

April 11, 2022

Ms. Jennifer Dorman  
Environmental Program Associate  
Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
1027 W. St. Paul Avenue  
Milwaukee, WI 53233

**Subject: Groundwater Monitoring Progress Report**  
Milwaukee Die Casting Company Site  
4132 North Holton Street, Milwaukee, Wisconsin  
WDNR BRRTS # 02-41-000023  
WDNR FID # 241228240

Dear Ms. Dorman,

We are providing this second semiannual *Groundwater Monitoring Progress Report* (“Report”) to the Wisconsin Department of Natural Resources (WDNR) for the Milwaukee Die Casting Company Site (“Site”) pursuant to the WDNR-approved June 15, 2021 *Additional Groundwater Investigation Work Plan and Groundwater Monitoring Plan* (“Work Plan”). This letter is being submitted on behalf of Pharmacia LLC (“Pharmacia”), which is acting on behalf of Fisher Controls International, Inc. (“Fisher”) in this matter.<sup>1</sup>

This Report provides the groundwater monitoring purpose and report basis, additional piezometer installation and development documentation, results of the October 2021 and the January/February 2022 groundwater monitoring events,<sup>2</sup> a data trend evaluation, investigation-derived waste (“IDW”) management information, and a summary of planned activities. The Wisconsin Administrative Code NR 712.09 submittal certification is provided in **Attachment 1**.

### **Purpose and Report Basis**

Monitored natural attenuation (MNA) groundwater monitoring is being conducted at the Site in accordance with the Plan to collect sufficient data to confirm that post-removal action residual

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<sup>1</sup> By submitting this Report, neither Pharmacia nor Fisher is waiving any of its rights under federal or state law. Additionally, nothing in this Report should be deemed an admission of fact or law, or a waiver of any defense or right to contest Pharmacia’s or Fisher’s liability under any state or federal law.

<sup>2</sup> The October 2021 and January/February 2022 groundwater monitoring events are the second and third conducted pursuant to the Plan and the associated August 6, 2021 WDNR conditional approval letter and are the fifth and sixth consecutive quarterly groundwater monitoring events.

chlorinated volatile organic compound (CVOC) concentrations greater than NR 140 enforcement standards (ESs) are effectively naturally attenuating.

This Report was prepared in accordance with Wisconsin Administrative Code NR 724.13(3) and WDNR Form 4400-194<sup>3</sup> and pursuant to the following:

- The Work Plan.
- WDNR's August 6, 2021 *Review of Supplemental Site Investigation Report and Additional Groundwater Investigation Work Plan and Groundwater Monitoring Plan* letter.

Site background information and previous groundwater monitoring data are documented in the May 11, 2021 *Supplemental Site Investigation Report*, the Work Plan and the October 13, 2021 *Groundwater Monitoring Progress Report*.

### **Additional Piezometer Installation and Development**

Two (2) additional piezometers (PZ-1A and PZ-6) were installed between September 29 and October 1, 2021 in accordance with the Work Plan. The piezometers were installed by Cascade Drilling, LP using sonic drilling. The piezometers were developed by Geosyntec on October 11, 2021.

PZ-1A was installed with a screen interval of approximately 43 to 48 feet below ground surface (bgs) [603.79 to 598.79 feet above mean sea level (amsl)] adjacent to existing monitoring well MW-1 (screened from approximately 5 to 15 feet bgs) and existing piezometer PZ-1 (screened from approximately 31 to 36 feet bgs). PZ-1A is screened in limestone bedrock.

PZ-6 was installed with a screen interval of approximately 28 to 33 feet bgs (611.27 to 606.27 feet amsl) adjacent to existing monitoring well MW-6 (screened from approximately 8 to 18 feet bgs). PZ-6 is screened in clayey silt.

The PZ-1A and PZ-6 boring logs (WDNR Form 4400-122), well construction forms (WDNR Form 4400-113A) and monitoring well development forms (WDNR Form 4400-113B) are provided in **Attachment 2**. Grain size distribution testing data for the PZ-6 well screen interval is also included in **Attachment 2**.

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<sup>3</sup> Pursuant to WDNR Form 4400-194 (R 06/20) General Instructions, the option of a narrative report or letter in lieu of the form may be submitted.

