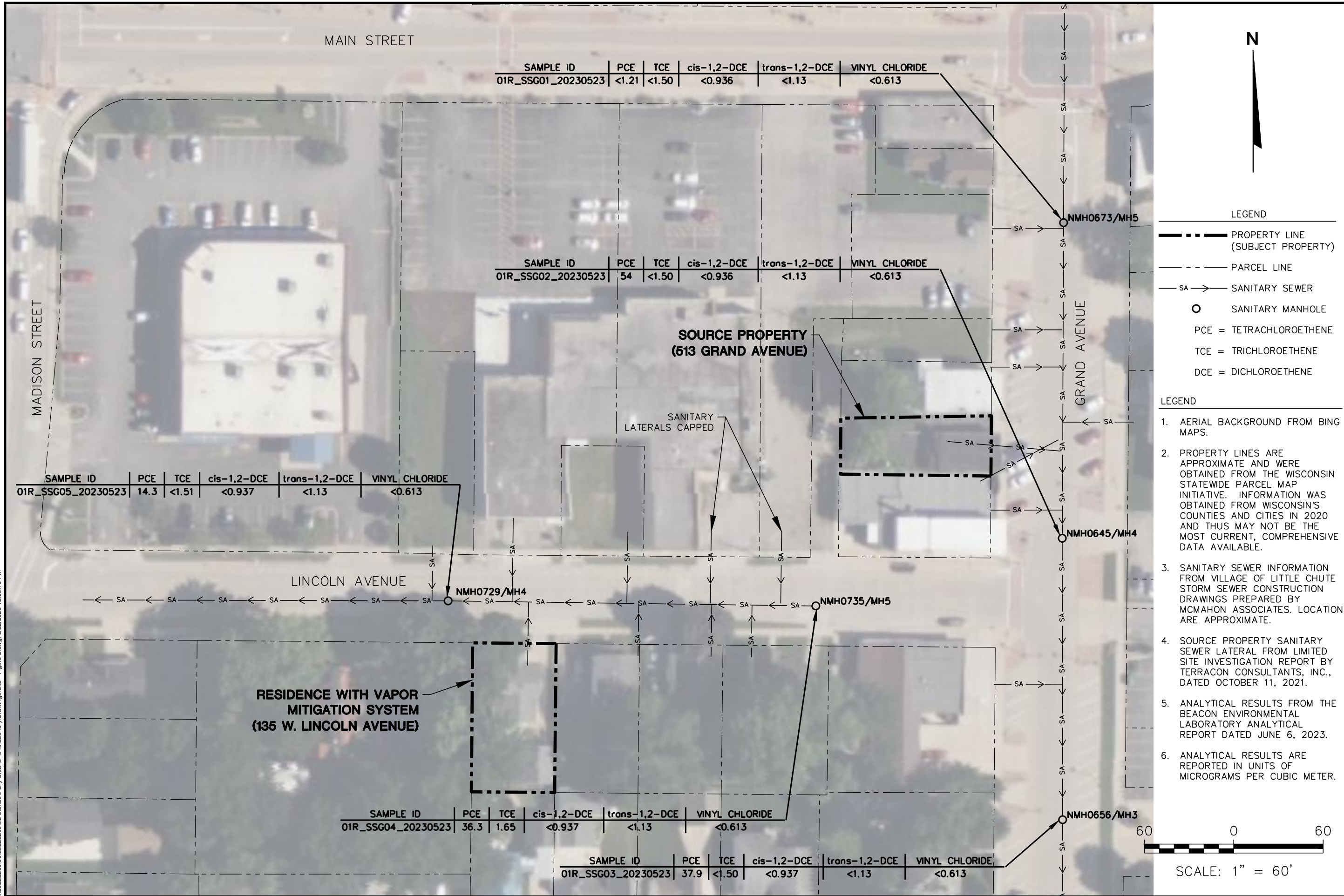
SCALE: 1" = 2,000'



CLIENT	 <b>WISCONSIN DEPARTMENT OF NATURAL RESOURCES</b>		SITE	<b>SANDIE'S DRY CLEANER AND LAUNDRY (FORMER)</b> <b>513 GRAND AVENUE</b> <b>LITTLE CHUTE, WISCONSIN</b>		ENGINEER	<b>SCS ENGINEERS</b> 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830		FIGURE	1
	PROJECT NO.	25222269.02		DRAWN BY:	AA		SITE LOCATION			
DRAWN:	08/04/20232	CHECKED BY:	JJK							
REVISED:	08/04/20232	APPROVED BY:	REL, 9/22/2023							



I:\2522269\_00\2522269\_02\_Sandies Dry Cleaner and Laundry\Drawings\Site - Figure 2.dwg, 9/22/2023 12:58:16 PM



