



July 29, 2021

Lawrence Lester  
Hydrogeologist – Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg, Wisconsin 53711

**Subject: Vapor Intrusion Assessment Report  
Former Portage Cleaners  
104 E. Wisconsin Street  
Portage, WI 53901  
BRRTS#: 02-11-512824**

Dear Mr. Lester:

EnviroForensics LLC is pleased to submit this Vapor Intrusion Assessment Report for the Portage Cleaners located at 104 E. Wisconsin Street in Portage, Wisconsin (the Site). This report documents the results of the vapor intrusion (VI) assessment activities completed at properties near the Site.

## **SITE BACKGROUND AND SETTING**

The Site consists of two parcels totaling approximately 0.29 acres and identified by the addresses 104 E. Wisconsin Street and 109 W. Mullet Street. A separate single-story slab-on-grade commercial building exists on each parcel, as depicted on **Figure 1**. The parcel boundaries bisect the location of a previous building that conducted dry cleaning associated with uniform cleaning services from around 1971 until a fire destroyed it in 1990. The building at 104 E. Wisconsin Street is located on the eastern parcel occupies approximately 1,884 square feet (ft). The retail dry-dry cleaning operations performed in this building date from around 1971 through 1996. From 1996 through 2020, the building housed a customer service location for items dry cleaned elsewhere. The 104 E. Wisconsin Street building is currently unoccupied. The second building is located on the western parcel with the street address of 109 W. Mullet Street. The Portage Cleaners office space and non-drycleaning operations previously occupied the 4,250 square ft building on the 109 W. Mullet Street parcel. The remainder of the property is covered by a paved asphalt driveway and gravel parking area.

The former dry cleaning machine locations are labeled “FDCM” and “DCM” on **Figure 1**. Tetrachloroethene (PCE) was used as the solvent for dry cleaning operations. A release of PCE to the subsurface has affected soil, groundwater, and soil gas. The primary soil source area is beneath the 104 E. Wisconsin Street building. The contaminants of concern (COCs) are PCE and its degradation products including trichloroethene (TCE), dichloroethene (DCE), and vinyl chloride.

The Site is bounded by the Portage Canal to the north; East Wisconsin Street, then commercial buildings to the east; Warren Street, followed by commercial buildings to the southeast; West Mullet Street, then single-family residential homes to the south; and commercial properties to the southwest. Utilities noted during the Site reconnaissance include water, storm sewer, sanitary sewer, natural gas, telephone, and electrical lines. The general layout of the Site and surrounding area, including salient Site features and utilities, are depicted on **Figure 1**.

## VAPOR INTRUSION ASSESSMENTS

Initially, EnviroForensics performed vapor intrusion assessments at 105 Warren Street and 109 W. Mullet Street. A description of activities performed and results are provided below and in **Table 1**:

- **105 Warren Street:** The paired indoor air and sub-slab vapor sampling occurred during two events in September 2017 and December 2017, respectively. In September 2017, TCE was detected in the basement and first-floor indoor air samples at concentrations above the vapor action level (VAL). The TCE concentration in the sub-slab vapor sample was much lower and well below the vapor risk screening level (VRSL). The juxtaposition of the results suggests an indoor air TCE source. TCE was not detected in the sub-slab vapor or indoor air samples collected during the subsequent sampling event (December 2017) after the prior occupant moved from the house.
- **109 W. Mullet Street:** Sub-slab vapor sampling was conducted in August 2017 and January 2018. PCE was detected in two (2) of the three (3) sub-slab vapor samples collected in January 2018 at concentrations above the VRSL, which prompted a paired indoor air/ sub-slab vapor sampling event in March 2018. PCE was detected in each of the indoor air and sub-slab vapor samples; however, all concentrations were below the applicable screening/action levels.

The initial data were included in a Supplemental Data Report dated May 11, 2018, and subsequent results were provided in individual property results notification letters. In a letter dated August 23, 2019, the Wisconsin Department of Natural Resources (WDNR) indicated that

additional investigation would be required to evaluate the degree and extent of vapor contamination. Per the WDNR letter, the VI investigation was expanded to include assessments at 115 and 122 W. Mullet Street, along with repeat sampling at 105 Warren Street and 109 W. Mullet Street.

Limited soil excavation was completed at the Site in June 2020 before the additional VI investigation activities. One objective of the excavation was to remove contaminated soil that was likely contributing to vapor impacts.

Post-excavation VI sampling events were performed during September 2020, January 2021, and early March 2021. A summary of samples collected at the individual properties during each event is provided in the table below.

Address	Property Use	Indoor Air Samples	Sub-Slab Vapor Samples
105 Warren Street	Residential	2	1
109 W. Mullet Street	Commercial	3 <sup>1</sup>	3
115 W. Mullet Street	Commercial	0	2
122 W. Mullet Street	Commercial	3 <sup>2</sup>	0

<sup>1</sup> Indoor air samples collected during the January and March 2021 events only.

<sup>2</sup> Includes samples collected from a crawl space.

For quality control purposes, samples of outdoor ambient air were collected during each event. Sub-slab vapor samples were not collected from 122 W. Mullet Street because the building has an unfinished crawl space with a dirt floor. Indoor air samples were not collected from 115 W. Mullet Street because the owner stores various paint-related products for a painting business that could adversely affect the indoor air samples with non-target compounds.