**October 2021 and January/February 2022 Groundwater Monitoring Events**

The fifth and sixth quarterly groundwater monitoring events were conducted on October 26 and 27, 2021 and on January 31 and February 1, 2022, respectively. The following is a summary of the October 2021 and January/February 2022 groundwater monitoring results:

*Groundwater Elevation and Flow Data*

The October 2021 and January/February 2022 groundwater depth and elevation data (and previous data) are summarized in **Table 1 (Attachment 3)**. Shallow groundwater elevation contours for the October 2021 monitoring event are included on **Figure 1 (Attachment 4)** and deeper groundwater piezometric elevation contours for the October 2021 monitoring event are depicted on **Figure 2 (Attachment 4)**. As depicted on **Figure 1**, shallow groundwater flow is to the east consistent with previous data and as depicted on **Figure 2**, deeper groundwater flow is to the east-northeast consistent with previous data.

*Groundwater Analytical Data*

The October 2021 and January/February 2022 groundwater sampling laboratory reports and associated data validation reports are provided in **Attachment 5**. The groundwater sample analytical data (and previous data) are summarized in **Table 2 (Attachment 3)**. The October 2021 and January/February 2022 data (CVOCs and 1,4-dioxane) are also summarized on **Figure 1** (shallow groundwater) and **Figure 2** (deeper groundwater). The following table provides a summary of the CVOC analytical results for the October 2021 and January/February 2022 groundwater monitoring events:

<b>Monitoring Well Location</b>		<b>CVOC Data Summary</b>
On-Site Upgradient Well	MW-13	CVOCs were not detected in groundwater at upgradient on-Site groundwater monitoring well MW-13 in either monitoring event consistent with previous data.
On-Site Monitoring Wells and Piezometers	MW-1, PZ-1, PZ-1A, MW-2, PZ-2, MW-4, MW-7	CVOCs were detected in groundwater at on-Site groundwater monitoring wells MW-1, MW-2, MW-4 and MW-7 and piezometer PZ-1 at concentrations greater than NR 140 ESs in both monitoring events consistent with previous data.  CVOCs were not detected in groundwater at on-Site piezometer PZ-2 in either monitoring event consistent with previous data.  CVOCs were not detected in groundwater at newly installed piezometer PZ-1A in either monitoring event with the exception of an estimated (J-flagged) concentration of tetrachloroethene (PCE) less than the NR 140 ES in the October 2021 monitoring

Monitoring Well Location		CVOC Data Summary
		event (PCE was not detected in groundwater at PZ-1A in the January/February 2022 monitoring event).
Near Off-Site Downgradient Monitoring Wells and Piezometers	MW-5, MW-6, PZ-6, MW-8, MW-14	<p>CVOCs were detected in groundwater at near off-Site downgradient monitoring wells MW-6 and MW-14 at concentrations just greater than NR 140 ESs in both monitoring events consistent with previous data.</p> <p>CVOCs were not detected in groundwater at monitoring wells MW-5 and MW-8 in either monitoring event consistent with previous data with the exception of a low concentration [less than NR 140 Preventive Action Limit (PAL)] of cis-1,2-dichloroethene (DCE) at MW-5 in the October 2021 monitoring event (1,2-DCE was not detected at MW-5 in the January/February 2022 monitoring event).</p> <p>CVOCs were not detected in groundwater at newly installed piezometer PZ-6 in either monitoring event.</p>
Off-Site Downgradient Sentinel Monitoring Well and Piezometer	MW-9, PZ-10	CVOCs were not detected in groundwater at off-Site downgradient sentinel monitoring well MW-9 or at off-Site downgradient sentinel piezometer PZ-10 in either monitoring event consistent with previous data.

1,4-Dioxane was detected in groundwater at near off-Site groundwater monitoring well MW-6 in both monitoring events at concentrations greater than the NR 140 ES which is consistent with previous data. Low concentrations (less than the NR 140 ES) of 1,4-dioxane were reported as detected in the October 2021 monitoring event at MW-2, PZ-2, MW-5, PZ-6, MW-7, MW-8, PZ-10, MW-13, and MW-14; however, in the January/February 2022 monitoring event, 1,4-dioxane was only reported as detected (at a concentration less than NR 140 ES) in one of these wells (PZ-10).