SAMPLE ID	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VINYL CHLORIDE
01R_SSG01_20230523	<1.21	<1.50	<0.936	<1.13	<0.613

SAMPLE ID	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VINYL CHLORIDE
01R_SSG02_20230523	54	<1.50	<0.936	<1.13	<0.613

SAMPLE ID	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VINYL CHLORIDE
01R_SSG05_20230523	14.3	<1.51	<0.937	<1.13	<0.613

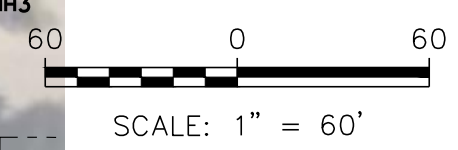
SAMPLE ID	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VINYL CHLORIDE
01R_SSG04_20230523	36.3	1.65	<0.937	<1.13	<0.613

SAMPLE ID	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VINYL CHLORIDE
01R_SSG03_20230523	37.9	<1.50	<0.937	<1.13	<0.613

**LEGEND**

- PROPERTY LINE (SUBJECT PROPERTY)
- PARCEL LINE
- SANITARY SEWER
- SANITARY MANHOLE
- PCE = TETRACHLOROETHENE
- TCE = TRICHLOROETHENE
- DCE = DICHLOROETHENE

- LEGEND**
- AERIAL BACKGROUND FROM BING MAPS.
  - PROPERTY LINES ARE APPROXIMATE AND WERE OBTAINED FROM THE WISCONSIN STATEWIDE PARCEL MAP INITIATIVE. INFORMATION WAS OBTAINED FROM WISCONSIN'S COUNTIES AND CITIES IN 2020 AND THUS MAY NOT BE THE MOST CURRENT, COMPREHENSIVE DATA AVAILABLE.
  - SANITARY SEWER INFORMATION FROM VILLAGE OF LITTLE CHUTE STORM SEWER CONSTRUCTION DRAWINGS PREPARED BY MCMAHON ASSOCIATES. LOCATION ARE APPROXIMATE.
  - SOURCE PROPERTY SANITARY SEWER LATERAL FROM LIMITED SITE INVESTIGATION REPORT BY TERRACON CONSULTANTS, INC., DATED OCTOBER 11, 2021.
  - ANALYTICAL RESULTS FROM THE BEACON ENVIRONMENTAL LABORATORY ANALYTICAL REPORT DATED JUNE 6, 2023.
  - ANALYTICAL RESULTS ARE REPORTED IN UNITS OF MICROGRAMS PER CUBIC METER.



 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE	2
	SANITARY SEWER VAPOR ANALYTICAL RESULTS	
WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLIENT	SANDIE'S DRY CLEANER AND LAUNDRY (FORMER) 513 GRAND AVENUE LITTLE CHUTE, WISCONSIN SITE	ENGINEER KP JJK REL 09/22/2023
PROJECT NO.: 2522269.02 DRAWN: 04/17/2023 REVISED: 06/19/2023	DRAWN BY: KP CHECKED BY: JJK APPROVED BY:	WISCONSIN DEPARTMENT OF NATURAL RESOURCES CLIENT

Table 1

Sanitary Sewer Gas Analytical Results Summary

**Table 1. Sanitary Sewer Gas Analytical Results Summary**  
**Sandie's Dry Cleaner & Laundry (Former), 513 Grand Avenue / SCS Engineers Project #25222269.02**  
 (Results are in  $\mu\text{g}/\text{m}^3$ )

Sample	Location	Sampler Deployment Date	Sampler Retrieval Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
01R_SSG01_20230523	NHM0673/MH5	5/9/2023	5/23/2023	--	<1.21	<1.50	<0.936	<1.13	<0.613
01R_SSG02_20230523	NMH0645/MH4	5/9/2023	5/23/2023	--	54	<1.50	<0.936	<1.13	<0.613
01R_SSG03_20230523	NMH0656/MH3	5/9/2023	5/23/2023	--	37.9	<1.50	<0.937	<1.13	<0.613
01R_SSG04_20230523	NMH0735/MH5	5/9/2023	5/23/2023	--	36.3	1.65	<0.937	<1.13	<0.613
01R_SSG05_20230523	NMH0729/MH4	5/9/2023	5/23/2023	(1)	14.3	<1.51	<0.937	<1.13	<0.613
Trip Blank	--	--	--	--	<1.21	<1.50	<0.936	<1.13	<0.613
Sanitary Sewer Gas Screening Level (Residential Buildings)					1,400	70	1,400	1,400	56
Sanitary Sewer Gas Screening Level (Commercial/Industrial Buildings)					5,800	290	5,800	5,800	930

Abbreviations:

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter  
 -- = Not Applicable

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

Notes:

1. Samples were collected using BEACON Environmental passive samplers and analyzed using the USEPA TO-17 analytical method.
2. Sanitary Sewer Gas Screening Levels (SSGSLs) are Vapor Action Levels (VALs) divided by an attenuation factor (AF) of 0.03 per WDNR's Guidance Document RR-649.
3. **Bold+underlined** values meet or exceed SSGSLs for the appropriate setting (residential or commercial/industrial).