Indoor and outdoor air samples were collected in 6-liter vacuum canisters regulated to withdraw air over time-integrated 8-hour (commercial) or 24-hour (residential) sampling periods. Sub-slab vapor samples were collected in 1-liter vacuum canisters regulated to withdraw vapor at a rate of 200 mL/ minute. All samples were analyzed for PCE and related compounds according to EPA Test Method TO-15.

**Table 1** provides the comprehensive VI sampling results, and the results of the three (3) most recent sampling events at each property are shown on **Figure 2**. The laboratory analytical reports associated with data not previously reported are provided in **Attachment 1**.

The VI assessment findings for each property are as follows:

- **105 Warren Street:** PCE was detected in the sub-slab vapor sample during all events at concentrations well below the VRSL. The COCs were not detected in the indoor air samples since September 2017, providing further evidence of an indoor air TCE source during that first sampling event.
- **109 W. Mullet Street:** The PCE and TCE concentrations in sub-slab vapor were less than VRSLs for the last four (4) sampling events. PCE was frequently detected in indoor air; however, the concentrations were below the VAL in all samples for three (3) consecutive sampling events. The source of indoor air detections may have originated from dry cleaned clothes brought in from an off-site cleaning location.
- **115 W. Mullet Street:** Concentrations of the COCs in sub-slab vapor samples were less than VRSLs for three (3) consecutive sampling events.
- **122 W. Mullet Street:** The COCs were not detected in any indoor air samples collected, including samples from the crawl space.

## CONCLUSIONS

The VI assessment results rule out a VI risk for 109 Mullet Street (formerly part of Portage Cleaners) and adjacent off-site properties. The overall assessment status for the project is illustrated on **Figure 3**. There are no other structures within 100 feet of soil contamination at the Site and the groundwater plume does not extend beneath any other buildings. Additional remediation is planned for the 104 E. Wisconsin Street parcel, which will further reduce concentrations of PCE and TCE in vapor.

Given the Site setting and history of use, the sanitary sewer is the only likely preferential pathway for vapor migration. However, based on the depth to water measurements in Site monitoring wells, the sanitary sewer lies below the water table at approximately 7.5 feet below ground surface. A submerged sanitary sewer will inhibit vapor movement in the sewer backfill. Further, the risk of exposure via vapor migration within the sewer itself is improbable based on distance from the Site to the nearest unassessed structures. The nearest downstream sanitary lateral leads to 222 E. Wisconsin Street (Associated Bank), more than 300 feet from the Site. The storm sewers will not convey vapors to additional structures by the nature of their construction.



The completed VI assessments screen out at all potentially affected properties according to the applicable WDNR guidance. No further VI assessment or mitigation activities appear necessary.

If you have any questions or require additional information, please contact us at (262) 290-4001.

Sincerely,  
**EnviroForensics, LLC**

Rob Hoverman, LPG  
*Senior Project Manager*  
[rhoverman@enviroforensics.com](mailto:rhoverman@enviroforensics.com)

#### **Attachments**

Table 1 – Vapor Intrusion Assessment Analytical Results  
Figure 1 – Detailed Site Plan  
Figure 2 – Vapor Intrusion Sampling Results Summary  
Figure 3 – Vapor Intrusion Assessment Status  
Attachment 1 – Laboratory Analytical Reports

Copy: Ted Warpinski, Davis Kuelthau, S.C.  
Andy Skwierawski, Davis Kuelthau, S.C.  
Dave Bieno, Former Portage Cleaners

**TABLE**

**TABLE 1**  
**VAPOR INTRUSION ASSESSMENT ANALYTICAL RESULTS**

Former Portage Cleaners  
104 E. Wisconsin St  
Portage, WI 53901

Sample Address	Sample Identification	Sample Date	Applicable Criteria	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride
<b>INDOOR/OUTDOOR AIR</b>								
<b>Small Commercial Vapor Action Level<sup>1</sup></b>				<b>180</b>	<b>8.8</b>	<b>NE</b>	<b>NE</b>	<b>28</b>
<b>Residential Vapor Action Level<sup>2</sup></b>				<b>42</b>	<b>2.1</b>	<b>NE</b>	<b>NE</b>	<b>1.7</b>
105 Warren St.	6493-105 Warren St-IA-B	09/07/17	Residential	<3.19	<b>55.3</b>	<19.8	<39.6	<1.28
		12/06/17		<3.19	<1.07	<19.8	<39.6	<1.28
		09/30/20		<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28
	6493-105 Warren St-IA-1	09/07/17	Residential	<3.19	<b>76.4</b>	<19.8	<39.6	<1.28
		12/06/17		<3.19	<1.07	<19.8	<39.6	<1.28
		09/30/20		<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28
	6493-OA-1	09/07/17	Residential	<3.19	<1.07	<19.8	<39.6	<1.28
		12/06/17		<3.19	<1.07	<19.8	<39.6	<1.28
		09/30/20		<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28
109 W. Mullet St.	6493-109-IA-1	03/16/18	Small Commercial	<b>32.2</b>	<1.07	<19.8	<39.6	<1.28
		1/26/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/2/2021		<b>8.95</b>	<1.07	<19.8	<39.6	<1.28
	6493-109-IA-2	03/16/18		<b>18.2</b>	<1.07	<19.8	<39.6	<1.28
		1/26/2021		<b>5.29</b>	<1.07	<19.8	<39.6	<1.28
		3/2/2021		<b>12.9</b>	<1.07	<19.8	<39.6	<1.28
	6493-109-IA-3	03/16/18		<b>27.8</b>	<1.07	<19.8	<39.6	<1.28
		1/26/2021		<b>5.90</b>	<1.07	<19.8	<39.6	<1.28
		3/2/2021		<b>13.0</b>	<1.07	<19.8	<39.6	<1.28
	6493-OA-1	03/16/18		<3.19	<1.07	<19.8	<39.6	<1.28
1/26/2021		<3.19	<1.07	<19.8	<39.6	<1.28		
3/2/2021		<3.19	<1.07	<19.8	<39.6	<1.28		
122 W. Mullet St.	6493-122 Mullet-IA-C	09/30/20	Residential	<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28
	6493-122 Mullet-IA-1	09/30/20		<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28
	6493-109-IA-2	09/30/20		<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28
	6493-OA-1	09/30/20		<3.19	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<3.19	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<3.19	<1.07	<19.8	<39.6	<1.28