### *Geochemical Parameters*

Geochemical parameter data for the October 2021 and January/February 2022 groundwater monitoring events are provided in **Table 2**. These data are summarized in the following table:

Geochemical Parameters	Data Summary
Ethane, Ethene, Methane <sup>(1)</sup>	<p>Ethene was detected in groundwater at MW-1 and PZ-1 (monitoring well and piezometer with the highest residual CVOC concentrations). Ethene was also detected in groundwater at PZ-2. The continued presence of ethene is consistent with the CVOC reductive dechlorination (degradation) pattern of PCE/trichloroethene (TCE) → DCE → vinyl chloride → ethene).</p> <p>Ethane was detected in groundwater at MW-1, MW-2, PZ-2 and MW-4.</p>



Geochemical Parameters	Data Summary
	<p>Methane was detected in groundwater at on-Site groundwater monitoring wells with CVOC concentrations greater than NR 140 ESs (MW-1, MW-2, MW-4, and MW-7) at concentrations ranging from 19.5 to 2,740 milligrams per liter (mg/L) with the highest methane concentration detected in groundwater at MW-1 (monitoring well with the highest residual CVOC concentrations). Methane was also detected in groundwater at near off-Site groundwater monitoring well MW-6 at a concentration of 543 mg/L. Elevated methane concentrations are indicative of reduced groundwater conditions.<sup>(2)</sup> Relatively lower methane concentrations were also detected in groundwater at groundwater monitoring wells MW-9 and MW-13 and piezometers PZ-1, PZ-2 and PZ-10.</p>
Dissolved Oxygen (DO), Oxidation-Reduction Potential (ORP)	<p>DO concentrations in groundwater at monitoring wells and piezometers with the highest residual CVOC concentrations (MW-1, PZ-1 and MW-2) ranged from 0.14 to 0.48 mg/L for the two monitoring events. DO concentrations less than 0.5 mg/L are indicative of reduced groundwater conditions.<sup>(2)</sup></p> <p>ORP measurements at groundwater monitoring wells and piezometers with the highest residual CVOC concentrations (MW-1, PZ-1 and MW-2) ranged from -118.4 to 27.7 millivolts (mV). These data are indicative of “likely” to “possible” reductive dechlorination.<sup>(2)</sup></p>
pH	pH measurements ranged from 6.64 to 7.46 for the two monitoring events, which are within the optimal range for microbial activity ( $5 < \text{pH} < 9$ ). <sup>(2)</sup>
Total Organic Carbon (TOC) <sup>(1)</sup>	TOC concentrations ranged from 0.79 to 6.4 mg/L which are less than the TOC concentration generally considered to support reductive dechlorination ( $>20 \text{ mg/L}$ ). <sup>(2)</sup>
Notes: (1) Ethane, ethene, methane and TOC data are collected semi-annually; therefore, these data were only collected for the January/February 2022 event. (2) <i>Understanding Chlorinated Hydrocarbon Behavior in Groundwater: Guidance on the Investigation, Assessment and Limitations of Monitored Natural Attenuation</i> , WDNR Publication RR-699.	

## **Data Trends**

### *Concentration and Groundwater Elevations versus Time*

CVOC concentration and groundwater elevation versus time plots for groundwater monitoring wells with NR 140 ES exceedances (MW-1, PZ-1, MW-2, MW-4, MW-6, MW-7 and MW-14) are provided in **Attachment 6**. These data trend plots show six (6) quarterly data points between September 2020 and January/February 2022. The plots depict stable CVOC concentration trends

over this period for each of the groundwater monitoring wells and piezometers with the exception of the following current variances:

- PZ-1 (on-Site deeper groundwater piezometer) vinyl chloride data: the plot for PZ-1 (Page 2 of 10) depicts an apparent increasing concentration trend for degradation product vinyl chloride; however, this increasing vinyl chloride concentration trend corresponds to a similar increasing concentration trend for subsequent degradation product ethene. The increasing degradation product ethene concentration trend and the PZ-1 ORP data (-118.4 and -54 mV for the October 2021 and January/February 2022 monitoring events) suggest effective CVOC reductive dichlorination at PZ-1.
- MW-7 (on-Site shallow groundwater monitoring well) PCE and vinyl chloride data: the plot for MW-7 (Page 6 of 10) depicts increasing concentrations for PCE and degradation product vinyl chloride between the October 2021 and January/February 2022 monitoring events. However, the PCE and vinyl chloride concentrations in groundwater at MW-7 are low and the increases are correspondingly low.

A 1,4-dioxane concentration and groundwater elevation versus time plot for MW-6 is also included in **Attachment 6** (Page 8 of 10). This data trend plot depicts very consistent (stable) 1,4-dioxane concentrations over the September 2020 to January/February 2022 period.

#### *Concentration versus Distance*

Concentration versus distance plots for the primary post-removal action residual CVOC groundwater flow path (MW-1 → MW-7 → MW-6 → MW-9) for the October 2021 and January/February 2022 sampling event data are included in **Attachment 6** (Pages 9 of 10 and 10 of 10). These data plots depict significant attenuation of CVOC concentrations with distance downgradient of MW-1 (shallow groundwater monitoring well with highest residual CVOC concentrations).