Lab Notes:

(1) 1,4-Dichlorobenzene-d4 = Internal Standard recovery was below laboratory and method acceptance limits, associated results with detections are biased high.

Created by: JJK	Date: 6/8/2023
Last revision by: JJK	Date: 9/21/2023
Checked by: REL	Date: 9/22/2023
Proj Mgr QA/QC: REL	Date: 9/22/2023

I:\25222269.00\25222269.02 Sandie's Dry Cleaner and Laundry\Data and Calculations\Tables\[Sanitary Sewer Gas Vapor\_short list VOCs\_Sandies.xlsx]Sanitary Sewer Gas





Appendix A

WDNR Vapor Intrusion Sample Log

Sample Identifier	Start	End	Duration (minutes)	Sampler Type	Floor	HVAC	Ground Cover	For SSG: Total Depth to Liquid	For SSG: Depth of Sampler	For SSG: Linear Distance from Source	Comments
01R_SSG01_20230523	5/9/2023 11:19	5/23/23 11:15	20156.00	Beacon				10.41	9.08	152.0	Upstream from source property sanitary sewer lateral
01R_SSG02_20230523	5/9/23 11:25	5/23/23 11:19	20154.00	Beacon				11.09	10.16	58.0	Downstream from source property sanitary sewer lateral
01R_SSG03_20230523	5/9/23 11:41	5/23/23 11:23	20142.00	Beacon				9.19	8.16	247.0	Downstream from source property sanitary sewer lateral
01R_SSG04_20230523	5/9/23 11:56	5/23/23 11:28	20132.00	Beacon				9.42	8.25	NA	Southwest of source property. Sanitary sewer not directly connected to sanitary sewer which intersects source property
01R_SSG05_20230523	5/9/23 12:02	5/23/23 11:31	20129.00	Beacon				9.89	8.75	NA	Southwest of source property. Sanitary sewer not directly connected to sanitary sewer which intersects source property

## Appendix B

### Vapor Sample Deployment Photographs

Vapor Sample Deployment Photos, May 9, 2023  
WDNR VIZC, Sandie's Dry Cleaner & Laundry (Former), 513 Grand Ave, Little Chute, WI  
SCS Engineers Project #25222269.02



**Photo 1:** Looking north up Grand Ave with sanitary manhole “NMH0673/MH5” in the foreground. Traffic control measures provided by Village of Little Chute are shown as well.



Vapor Sample Deployment Photos, May 9, 2023  
WDNR VIZC, Sandie's Dry Cleaner & Laundry (Former), 513 Grand Ave, Little Chute, WI  
SCS Engineers Project #25222269.02



**Photo 2:** Accessing manhole “NHM0735/MH5” along West Lincoln Avenue with the assistance of Village of Little Chute staff.

Vapor Sample Deployment Photos, May 9, 2023  
WDNR VIZC, Sandie's Dry Cleaner & Laundry (Former), 513 Grand Ave, Little Chute, WI  
SCS Engineers Project #25222269.02



**Photo 3:** Accessing manhole "NMH0645/MH4" along Grand Avenue with the assistance of Village of Little Chute staff.



Vapor Sample Deployment Photos, May 9, 2023  
WDNR VIZC, Sandie's Dry Cleaner & Laundry (Former), 513 Grand Ave, Little Chute, WI  
SCS Engineers Project #25222269.02



**Photo 4:** Beacon sampler deployed with twisted mason line secured with neodymium magnets.

## Appendix C

### Laboratory Analytical Report





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

## CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230503R02  
Laboratory Work Order: 0006993

### Project Description:

Sandie's Dry Cleaner and Laundry (Former)  
Little Chute, WI

Client PO No.: 25222269.02-001

Prepared for:  
Jacob Krause  
**SCS Engineers**  
2830 Dairy Drive  
Madison, WI 53718-6751

---

Ryan W. Schneider  
Senior Project Manager

June 06, 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:

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Steven C. Thornley  
Laboratory Director

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Peter B. Kelly  
Quality Manager

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SCS Engineers  
 2830 Dairy Drive  
 Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

### Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0006993-01 Sampler Type:	Trip Blank Beacon Passive Sampler	05/25/2023	TO-17 (Passive)	Air
0006993-02 Sampler Type:	01R_SSG01_20230523 Beacon Passive Sampler	05/25/2023	TO-17 (Passive)	Sewer Gas
0006993-03 Sampler Type:	01R_SSG02_20230523 Beacon Passive Sampler	05/25/2023	TO-17 (Passive)	Sewer Gas
0006993-04 Sampler Type:	01R_SSG03_20230523 Beacon Passive Sampler	05/25/2023	TO-17 (Passive)	Sewer Gas
0006993-05 Sampler Type:	01R_SSG04_20230523 Beacon Passive Sampler	05/25/2023	TO-17 (Passive)	Sewer Gas
0006993-06 Sampler Type:	01R_SSG05_20230523 Beacon Passive Sampler	05/25/2023	TO-17 (Passive)	Sewer Gas

#### Project Completeness

**Samples Received:** 6  
**Samples Analyzed:** 6

SCS Engineers  
2830 Dairy Drive  
Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

### *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.



**SCS Engineers**  
2830 Dairy Drive  
Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

***STATEMENT OF DATA QUALIFICATIONS***

***Qualifier Summary:***

**Analysis:** TO-17 (Passive) / Organics in Air by EPA TO-17 Using Beacon Sampler

**0006993-06                      01R\_SSG05\_20230523**

Compound	Q	Q Explanation
1,4-Dichlorobenzene-d4	I3	Internal Standard recovery was below laboratory and method acceptance limits, associated results with detections are biased high.

**SCS Engineers**  
2830 Dairy Drive  
Madison, WI 53718-6751

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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

## *Analytical Results*

<b>SCS Engineers</b> 2830 Dairy Drive Madison, WI 53718-6751	<b>Site Name:</b> Sandie's Dry Cleaner and Laundry (Former) <b>Site Location:</b> Little Chute, WI <b>Project Manager:</b> Jacob Krause	<b>Beacon Proposal:</b> 230503R02 <b>Lab Work Order:</b> 0006993 <b>Reported:</b> 06/06/2023
--	---	--

*Summary of Compound Detections- Concentration*

Lab Sample ID: 0006993-03	<b>01R_SSG02_20230523</b>	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>54.0</b>		8.158	1.21	Ka23052607.D

Lab Sample ID: 0006993-04	<b>01R_SSG03_20230523</b>	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>37.9</b>		8.158	1.21	Ka23052608.D

Lab Sample ID: 0006993-05	<b>01R_SSG04_20230523</b>	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Trichloroethene</b>	79-01-6	<b>1.65</b>		5.920	1.51	Ka23052609.D
<b>Tetrachloroethene</b>	127-18-4	<b>36.3</b>		8.158	1.21	Ka23052609.D

Lab Sample ID: 0006993-06	<b>01R_SSG05_20230523</b>	Method: TO-17 (Passive)
Sewer Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
<b>Tetrachloroethene</b>	127-18-4	<b>14.3</b>		8.158	1.21	Ka23052610.D

**SCS Engineers**  
2830 Dairy Drive  
Madison, WI 53718-6751**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023***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	1.51	1.65
Tetrachloroethene	4	1.21	54.0

**SCS Engineers**  
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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

## *Detailed Analytical Results*



**SCS Engineers**  
 2830 Dairy Drive  
 Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

Lab Sample ID: 0006993-01

**Trip Blank**

Method: TO-17 (Passive)

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	<0.613		0.613	05/26/2023 11:35	Ka23052605.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	05/26/2023 11:35	Ka23052605.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	05/26/2023 11:35	Ka23052605.D
Trichloroethene	79-01-6	<1.50		1.50	05/26/2023 11:35	Ka23052605.D
Tetrachloroethene	127-18-4	<1.21		1.21	05/26/2023 11:35	Ka23052605.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	99.2%	70-130		05/26/2023 11:35	Ka23052605.D
Surrogate: Toluene-d8	2037-26-5	98.0%	70-130		05/26/2023 11:35	Ka23052605.D
Surrogate: Bromofluorobenzene	460-00-4	97.7%	70-130		05/26/2023 11:35	Ka23052605.D

**SCS Engineers**  
 2830 Dairy Drive  
 Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

Lab Sample ID: 0006993-02

**01R\_SSG01\_20230523**

Method: TO-17 (Passive)