**TABLE 1**  
**VAPOR INTRUSION ASSESSMENT ANALYTICAL RESULTS**

Former Portage Cleaners  
104 E. Wisconsin St  
Portage, WI 53901

Sample Address	Sample Identification	Sample Date	Applicable Criteria	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride
<b>SUB-SLAB VAPOR</b>								
<b>Small Commercial Vapor Risk Screening Level<sup>1</sup></b>				<b>6,000</b>	<b>290</b>	<b>NE</b>	<b>NE</b>	<b>930</b>
<b>Residential Vapor Risk Screening Level<sup>2</sup></b>				<b>1,400</b>	<b>70</b>	<b>NE</b>	<b>NE</b>	<b>57</b>
105 Warren St.	6493-105 Warren St-SSV-1	9/7/2017	Residential	<b>10.9</b>	<b>3.28</b>	<19.8	<39.6	<1.28
		12/6/2017		<b>50.9</b>	<10.7	<198	<396	<12.8
		9/30/2020		<b>25.2</b>	<10.7	<198	<396	<12.8
		1/26/2021		<b>5.49</b>	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<b>13.4</b>	<1.07	<19.8	<39.6	<1.28
109 W. Mullet St	6493-109-SSV-1	8/7/2017	Small Commercial	<b>3,090</b>	<10.7	<198	<396	<12.8
		1/23/2018		<b>12,100</b>	<10.7	<198	<396	<12.8
		3/16/2018		<b>1,480</b>	<1.07	<19.8	<39.6	<1.28
		9/30/2020		<b>331</b>	<1.07	<19.8	<39.6	<1.28
		1/26/2021		<b>17.4</b>	<1.07	<19.8	<39.6	<1.28
	3/3/2021	<b>36.1</b>	<1.07	<19.8	<39.6	<1.28		
	6493-109-SSV-2	Small Commercial	8/7/2017	<b>3,810</b>	<10.7	<198	<396	<12.8
			1/23/2018	<b>18,700</b>	<10.7	<198	<396	<12.8
			3/16/2018	<b>3,210</b>	<b>19.8</b>	<19.8	<39.6	<1.28
			9/30/2020	<b>2,160</b>	<b>2.26</b>	<19.8	<39.6	<1.28
			1/26/2021	<b>510</b>	<1.07	<19.8	<39.6	<1.28
	3/3/2021	<b>191</b>	<1.07	<19.8	<39.6	<1.28		
	6493-109-SSV-3	Small Commercial	8/7/2017	<b>2,490</b>	<10.7	<198	<396	<12.8
			1/23/2018	<b>2,030</b>	<10.7	<198	<396	<12.8
			3/16/2018	<b>1,210</b>	<b>11.1</b>	<19.8	<39.6	<1.28
9/30/2020			<b>2,660</b>	<1.07	<19.8	<39.6	<1.28	
1/26/2021			<b>3.87</b>	<1.07	<19.8	<39.6	<1.28	
3/3/2021	<b>106</b>	<1.07	<19.8	<39.6	<1.28			
115 W. Mullet St	6493-115-SSV-1	9/29/2020	Small Commercial	<b>36.2</b>	<1.07	<19.8	<39.6	<1.28
		1/25/2021		<b>33.7</b>	<1.07	<19.8	<39.6	<1.28
		3/3/2021		<b>15.9</b>	<1.07	<19.8	<39.6	<1.28
	6493-115-SSV-2	Small Commercial	9/29/2020	<b>28</b>	<b>2.26</b>	<19.8	<39.6	<1.28
			1/25/2021	<b>14.7</b>	<1.07	<19.8	<39.6	<1.28
			3/3/2021	<b>9.29</b>	<1.07	<19.8	<39.6	<1.28

**Notes:**

<sup>1</sup> Vapor action levels and risk screening levels for small commercial structures are calculated in accordance with the procedures described in WDNR Publication RR-800 and subsequent guidance

<sup>2</sup> Vapor action levels and risk screening levels for residential structures are calculated in accordance with the procedures described in WDNR Publication RR-800 and subsequent guidance

Samples analyzed according to EPA Method TO-15

All concentrations reported in units in micrograms per cubic meter = µg/m<sup>3</sup>