#### **IDW Management**

Soil and water generated during additional piezometer installation and development and groundwater sampling were contained in labeled 55-gallon drums. The drums were staged in the northwest portion of the Site pending disposal. The water drums were staged in secondary containment. Five (5) soil and 11 water drums were generated during piezometer installation and development, five (5) water drums were generated during the October 2021 groundwater monitoring event and three (3) water drums were generated during the January/February 2022 groundwater monitoring event.

The drums generated during piezometer installation and development and the October 2021 groundwater monitoring event were picked up by Veolia for off-site disposal on December 13,

Ms. Jennifer Dorman  
Wisconsin Department of Natural Resources  
April 11, 2022  
Page 7

2021. The drums generated during the January/February 2022 groundwater monitoring event are staged on-Site pending disposal. The disposal manifests are included in **Attachment 7**.<sup>4</sup>

### **Planned Activities**

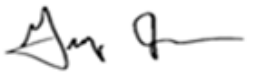
The next (seventh) quarterly groundwater monitoring event is planned for late April 2022. The next semiannual report will be provided to the WDNR following the eighth quarterly groundwater monitoring event.

Please contact us if you have any questions regarding this letter.

Sincerely,



Jeremiah Johnson, P.G.  
Senior Geologist  
(Licensed P.G. in WI)



Greg Johnson, P.H., P.G., P.E.  
Senior Engineer  
(Licensed P.E. in WI, P.H. in WI, P.G. in IL, WI)

Attachment 1 - NR 712.09 Submittal Certification  
Attachment 2 - PZ-1A and PZ-6 Installation Information  
Attachment 3 - Tables  
Attachment 4 - Figures  
Attachment 5 - Laboratory Report and Data Validation Report  
Attachment 6 - Data Trend Plots  
Attachment 7 - IDW Disposal Documentation

cc: Mr. John (Greg) Moll, WDNR  
Mr. Christopher Clark, Pharmacia LLC  
Ms. Mary Jo Anzia, BSI

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<sup>4</sup> The disposal manifests for the July 2021 groundwater monitoring event are also provided in **Attachment 7**. The disposal manifests for the January/February 2022 groundwater monitoring event will be provided in the next Groundwater Monitoring Progress Report.

# **ATTACHMENT 1**

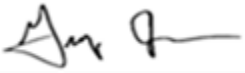

## **NR 712.09 Submittal Certification**

**Groundwater Monitoring Progress Report**  
Milwaukee Die Casting Company Site  
4132 North Holton Street  
Milwaukee, Wisconsin  
WDNR BRRS # 02-41-00023  
WDNR FID # 241228240

**NR 712.09 Submittal certification.**

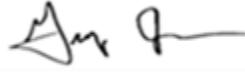
Document Name	GROUNDWATER MONITORING PROGRESS REPORT
Document Date	April 11, 2022
Site Name	Milwaukee Die Casting Company Site
WDNR BRRTS #	02-41-000023

"I, Greg Johnson, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

 Greg Johnson, P.H., P.G., P.E. Senior Engineer P.E. #: 29898-006	 4/11/2022
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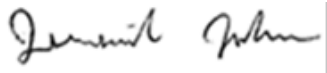
Signature, title and P.E. number      P.E. stamp

"I, Greg Johnson, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

 Senior Engineer	4/11/2022
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Signature and title      Date

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

 Senior Geologist	4/11/2022
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Signature and title      Date

# **ATTACHMENT 2**

## **PZ-1A and PZ-6 Installation Information**


Boring Logs  
Well Construction Forms  
Monitoring Well Development Forms  
Grain Size Testing Data

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

<b>Facility/Project Name</b> Milwaukee Die Casting Company Site			<b>License/Permit/Monitoring No.</b> BRRTS# 02-41-000023		<b>Boring Number</b> PZ-1A	
<b>Boring Drilled By</b> (First and Last Name, Firm) Kendall Schultz, Cascade Drilling			<b>Drilling Start Date</b> 09/29/2021		<b>Drilling End Date</b> 10/01/2021	
<b>WI Unique Well No.</b>			<b>DNR Well ID No.</b>		<b>Well Name</b> --	
<b>Final Static WL</b> Feet MSL			<b>Surface Elevation</b> 646.79 Feet MSL		<b>Borehole Diameter</b> 6 inches	
<b>Local Grid Origin</b> <input type="checkbox"/> State Plane 15654238.7 ft. N, 1398971.55 ft. E SW 1/4 of SW 1/4 of Section 04, T 07 N, R 22 E			<b>Boring Location</b> <input type="checkbox"/> Lat -- Long --		<b>Local Grid Location</b> ____ Feet <input type="checkbox"/> N ____ Feet <input type="checkbox"/> E ____ Feet <input type="checkbox"/> S ____ Feet <input type="checkbox"/> W	
<b>Facility ID</b> 241228240			<b>County</b> Milwaukee		<b>County Code</b> 41	
					<b>Civil Town/City/Village</b> Milwaukee	