Sewer 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	05/26/2023 12:04	Ka23052606.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	05/26/2023 12:04	Ka23052606.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	05/26/2023 12:04	Ka23052606.D
Trichloroethene	79-01-6	<1.50		1.50	05/26/2023 12:04	Ka23052606.D
Tetrachloroethene	127-18-4	<1.21		1.21	05/26/2023 12:04	Ka23052606.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	94.7%	70-130		05/26/2023 12:04	Ka23052606.D
Surrogate: Toluene-d8	2037-26-5	98.1%	70-130		05/26/2023 12:04	Ka23052606.D
Surrogate: Bromofluorobenzene	460-00-4	98.5%	70-130		05/26/2023 12:04	Ka23052606.D

**SCS Engineers**  
 2830 Dairy Drive  
 Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

Lab Sample ID: 0006993-03

**01R\_SSG02\_20230523**

Method: TO-17 (Passive)

Sewer 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	05/26/2023 12:32	Ka23052607.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	05/26/2023 12:32	Ka23052607.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	05/26/2023 12:32	Ka23052607.D
Trichloroethene	79-01-6	<1.50		1.50	05/26/2023 12:32	Ka23052607.D
<b>Tetrachloroethene</b>	127-18-4	<b>54.0</b>		1.21	05/26/2023 12:32	Ka23052607.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	99.1%	70-130		05/26/2023 12:32	Ka23052607.D
Surrogate: Toluene-d8	2037-26-5	98.2%	70-130		05/26/2023 12:32	Ka23052607.D
Surrogate: Bromofluorobenzene	460-00-4	101%	70-130		05/26/2023 12:32	Ka23052607.D

**SCS Engineers**  
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**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

Lab Sample ID: 0006993-04

**01R\_SSG03\_20230523**

Method: TO-17 (Passive)

Sewer 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	05/26/2023 13:00	Ka23052608.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	05/26/2023 13:00	Ka23052608.D
cis-1,2-Dichloroethene	156-59-2	<0.937		0.937	05/26/2023 13:00	Ka23052608.D
Trichloroethene	79-01-6	<1.50		1.50	05/26/2023 13:00	Ka23052608.D
<b>Tetrachloroethene</b>	127-18-4	<b>37.9</b>		1.21	05/26/2023 13:00	Ka23052608.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	96.9%	70-130		05/26/2023 13:00	Ka23052608.D
Surrogate: Toluene-d8	2037-26-5	94.9%	70-130		05/26/2023 13:00	Ka23052608.D
Surrogate: Bromofluorobenzene	460-00-4	103%	70-130		05/26/2023 13:00	Ka23052608.D

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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

Lab Sample ID: 0006993-05

**01R\_SSG04\_20230523**

Method: TO-17 (Passive)

Sewer 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	05/26/2023 13:29	Ka23052609.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	05/26/2023 13:29	Ka23052609.D
cis-1,2-Dichloroethene	156-59-2	<0.937		0.937	05/26/2023 13:29	Ka23052609.D
<b>Trichloroethene</b>	79-01-6	<b>1.65</b>		1.51	05/26/2023 13:29	Ka23052609.D
<b>Tetrachloroethene</b>	127-18-4	<b>36.3</b>		1.21	05/26/2023 13:29	Ka23052609.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.8%	70-130		05/26/2023 13:29	Ka23052609.D
Surrogate: Toluene-d8	2037-26-5	90.5%	70-130		05/26/2023 13:29	Ka23052609.D
Surrogate: Bromofluorobenzene	460-00-4	105%	70-130		05/26/2023 13:29	Ka23052609.D



SCS Engineers  
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**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

Lab Sample ID: 0006993-06

**01R\_SSG05\_20230523**

Method: TO-17 (Passive)

Sewer 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	05/26/2023 13:58	Ka23052610.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	05/26/2023 13:58	Ka23052610.D
cis-1,2-Dichloroethene	156-59-2	<0.937		0.937	05/26/2023 13:58	Ka23052610.D
Trichloroethene	79-01-6	<1.51		1.51	05/26/2023 13:58	Ka23052610.D
<b>Tetrachloroethene</b>	127-18-4	<b>14.3</b>		1.21	05/26/2023 13:58	Ka23052610.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	96.3%	70-130		05/26/2023 13:58	Ka23052610.D
Surrogate: Toluene-d8	2037-26-5	91.1%	70-130		05/26/2023 13:58	Ka23052610.D
Surrogate: Bromofluorobenzene	460-00-4	106%	70-130		05/26/2023 13:58	Ka23052610.D

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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

## *QC Information/Summary*

**SCS Engineers**  
 2830 Dairy Drive  
 Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E038 - Instrument: K System - File ID: Kc23051215.D**
***B23E038-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	44.1	10	ng	50.0		88.2	70-130			
trans-1,2-Dichloroethene	51.6	10	ng	50.0		103	70-130			
cis-1,2-Dichloroethene	48.9	10	ng	50.0		97.8	70-130			
Trichloroethene	48.4	10	ng	50.0		96.8	70-130			
Tetrachloroethene	47.6	10	ng	50.0		95.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>50.1</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.8</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>49.1</i>		<i>ng</i>	<i>50.0</i>		<i>98.2</i>	<i>70-130</i>			