Only detected compounds are listed

**Bolded** values are above method detection limits

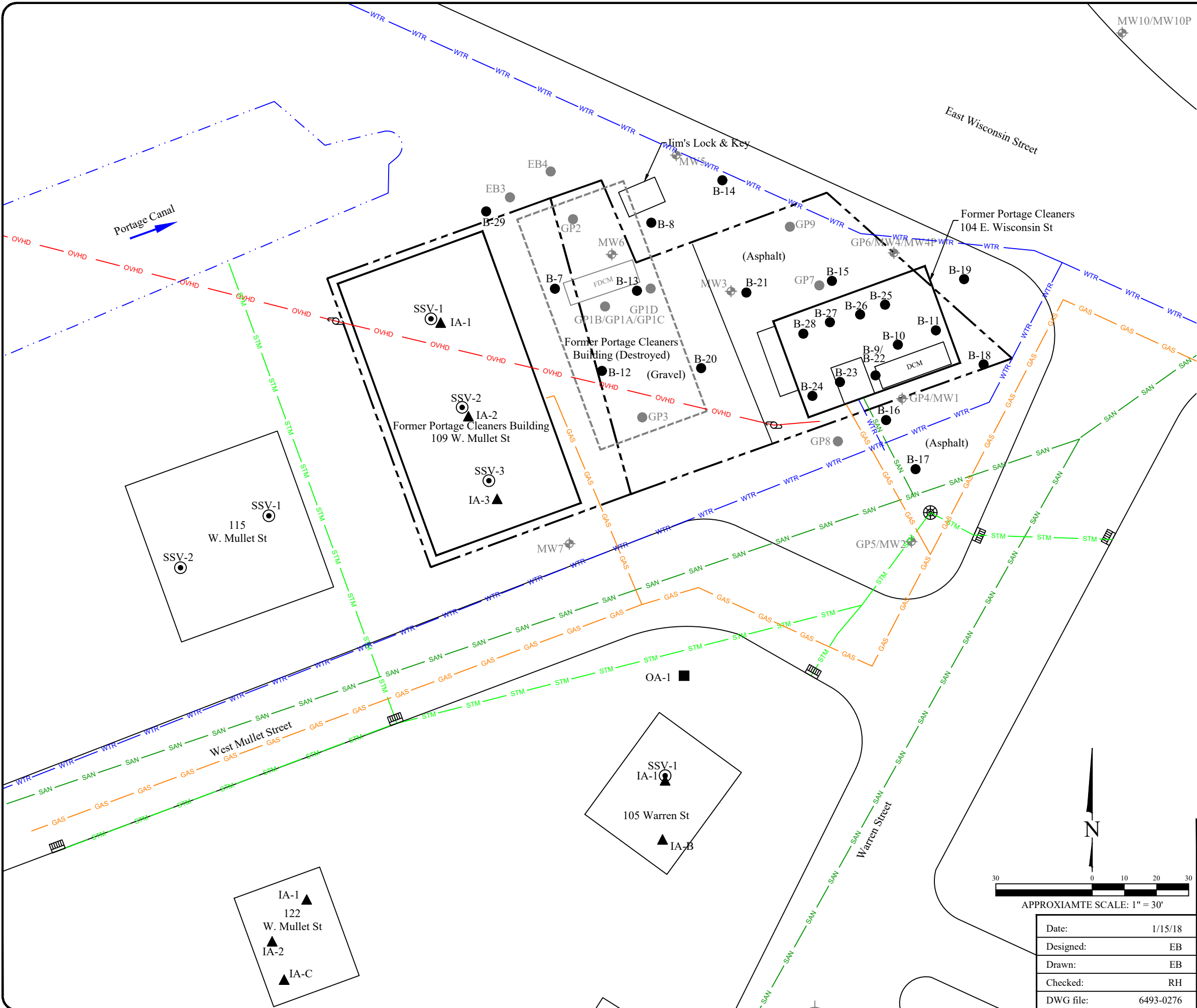
**Bolded and blue shaded** values exceed the residential Vapor Risk Screening Level

**Bolded and orange shaded** values exceed the small commercial Vapor Risk Screening Level

NE = Not Established

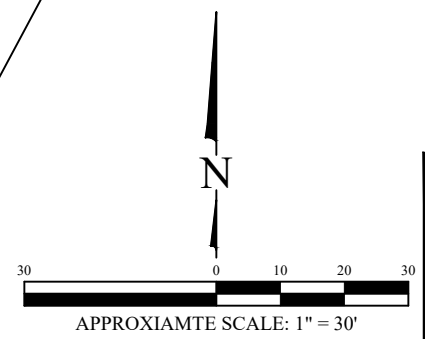


## FIGURES

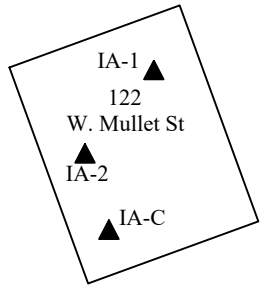


### Legend

- Property boundary
- SAN Underground sanitary utility line
- WTR Underground water utility line
- GAS Underground gas utility line
- STM Underground storm utility line
- OVHD Over head electrical utility line
- Utility Pole
- Catch Basin
- Manhole
- DCM Dry cleaning machine location
- FDCM Former dry cleaning machine location
- MW1 Monitoring well location (By Others)
- GP1 Soil boring location (By Others)
- B-1 Direct push soil boring location
- SS-1 Sub-slab sample location
- OA-1 Outdoor air sample location
- IA-1 Indoor air sample location