SAMPLE					Depth (ft)	SOIL/ROCK VISUAL DESCRIPTION	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES						Comments
Sample ID	Sample Type Length Attempt	Recovery (in)	Blow Counts	Compressive Strength							Moisture Content	Liquid Limit	Plasticity Index	P 200	N Value RQD		
1/RS	CB	60/60			0	(0') Brown TOPSOIL; moist (FILL).	FILL										
						(1.5') Gray CLAY (CL); moist (FILL).	FILL										
2/RS	CB	60/60			5	(4') Brown and gray CLAY (CL); moist (FILL).	FILL			0.5							
						(6.5') Brown CLAY (CL); moist, little silt with few gravel and sand, massive.	CL			11.5							
3/RS	CB	60/60			10	(8.5') Gray, SANDY SILT to SILTY SAND (ML); moist, very fine sand with trace gravel, massive.	ML			33.2							
						(11.5') Gray, POORLY GRADED SAND (SP); moist, fine sand with few gravel and trace cobbles.	SP			55							
										934							
4/RS	CB	60/60			15	(15') Gray, SILTY SAND (SM); moist, few gravel and trace cobbles, massive.	SM			2374							
						(18') Gray, POORLY GRADED SAND (SP); moist, fine sand and trace gravel.	SP			28							
						(18.5') Gray, POORLY GRADED SAND with GRAVEL (SP); moist, few cobbles.	SP			25.7							
5/RS	CB	60/60			20	(19.5') Gray, POORLY GRADED SAND (SP); moist, fine to medium sand, massive.	ML			0.9							
						(21') Gray SILT (ML); moist, trace sand.	SP										
						(21.5') Gray, POORLY GRADED SAND and GRAVEL (SP); coarse sand, massive.	ML			0.3							
					25					0.6							

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature 	Firm <b>Geosyntec Consultants, Inc.</b>
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This form is authorized by Chapters 281, 283, 289, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.



Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

<b>Facility/Project Name</b> Milwaukee Die Casting Company Site			<b>License/Permit/Monitoring No.</b> BRRTS# 02-41-000023		<b>Boring Number</b> PZ-1A	
<b>Boring Drilled By</b> (First and Last Name, Firm) Kendall Schultz, Cascade Drilling			<b>Drilling Start Date</b> 09/29/2021		<b>Drilling End Date</b> 10/01/2021	
<b>WI Unique Well No.</b>			<b>DNR Well ID No.</b>		<b>Well Name</b> --	
<b>Final Static WL</b> Feet MSL			<b>Surface Elevation</b> 646.79 Feet MSL		<b>Borehole Diameter</b> 6 inches	
<b>Local Grid Origin</b> <input type="checkbox"/> State Plane 15654238.7 ft. N, 1398971.55 ft. E SW 1/4 of SW 1/4 of Section 04, T 07 N, R 22 E			<b>Boring Location</b> <input type="checkbox"/> Lat -- Long --		<b>Local Grid Location</b> ____ Feet <input type="checkbox"/> N ____ Feet <input type="checkbox"/> E ____ Feet <input type="checkbox"/> S ____ Feet <input type="checkbox"/> W	
<b>Facility ID</b> 241228240			<b>County</b> Milwaukee		<b>County Code</b> 41	
					<b>Civil Town/City/Village</b> Milwaukee	