**SCS Engineers**  
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**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E038 - Instrument: K System - File ID: Kc23051218.D**
***B23E038-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>101</i>		<i>ng</i>	<i>100</i>		<i>101</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>95.4</i>		<i>ng</i>	<i>100</i>		<i>95.4</i>	<i>70-130</i>			

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**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Batch: 23E0042 - Instrument: K System - File ID: Ka23052602.D**
**23E0042-BS1 (LCS, Calibration Source Verification)**

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	47.1	10	ng	50.0		94.1	70-130			
trans-1,2-Dichloroethene	52.6	10	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	49.6	10	ng	50.0		99.2	70-130			
Trichloroethene	48.2	10	ng	50.0		96.3	70-130			
Tetrachloroethene	48.9	10	ng	50.0		97.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>49.0</i>		<i>ng</i>	<i>50.0</i>		<i>98.0</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>52.0</i>		<i>ng</i>	<i>50.0</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>49.9</i>		<i>ng</i>	<i>50.0</i>		<i>99.8</i>	<i>70-130</i>			



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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Batch: 23E0042 - Instrument: K System - File ID: Ka23052603.D**
**23E0042-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>98.7</i>		<i>ng</i>	<i>100</i>		<i>98.7</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>95.9</i>		<i>ng</i>	<i>100</i>		<i>95.9</i>	<i>70-130</i>			

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**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Instrument: K System - File ID: Ka23052604.D**
***B23E060-ICV1 (LCSD/Second Source Verification/CALV)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.5	10	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	54.0	10	ng	50.0		108	70-130			
cis-1,2-Dichloroethene	50.8	10	ng	50.0		102	70-130			
Trichloroethene	49.2	10	ng	50.0		98.4	70-130			
Tetrachloroethene	49.3	10	ng	50.0		98.6	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>48.3</i>		<i>ng</i>	<i>50.0</i>		<i>96.7</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>48.1</i>		<i>ng</i>	<i>50.0</i>		<i>96.2</i>	<i>70-130</i>			

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**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Instrument: K System - File ID: Ka23052611.D**
***B23E060-CCV1 (LCS, Closing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	47.3	10	ng	50.0		94.6	70-130			
trans-1,2-Dichloroethene	51.9	10	ng	50.0		104	70-130			
cis-1,2-Dichloroethene	49.5	10	ng	50.0		99.0	70-130			
Trichloroethene	49.2	10	ng	50.0		98.4	70-130			
Tetrachloroethene	47.3	10	ng	50.0		94.5	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>49.9</i>		<i>ng</i>	<i>50.0</i>		<i>99.9</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>50.6</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			

**SCS Engineers**  
 2830 Dairy Drive  
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**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Instrument: K System - File ID: Ka23052612.D**
***B23E060-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>	97.5		ng	100		97.5	70-130			
<i>Surrogate: Toluene-d8</i>	96.8		ng	100		96.8	70-130			
<i>Surrogate: Bromofluorobenzene</i>	97.5		ng	100		97.5	70-130			

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**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Instrument: K System - File ID: Ka23052617.D**
***B23E060-CCV2 (Continuing Calibration Verification)***

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.7	10	ng	50.0		85.4	70-130			
trans-1,2-Dichloroethene	50.2	10	ng	50.0		100	70-130			
cis-1,2-Dichloroethene	48.7	10	ng	50.0		97.3	70-130			
Trichloroethene	50.1	10	ng	50.0		100	70-130			
Tetrachloroethene	47.6	10	ng	50.0		95.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>47.9</i>		<i>ng</i>	<i>50.0</i>		<i>95.7</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.2</i>		<i>ng</i>	<i>50.0</i>		<i>98.3</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>51.7</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			

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**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

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

**Sequence: B23E060 - Instrument: K System - File ID: Ka23052618.D**
***B23E060-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>98.1</i>		<i>ng</i>	<i>100</i>		<i>98.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>98.5</i>		<i>ng</i>	<i>100</i>		<i>98.5</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>99.4</i>		<i>ng</i>	<i>100</i>		<i>99.4</i>	<i>70-130</i>			



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**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

*TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*
**LCS: 23E0042-BS1 File ID: Ka23052602.D**