<b>DETAILED SITE PLAN</b>	
Portage Cleaners 104 East Wisconsin Street Portage, Wisconsin	
Date: 1/15/18	Figure
Designed: EB	1
Drawn: EB	Project
Checked: RH	6493
DWG file: 6493-0276	



109 W. Mullet St				
IA-1	3/16/18	9/30/20	1/26/21	3/2/21
PCE	<b>32.2</b>	NS	<3.19	<b>8.95</b>
IA-2	3/16/18	9/30/20	1/26/21	3/2/21
PCE	<b>18.2</b>	NS	<b>5.29</b>	<b>12.9</b>
IA-3	3/16/18	9/30/20	1/26/21	3/2/21
PCE	<b>27.8</b>	NS	<b>5.90</b>	<b>13.0</b>
SSV-1	3/16/18	9/30/20	1/25/21	3/3/21
PCE	<b>1,480</b>	<b>331</b>	<b>17.4</b>	<b>36.1</b>
SSV-2	3/16/18	9/30/20	1/25/21	3/3/21
PCE	<b>3,210</b>	<b>2,160</b>	<b>510</b>	<b>191</b>
TCE	<b>19.8</b>	<b>2.26</b>	<1.07	<1.07
SSV-3	3/16/18	9/30/20	1/25/21	3/3/21
PCE	<b>1,210</b>	<b>2,660</b>	<b>3.87</b>	<b>106</b>

115 W. Mullet St			
SSV-1	9/30/20	1/25/21	3/3/21
PCE	<b>36.2</b>	<b>33.7</b>	<b>15.9</b>
SSV-2	9/30/20	1/25/21	3/3/21
PCE	<b>28</b>	<b>14.7</b>	<b>9.29</b>
TCE	<b>2.26</b>	<1.07	<1.07

122 W. Mullet St			
IA-1	9/30/20	1/25/21	3/3/21
CVOCs	ND	ND	ND
IA-2	9/30/20	1/25/21	3/3/21
CVOCs	ND	ND	ND
IA-C	9/30/20	1/25/21	3/3/21
CVOCs	ND	ND	ND

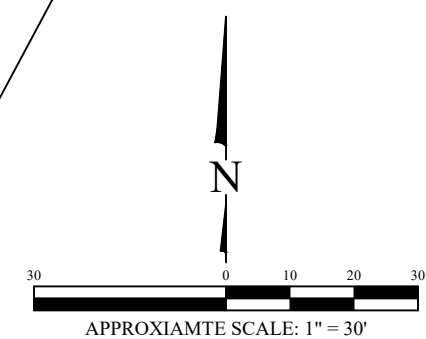
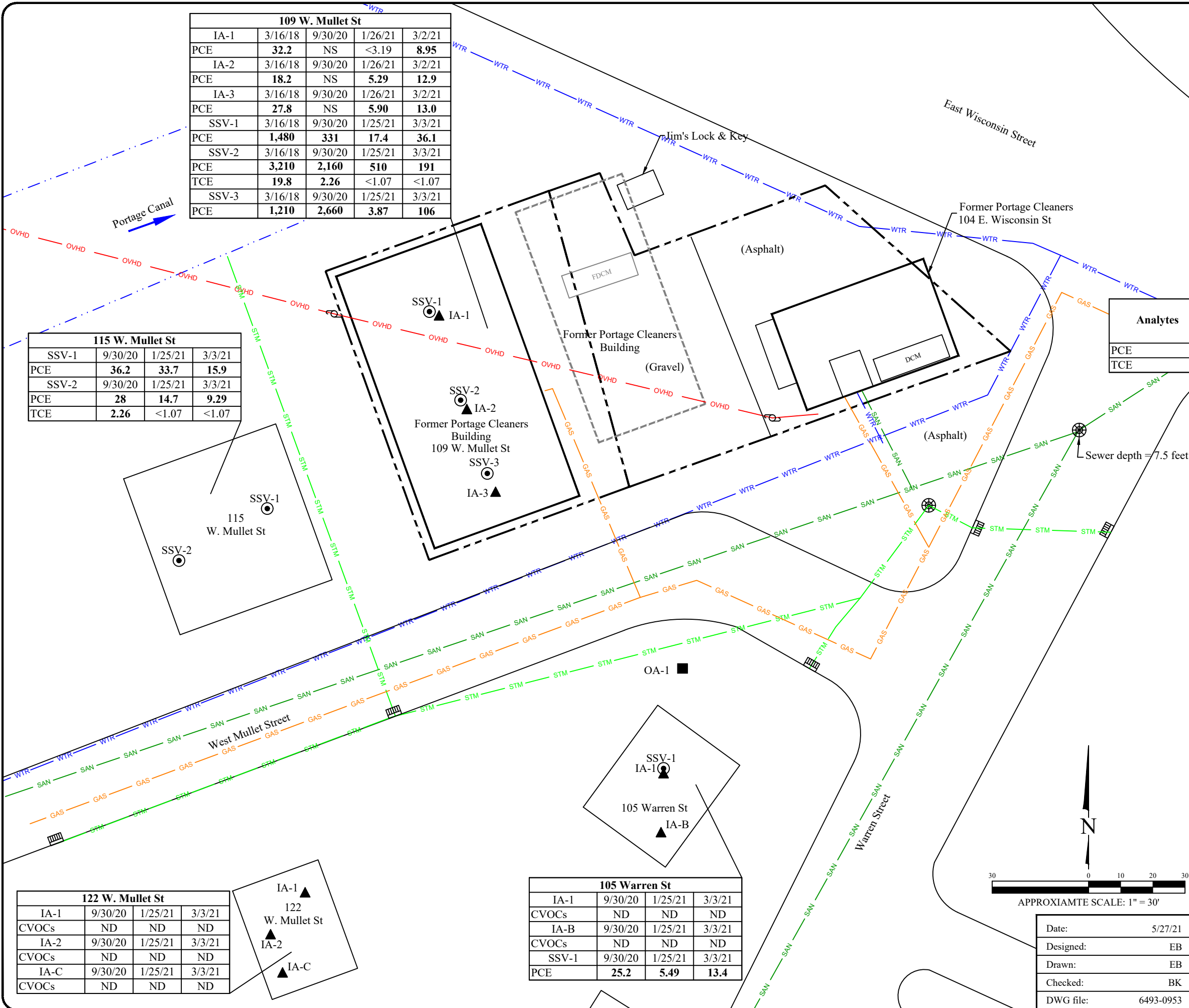
105 Warren St			
IA-1	9/30/20	1/25/21	3/3/21
CVOCs	ND	ND	ND
IA-B	9/30/20	1/25/21	3/3/21
CVOCs	ND	ND	ND
SSV-1	9/30/20	1/25/21	3/3/21
PCE	<b>25.2</b>	<b>5.49</b>	<b>13.4</b>