SAMPLE				Depth (ft)	SOIL/ROCK VISUAL DESCRIPTION	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES						Comments
Sample ID	Sample Type Length Attempt	Recovery (in)	Blow Counts							Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	N Value RQD	
6/RS	CB	60/60		25	(22') Gray SILT (ML); moist to dry, few gravel, massive.	ML										
					(26') Gray, SILTY SAND (SM); moist, few gravel.	SM			0.2							
					(27.5') Gray, SILTY SAND to POORLY GRADED SAND (SM-SP); moist to wet, very fine sand, massive.	SP-SM			0.0							
					(30') As above from 27.5-30.0 feet but trace cobbles.				0.1							
7/RS	CB	84/84		30	(31') Gray, SANDY SILT (ML); moist, some fine sand and few gravel with trace cobbles, massive.	ML			0.6							
					(34') Gray SILT (ML); moist, trace sand, massive.	ML			1.2							
				35	(36') Gray, SANDY SILT (ML); moist, some fine sand and few gravel with trace cobbles, massive.	ML			0.8							
8/RS	CB	36/36			(37') Gray, POORLY GRADED SAND to SILT (SP-SM); wet, very fine sand, massive.	SP-SM			1.6							
					(38') Gray, CLAYEY SILT (ML-CL); moist, some sand and few gravel with trace cobbles, massive.	ML-CL			0.8							
9/RS	CB	36/36		40	(39.5') LIMESTONE.	LIMESTONE			0.7							
					(42') Apparent fracture.											
10/RS	CB	36/36			(43') No staining or mineralization from water.											
11/RS	CB	30/30		45	(47') SHALE/CLAYSTONE;	SHALE										

(48.5') Boring terminated.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

Geosyntec Consultants, Inc.

Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Milwaukee Die Casting Company Site</b>	Local Grid Location of Well ft. N. _____ E. _____ ft. S. _____ W. _____	Well Name <b>PZ-1A</b>
Facility License, Permit or Monitoring No. BRRTS# 02-41-00023	Local Grid Origin (estimated: _____) or Well Location <input checked="" type="checkbox"/> Lat. _____ Long. _____ or _____	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID <b>241228240</b>	St. Plane <b>15654238.7</b> ft. N., <b>1398971.55</b> ft. E. <input checked="" type="checkbox"/> S / C / N	Date Well Installed <b>10/01/2021</b>
Type of Well Well Code <b>12 / pz</b>	Section Location of Waste/Source <b>SW</b> 1/4 of <b>SW</b> 1/4 of Sec. <b>4</b> T. <b>7</b> N, R. <b>22</b> <input checked="" type="checkbox"/> E.	Well Installed By: Name (first, last) and Firm <b>Kendall Schultz</b> <b>Cascade</b>
Distance from Waste/Source ft. _____	Location of Well Relative to Well/Source u _____ s _____ d _____ n _____ Upgradient Downgradient Sidegradient Not Known	Gov. Lot Number _____

A. Protective pipe, top elevation	<b>649.33</b> ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation	<b>648.62</b> ft. MSL	2. Protective cover pipe: a. Inside diameter: <b>4</b> in. b. Length: <b>5</b> in. c. Material: Steel <input checked="" type="checkbox"/> 04 Other _____ d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____
C. Land surface elevation	<b>646.79</b> ft. MSL	3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other _____
D. Surface seal, bottom	<b>644.79</b> ft. MSL or <b>2</b> ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 <b>Filter sand</b> Other <input checked="" type="checkbox"/> 30
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/>		5. Annular space seal: a. Granular/Chipped Bentonite <input type="checkbox"/> 33 b. _____ Lbs/gal mud weight... Bentonite sand-slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight... Bentonite slurry <input checked="" type="checkbox"/> 31 d. _____ % Bentonite... Bentonite-cement grout <input type="checkbox"/> 50 e. <b>30 gal</b> FT <sup>3</sup> volume added for any of the above f. How installed: Tremie <input checked="" type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
13. Sieve analysis performed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input type="checkbox"/> 32 c. _____ Other _____
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow stem auger <input type="checkbox"/> 41 <b>Sonic</b> Other <input checked="" type="checkbox"/> 30		7. Fine sand material: Manufacturer, product name & mesh size a. _____ Other _____ b. Volume added _____ ft <sup>3</sup>
15. Drilling fluid used: Water <input checked="" type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99		8. Filter pack material: Manufacturer, product name & mesh size a. <b>K&amp;E Well Gravel</b> Other _____ b. Volume added <b>2</b> ft <sup>3</sup>
16. Drilling additives used: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____		9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other _____
17. Source of water (attach analysis, if required): <b>City of Milwaukee</b>		10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other _____ b. Manufacturer: <b>Johnson Screens</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>5.0</b> ft.
E. Bentonite seal, top	<b>611.79</b> ft. MSL or <b>35</b> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 01 Other _____
F. Fine sand, top	<b>--</b> ft. MSL or <b>--</b> ft.	
G. Filter pack, top	<b>604.29</b> ft. MSL or <b>42.5</b> ft.	
H. Screen joint, top	<b>603.79</b> ft. MSL or <b>43</b> ft.	
I. Well bottom	<b>598.79</b> ft. MSL or <b>48</b> ft.	
J. Filter pack, bottom	<b>598.29</b> ft. MSL or <b>48.5</b> ft.	
K. Borehole, bottom	<b>598.29</b> ft. MSL or <b>48.5</b> ft.	
L. Borehole diameter	<b>6</b> in.	
M. O.D. well casing	<b>2.36</b> in.	
N. I.D. well casing	<b>2.06</b> in.	