Analyzed: 5/26/23 10:15

**LCSD: B23E060-ICV1 File ID: Ka23052604.D**

Analyzed: 5/26/23 9:27

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	47.06	94.12	50	53.49	107.00	70-130	12.79	30	
trans-1,2-Dichloroethene	156-60-5	52.56	105.12	50	53.97	108.00	70-130	2.65	30	
cis-1,2-Dichloroethene	156-59-2	49.61	99.22	50	50.79	102.00	70-130	2.35	30	
Trichloroethene	79-01-6	48.16	96.32	50	49.2	98.40	70-130	2.14	30	
Tetrachloroethene	127-18-4	48.86	97.72	50	49.3	98.60	70-130	0.90	30	

**SCS Engineers**  
2830 Dairy Drive  
Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
**Site Location:** Little Chute, WI  
**Project Manager:** Jacob Krause

**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

*Additional QC Information*

**SCS Engineers**  
2830 Dairy Drive  
Madison, WI 53718-6751

**Site Name:** Sandie's Dry Cleaner and Laundry (Former)  
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**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

**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
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**Lab ID:** 0006993-01      **Sample Name:** Trip Blank

Vinyl Chloride	20,156	1.00	0.810	U	U	Ka23052605.D
trans-1,2-Dichloroethene	20,156	1.00	0.440	U	U	Ka23052605.D
cis-1,2-Dichloroethene	20,156	1.00	0.530	U	U	Ka23052605.D
Trichloroethene	20,156	1.00	0.330	U	U	Ka23052605.D
Tetrachloroethene	20,156	1.00	0.410	U	U	Ka23052605.D

**Lab ID:** 0006993-02      **Sample Name:** 01R\_SSG01\_20230523

Vinyl Chloride	20,156	1.00	0.810	U	U	Ka23052606.D
trans-1,2-Dichloroethene	20,156	1.00	0.440	U	U	Ka23052606.D
cis-1,2-Dichloroethene	20,156	1.00	0.530	U	U	Ka23052606.D
Trichloroethene	20,156	1.00	0.330	U	U	Ka23052606.D
Tetrachloroethene	20,156	1.00	0.410	U	U	Ka23052606.D

**Lab ID:** 0006993-03      **Sample Name:** 01R\_SSG02\_20230523

Vinyl Chloride	20,154	1.00	0.810	U	U	Ka23052607.D
trans-1,2-Dichloroethene	20,154	1.00	0.440	U	U	Ka23052607.D
cis-1,2-Dichloroethene	20,154	1.00	0.530	U	U	Ka23052607.D
Trichloroethene	20,154	1.00	0.330	U	U	Ka23052607.D
Tetrachloroethene	20,154	1.00	0.410	446.37	54.0	Ka23052607.D

**Lab ID:** 0006993-04      **Sample Name:** 01R\_SSG03\_20230523

Vinyl Chloride	20,142	1.00	0.810	U	U	Ka23052608.D
trans-1,2-Dichloroethene	20,142	1.00	0.440	U	U	Ka23052608.D
cis-1,2-Dichloroethene	20,142	1.00	0.530	U	U	Ka23052608.D
Trichloroethene	20,142	1.00	0.330	U	U	Ka23052608.D
Tetrachloroethene	20,142	1.00	0.410	313.18	37.9	Ka23052608.D

**Lab ID:** 0006993-05      **Sample Name:** 01R\_SSG04\_20230523

Vinyl Chloride	20,132	1.00	0.810	U	U	Ka23052609.D
trans-1,2-Dichloroethene	20,132	1.00	0.440	U	U	Ka23052609.D
cis-1,2-Dichloroethene	20,132	1.00	0.530	U	U	Ka23052609.D
Trichloroethene	20,132	1.00	0.330	10.98	1.65	Ka23052609.D
Tetrachloroethene	20,132	1.00	0.410	299.35	36.3	Ka23052609.D

<b>SCS Engineers</b> 2830 Dairy Drive Madison, WI 53718-6751	<b>Site Name:</b> Sandie's Dry Cleaner and Laundry (Former) <b>Site Location:</b> Little Chute, WI <b>Project Manager:</b> Jacob Krause	<b>Beacon Proposal:</b> 230503R02 <b>Lab Work Order:</b> 0006993 <b>Reported:</b> 06/06/2023
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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/m³	File ID
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**Lab ID:** 0006993-06      **Sample Name:** 01R\_SSG05\_20230523

Vinyl Chloride	20,129	1.00	0.810	U	U	Ka23052610.D
trans-1,2-Dichloroethene	20,129	1.00	0.440	U	U	Ka23052610.D
cis-1,2-Dichloroethene	20,129	1.00	0.530	U	U	Ka23052610.D
Trichloroethene	20,129	1.00	0.330	U	U	Ka23052610.D
Tetrachloroethene	20,129	1.00	0.410	118.18	14.3	Ka23052610.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*