### Legend

- Property boundary
- SAN Underground sanitary utility line
- WTR Underground water utility line
- GAS Underground gas utility line
- STM Underground storm utility line
- OVHD Over head electrical utility line
- Utility Pole
- Catch Basin
- Manhole
- DCM Dry cleaning machine location
- FDCM Former dry cleaning machine location
- SS-1 Sub-slab sample location
- OA-1 Outdoor air sample location
- IA-1 Indoor air sample location

Analytes	Small Commercial Sub-Slab Vapor Risk Screening Level	Residential Sub-Slab Vapor Risk Screening Level	Indoor Air Small Commercial Vapor Action Level	Indoor Air Residential Vapor Action Level
PCE	<b>6,000</b>	<b>1,400</b>	<b>180</b>	<b>42</b>
TCE	<b>290</b>	<b>70</b>	<b>8.8</b>	<b>2.1</b>

- Note:
- All results reported in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )
  - Vapor risk screening level = US EPA Regional Screening Levels with an attenuation factor of 0.1 for sub-slab vapor to indoor air, and a 0.1 adjustment for carcinogens as described in WDNR Publication RR-800
  - PCE = Tetrachloroethene
  - TCE = Trichloroethene
  - ND = Compounds not detected
  - NS = Not samples
  - CVOCs = Chlorinated Volatile Organic Compounds








### VAPOR INTRUSION SAMPLING RESULTS SUMMARY

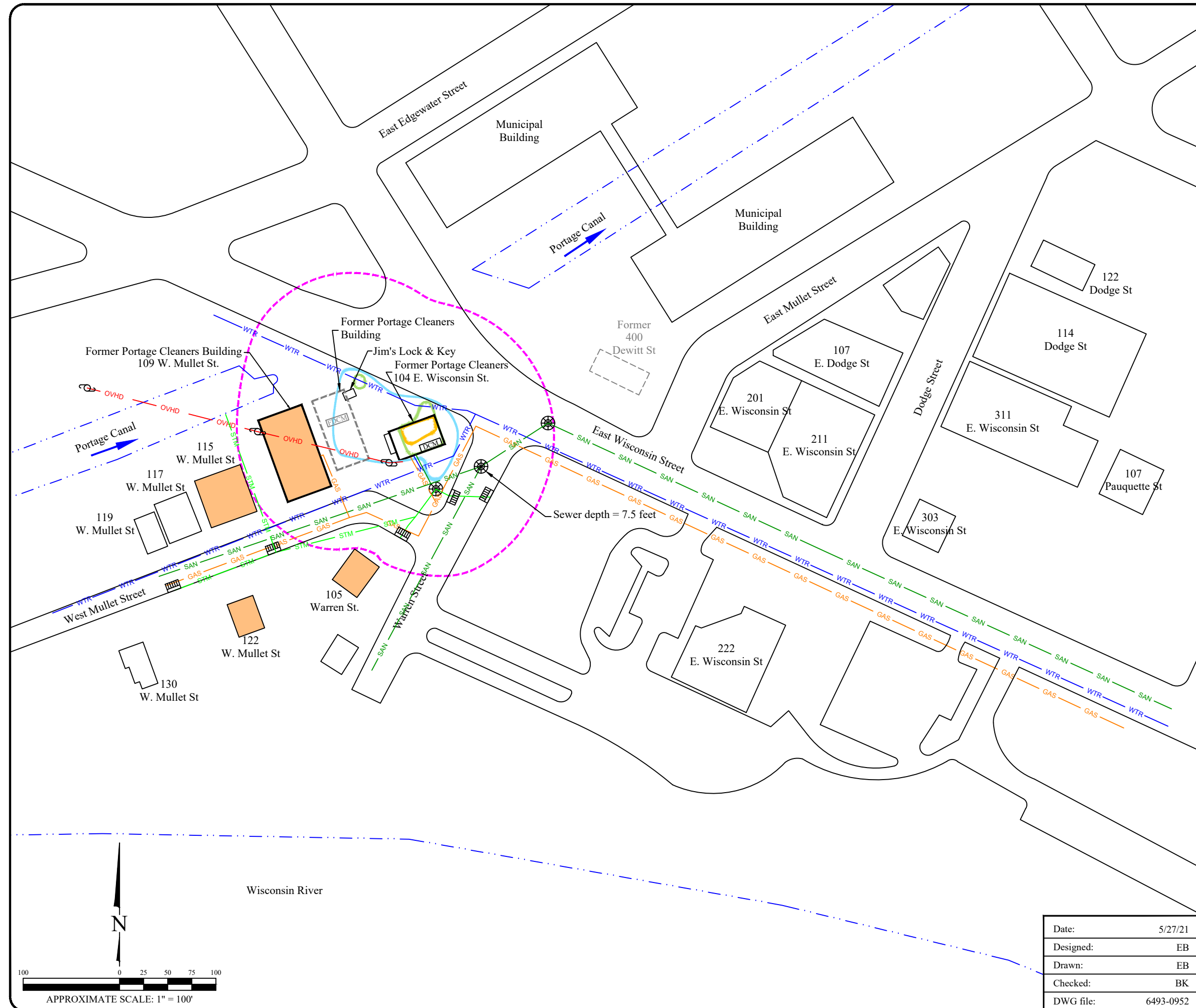
Portage Cleaners  
104 East Wisconsin Street  
Portage, Wisconsin