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm  
**Geosyntec Consultants**

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name Milwaukee Die Casting Company Site	County Name Milwaukee	Well Name PZ-1A
Facility License, Permit or Monitoring Number BRRTS# 02-41-000023	County Code 4 1	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry?  Yes  No

2. Well development method
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - Other pumped and surged with pump  \_\_\_\_\_

3. Time spent developing well \_\_\_\_\_ 75 \_\_\_\_\_ min.

4. Depth of well (from top of well casing) \_\_\_\_\_ 5 0 . 3 \_\_\_\_\_ ft.

5. Inside diameter of well \_\_\_\_\_ 2 . 0 6 \_\_\_\_\_ in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ 7 . 8 \_\_\_\_\_ gal.

7. Volume of water removed from well \_\_\_\_\_ 7 0 . 0 \_\_\_\_\_ gal.

8. Volume of water added (if any) \_\_\_\_\_ . . . . . gal.

9. Source of water added N/A

10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

17. Additional comments on development:

- 9:20- surge prior to pumping
- 9:25- start purge
- 9:30 - surge and pump
- 9:40- surge and pump
- 9:50 - surge

11. Depth to Water Before Development After Development

(from top of well casing) a. \_\_\_\_\_ 9 . 0 6 \_\_\_\_\_ ft. \_\_\_\_\_ 3 0 . 3 0 \_\_\_\_\_ ft.

Date b. 1 0 / 1 1 / 2 0 2 1 1 0 / 1 1 / 2 0 2 1  
m m d d y y y y m m d d y y y y

Time c. 0 9 : 1 5  a.m. 1 0 : 3 0  a.m.  
 p.m.  p.m.

12. Sediment in well \_\_\_\_\_ . . . . . inches \_\_\_\_\_ . . . . . inches  
bottom

13. Water clarity Clear  1 0 Clear  2 0  
Turbid  1 5 Turbid  2 5  
(Describe) (Describe)  
gray, turbid clear

Fill in if drilling fluids were used and well is at solid waste facility:


14. Total suspended \_\_\_\_\_ . . . . . mg/l \_\_\_\_\_ . . . . . mg/l  
solids

15. COD \_\_\_\_\_ . . . . . mg/l \_\_\_\_\_ . . . . . mg/l

16. Well developed by: Name (first, last) and Firm  
First Name: David Last Name: Zolp  
Firm: Geosyntec Consultants

Name and Address of Facility Contact /Owner/Responsible Party  
First Name: Christopher Last Name: Clark  
Facility/Firm: Pharmacia, LLC.  
Street: 235 East 42nd Street, 219/5/1  
City/State/Zip: New York, NY 10017

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:   
Print Name: David Zolp  
Firm: Geosyntec Consultants

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

<b>Facility/Project Name</b> Milwaukee Die Casting Company Site			<b>License/Permit/Monitoring No.</b> BRRTS# 02-41-000023		<b>Boring Number</b> PZ-6	
<b>Boring Drilled By</b> (First and Last Name, Firm) Kendall Schultz, Cascade Drilling			<b>Drilling Start Date</b> 09/30/2021		<b>Drilling End Date</b> 09/30/2021	
<b>WI Unique Well No.</b>			<b>DNR Well ID No.</b>		<b>Well Name</b> --	
<b>Final Static WL</b> Feet MSL			<b>Surface Elevation</b> 639.27 Feet MSL		<b>Borehole Diameter</b> 6 inches	
<b>Local Grid Origin</b> <input type="checkbox"/> State Plane 15654307.27 ft. N, 1399232.83 ft E SW 1/4 of SW 1/4 of Section 04, T 07 N, R 22 E			<b>Boring Location</b> <input type="checkbox"/> Lat -- Long --		<b>Local Grid Location</b> ____ Feet <input type="checkbox"/> N ____ Feet <input type="checkbox"/> E ____ Feet <input type="checkbox"/> S ____ Feet <input type="checkbox"/> W	
<b>Facility ID</b> 241228240			<b>County</b> Milwaukee		<b>County Code</b> 41	
					<b>Civil Town/City/Village</b> Milwaukee	