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**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

**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>
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**Lab ID:** 0006993-01      **Sample Name:** Trip Blank

Vinyl Chloride	20,156	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,156	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,156	1.00	0.530	10.0	0.936
Trichloroethene	20,156	1.00	0.330	10.0	1.50
Tetrachloroethene	20,156	1.00	0.410	10.0	1.21

**Lab ID:** 0006993-02      **Sample Name:** 01R\_SSG01\_20230523

Vinyl Chloride	20,156	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,156	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,156	1.00	0.530	10.0	0.936
Trichloroethene	20,156	1.00	0.330	10.0	1.50
Tetrachloroethene	20,156	1.00	0.410	10.0	1.21

**Lab ID:** 0006993-03      **Sample Name:** 01R\_SSG02\_20230523

Vinyl Chloride	20,154	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,154	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,154	1.00	0.530	10.0	0.936
Trichloroethene	20,154	1.00	0.330	10.0	1.50
Tetrachloroethene	20,154	1.00	0.410	10.0	1.21

**Lab ID:** 0006993-04      **Sample Name:** 01R\_SSG03\_20230523

Vinyl Chloride	20,142	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,142	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,142	1.00	0.530	10.0	0.937
Trichloroethene	20,142	1.00	0.330	10.0	1.50
Tetrachloroethene	20,142	1.00	0.410	10.0	1.21

**Lab ID:** 0006993-05      **Sample Name:** 01R\_SSG04\_20230523

Vinyl Chloride	20,132	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,132	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,132	1.00	0.530	10.0	0.937
Trichloroethene	20,132	1.00	0.330	10.0	1.51
Tetrachloroethene	20,132	1.00	0.410	10.0	1.21

**Lab ID:** 0006993-06      **Sample Name:** 01R\_SSG05\_20230523

Vinyl Chloride	20,129	1.00	0.810	10.0	0.613
trans-1,2-Dichloroethene	20,129	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,129	1.00	0.530	10.0	0.937
Trichloroethene	20,129	1.00	0.330	10.0	1.51
Tetrachloroethene	20,129	1.00	0.410	10.0	1.21

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**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

### *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	

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**Reported:** 06/06/2023

### 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

#### *Sample/Sample Receipt Qualifiers and Notes:*

I3 Internal Standard recovery was below laboratory and method acceptance limits, associated results with detections are biased high.



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**Beacon Proposal:** 230503R02  
**Lab Work Order:** 0006993  
**Reported:** 06/06/2023

## *Sample Management Records*

<b>Client Information</b>					Project Manager: <u>Robert Langdon</u>		Client PO:		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company: <u>SCS Engineers</u>					Project Name: <u>Sandie's Dry Cleaner</u>		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days					
Address: <u>2830 Dairy Drive</u>					Location: <u>Little Chute, WI</u>		Analysis: <u>TCW listed on order form</u> <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C					
City / State / Zip: <u>Madison, WI, 53718</u>					Submitted by: <u>Jacob Krause</u>		Email: <u>jkrause@scsengineers.com</u>					
Phone: <u>608-212-3995</u>												
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes						
<u>01R-SSG01-20230523</u>	<u>5-9-23</u>	<u>11:19</u>	<u>5-23-23</u>	<u>11:15</u>							<input checked="" type="checkbox"/>	
<u>01R-SSG02-20230523</u>		<u>11:25</u>		<u>11:19</u>							<input checked="" type="checkbox"/>	
<u>01R-SSG03-20230523</u>		<u>11:41</u>		<u>11:23</u>							<input checked="" type="checkbox"/>	
<u>01R-SSG04-20230523</u>		<u>11:56</u>		<u>11:28</u>							<input checked="" type="checkbox"/>	
<u>01R-SSG05-20230523</u>	<u>↓</u>	<u>12:02</u>	<u>↓</u>	<u>11:31</u>							<input checked="" type="checkbox"/>	
<u>Trip Blank</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>nae 5/25/23</u>						
Special Notes / Instructions: <u>SCS Proj # 25 222267.02</u>												
Relinquished by (signature): <u>[Signature]</u>					Date / Time: <u>5/24/2023 / 0840</u>		Received by (signature): <u>[Signature]</u>			Date / Time: <u>5/25/23 11:28</u>		
Relinquished by (signature):					Date / Time:		Received by (signature):			Date / Time:		
<b>For Lab Use Only</b>					Beacon Job No: <u>6993</u>		Beacon Proposal: <u>230503R02</u>					
Courier Name: <u>FedEx</u>					Shipment Condition: <u>Good</u>		Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a			Custody Seal No: <u>4769917</u>		