Date:	5/27/21		Figure
Designed:	EB		2
Drawn:	EB		Project
Checked:	BK		6493
DWG file:	6493-0953		

825 North Capitol Avenue • Indianapolis, IN 46204  
EnviroForensics.com

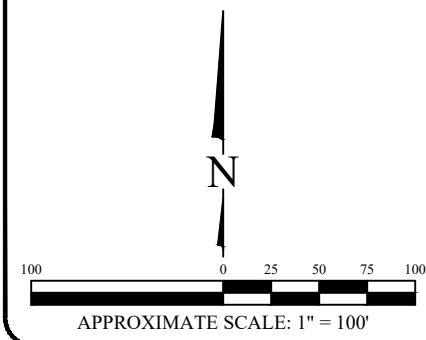
### Legend

- SAN — Underground sanitary utility line
- WTR — Underground water utility line
- GAS — Underground gas utility line
- STM — Underground storm utility line
- OVHD — Over head electrical utility line
-  Utility Pole
-  Catch Basin
-  Manhole
-  DCM Dry cleaning machine location
-  FDCM Former dry cleaning machine location
- PCE concentrations exceeding 1,000 ug/kg
- PCE concentrations exceeding the Non-Industrial Residual Contaminant Level - 33,000 ug/kg
- PCE concentrations exceeding the Industrial Residual Contaminant Level - 145,000 ug/kg
- - - 100 foot buffer
- Vapor intrusion risk ruled out by sampling



<b>VAPOR INTRUSION ASSESSMENT STATUS</b>	
Portage Cleaners 104 East Wisconsin Street Portage, Wisconsin	
	Figure 3
825 North Capitol Avenue • Indianapolis, IN 46204 EnviroForensics.com	Project 6493

Date:	5/27/21
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6493-0952



**ATTACHMENT 1**

**LABORATORY ANALYTICAL REPORTS**



**EnvisionAir**  
1441 Sadler Circle West Drive  
Indianapolis, IN 46239  
Ph: 317-351-0885  
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www.envision-air.com

Mr. Rob Hoverman  
Enviroforensics  
N16 W. 23390 Stone Ridge Dr  
Suite G  
Waukesha, WI 53188

February 4, 2021

EnvisionAir Project Number: 2021-46  
Client Project Name: 6493 – Portage Cleaners

Dear Mr. Hoverman,

Please find the attached analytical report for the samples received January 29, 2021. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in black ink that reads "Stanley A. Hunnicutt".

Stanley A Hunnicutt

Project Manager  
EnvisionAir, LLC



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**Client Name:** ENVIROFORENSICS  
**Project ID:** 6493 - PORTAGE CLEANERS  
**Client Project Manager:** ROB HOVERMAN  
**EnvisionAir Project Number:** 2021-46

**Sample Summary**

*Canister Pressure / Vacuum*

<u>Laboratory Sample Number:</u>	<u>Sample Description:</u>	<u>Matrix:</u>	<u>START</u>	<u>START</u>	<u>End Date</u>	<u>End Time</u>	<u>Date</u>	<u>Time</u>	<u>Canister Pressure / Vacuum</u>		<u>Lab</u>
			<u>Date</u>	<u>Time</u>					<u>Initial Field</u>	<u>Final Field</u>	
			<u>Collected:</u>	<u>Collected:</u>	<u>Collected:</u>	<u>Collected:</u>	<u>Received:</u>	<u>Received:</u>	<u>(in. Hg)</u>	<u>(in. Hg)</u>	<u>(in. Hg)</u>
21-212	6493-105 WARREN ST-IA-B	A	1/25/21	10:02	1/26/21	9:57	1/29/21	13:00	-30	-7	-7
21-213	6493-105 WARREN ST-IA-1	A	1/25/21	10:00	1/26/21	9:55	1/29/21	13:00	-30	0	0
21-214	6493-OA-1	A	1/25/21	9:55	1/26/21	9:45	1/29/21	13:00	-29	-2	-2
21-215	6493-105 WARREN ST-SSV-1	A	1/26/21	9:58	1/26/21	10:06	1/29/21	13:00	-29	-3	-3



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**Client Name:** ENVIROFORENSICS  
**Project ID:** 6493 - PORTAGE CLEANERS  
**Client Project Manager:** ROB HOVERMAN  
**EnvisionAir Project Number:** 2021-46

**Analytical Method:** TO-15  
**Analytical Batch:** 020121AIR

**Client Sample ID:** 6493-105 WARREN ST-  
 IA-B  
**EnvisionAir Sample Number:** 21-212  
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 1/25/21 10:02  
**Sample Collection END Date/Time:** 1/26/21 9:57  
**Sample Received Date/Time:** 1/29/21 13:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	108%		
Analysis Date/Time:	2-1-21/22:52		
Analyst Initials	tjg		





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**Project ID:** 6493 - PORTAGE CLEANERS  
**Client Project Manager:** ROB HOVERMAN  
**EnvisionAir Project Number:** 2021-46

**Analytical Method:** TO-15  
**Analytical Batch:** 020121AIR

**Client Sample ID:** 6493-105 WARREN ST-  
IA-1  
**Sample Collection START Date/Time:** 1/25/21 10:00  
**Sample Collection END Date/Time:** 1/26/21 9:55  
**EnvisionAir Sample Number:** 21-213  
**Sample Matrix:** AIR  
**Sample Received Date/Time:** 1/29/21 13:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	109%		
Analysis Date/Time:	2-1-21/23:34		
Analyst Initials	tjg		



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**Client Name:** ENVIROFORENSICS  
**Project ID:** 6493 - PORTAGE CLEANERS  
**Client Project Manager:** ROB HOVERMAN  
**EnvisionAir Project Number:** 2021-46

**Analytical Method:** TO-15  
**Analytical Batch:** 020121AIR

**Client Sample ID:** 6493-OA-1  
**EnvisionAir Sample Number:** 21-214  
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 1/25/21 9:55  
**Sample Collection END Date/Time:** 1/26/21 9:45  
**Sample Received Date/Time:** 1/29/21 13:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	99%		
Analysis Date/Time:	2-1-21/20:50		
Analyst Initials	tjg		



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**Client Name:** ENVIROFORENSICS  
**Project ID:** 6493 - PORTAGE CLEANERS  
**Client Project Manager:** ROB HOVERMAN  
**EnvisionAir Project Number:** 2021-46

**Analytical Method:** TO-15  
**Analytical Batch:** 020221AIR

**Client Sample ID:** 6493-105 WARREN ST-SSV-1  
**EnvisionAir Sample Number:** 21-215  
**Sample Matrix:** AIR  
**Sample Collection START Date/Time:** 1/26/21 9:58  
**Sample Collection END Date/Time:** 1/26/21 10:06  
**Sample Received Date/Time:** 1/29/21 13:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	<b>5.49</b>	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	99%		
Analysis Date/Time:	2-2-21/14:20		
Analyst Initials	tjg		

**TO-15 Quality Control Data**

**EnvisionAir Batch Number:** 020121AIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
cis-1,2-Dichloroethene	< 5	5	
Tetrachloroethene	< 0.47	0.47	
trans-1,2-Dichloroethene	< 10	10	
Trichloroethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	101%		
Analysis Date/Time:	2-1-21/09:59		
Analyst Initials	tjg		

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D Conc(ppbv)</u>	<u>LCS Rec.</u>	<u>LCSD Rec.</u>	<u>RPD</u>	<u>Flag</u>
Vinyl Chloride	8.78	8.85	10	88%	89%	0.8%	
trans-1,2-Dichloroethene	9.83	10.9	10	98%	109%	10.3%	
cis-1,2-Dichloroethene	11.2	11	10	112%	110%	1.8%	
Trichloroethene	10.7	10.2	10	107%	102%	4.8%	
Tetrachloroethene	9.33	9.59	10	93%	96%	2.7%	
4-bromofluorobenzene (surrogate)	100%	97%					
Analysis Date/Time:	2-1-21/08:40	2-1-21/09:24					
Analyst Initials	tjg	tjg					

**TO-15 Quality Control Data**

**EnvisionAir Batch Number:** 020221AIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
cis-1,2-Dichloroethene	< 5	5	
Tetrachloroethene	< 0.47	0.47	
trans-1,2-Dichloroethene	< 10	10	
Trichloroethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	104%		
Analysis Date/Time:	2-2-21/12:58		
Analyst Initials	tjg		

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D Conc(ppbv)</u>	<u>LCS Rec.</u>	<u>LCSD Rec.</u>	<u>RPD</u>	<u>Flag</u>
Vinyl Chloride	10.5	9.93	10	105%	99%	5.6%	
trans-1,2-Dichloroethene	10.9	10.1	10	109%	101%	7.6%	
cis-1,2-Dichloroethene	10.6	10.6	10	106%	106%	0.0%	
Trichloroethene	10.1	10.2	10	101%	102%	1.0%	
Tetrachloroethene	9.97	9.69	10	100%	97%	2.8%	
4-bromofluorobenzene (surrogate)	97%	101%					
Analysis Date/Time:	2-2-21/11:34	2-2-21/12:22					
Analyst Initials	tjg	tjg					



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Flag Number

Comments