SAMPLE				Depth (ft)	SOIL/ROCK VISUAL DESCRIPTION	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES						Comments
Sample ID	Sample Type Length Attempt	Recovery (in)	Blow Counts							Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	N Value RQD	
1/RS	CB	60/60		0	(0') Brown CLAY (CL); trace gravel (FILL).	FILL			1.1							
2/RS	CB	60/60		5	(5') Brown CLAY (CL); moist, few gravel and sand, massive.	CL			0.3							
									16.8							
3/RS	CB	60/60		10	(10') As above from 5-10 feet but gray mottles.											
					(11.5') Grading to grayish brown.				0.7							
					(12') Grayish brown CLAY (CL); moist, trace gravel and sand, massive.	CL			0.8							
4/RS	CB	60/60		15	(17') Grayish brown, SANDY CLAY (CL); moist, little fine to medium sand and silt with few gravel, massive and grading to sandy silt at 18 feet.	CL			0.0							
						ML			0.0							
5/RS	CB	36/36		20	(18') SANDY SILT (ML); moist, fine sand with few gravel and trace cobbles, massive.	ML			0.0							
					(19') Gray SILT (ML); moist, few gravel and fine sand with trace cobbles, massive.	ML			0.0							
6/RS	CB	24/24		20	(20') As above from 19-20 feet.	ML-CL										
					(22') Large cobbles from 22-23 feet.											
				25	(22.8') Grayish brown, CLAYEY SILT											

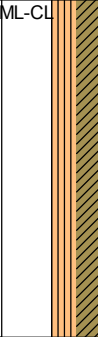
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature 	Firm <b>Geosyntec Consultants, Inc.</b>
---------------	--

This form is authorized by Chapters 281, 283, 289, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

<b>Facility/Project Name</b> Milwaukee Die Casting Company Site			<b>License/Permit/Monitoring No.</b> BRRTS# 02-41-000023		<b>Boring Number</b> PZ-6	
<b>Boring Drilled By</b> (First and Last Name, Firm) Kendall Schultz, Cascade Drilling			<b>Drilling Start Date</b> 09/30/2021	<b>Drilling End Date</b> 09/30/2021	<b>Drilling Method</b> Sonic	
<b>WI Unique Well No.</b>	<b>DNR Well ID No.</b>	<b>Well Name</b> --	<b>Final Static WL</b> Feet MSL	<b>Surface Elevation</b> 639.27 Feet MSL	<b>Borehole Diameter</b> 6 inches	
<b>Local Grid Origin</b> <input checked="" type="checkbox"/> State Plane N, E SW 1/4 of SW 1/4 of Section 04, T 07 N, R 22 E			<b>Boring Location</b> <input type="checkbox"/> Lat -- Long --	<b>Local Grid Location</b> ____ Feet <input type="checkbox"/> N ____ Feet <input type="checkbox"/> E ____ Feet <input type="checkbox"/> S ____ Feet <input type="checkbox"/> W		
<b>Facility ID</b> 241228240		<b>County</b> Milwaukee	<b>County Code</b> 41	<b>Civil Town/City/Village</b> Milwaukee		

SAMPLE					Depth (ft)	SOIL/ROCK VISUAL DESCRIPTION	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES						Comments	
Sample ID	Sample Type Length Attempt	Recovery (in)	Blow Counts	Compressive Strength							Moisture Content	Liquid Limit	Plasticity Index	P 200	N Value RQD			
7/RS	CB	48/48			25	(ML-CL); dry, little to some sand and few to little gravel with trace cobbles. (25') As above from 22.8-25.0 feet.	ML-CL			8.6								
8/RS	CB	48/48			30	(29') As above from 22.8-29 feet.												

(33') Boring terminated.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature



Firm

**Geosyntec Consultants, Inc.**

Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Milwaukee Die Casting Company Site</b>	Local Grid Location of Well ft. N. _____ E. _____ ft. S. _____ W. _____	Well Name <b>PZ-6</b>
Facility License, Permit or Monitoring No. BRTS# 02-41-00023	Local Grid Origin (estimated: _____) or Well Location <input checked="" type="checkbox"/> Lat. _____ Long. _____ or _____	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID <b>241228240</b>	St. Plane <b>15654307.27</b> ft. N., <b>1399232.83</b> ft. E. <input checked="" type="checkbox"/> S / C / N	Date Well Installed <b>09/30/2021</b>
Type of Well Well Code <b>12 / pz</b>	Section Location of Waste/Source <b>SW</b> 1/4 of <b>SW</b> 1/4 of Sec. <b>4</b> T. <b>7</b> N, R. <b>22</b> <input checked="" type="checkbox"/> E.	Well Installed By: Name (first, last) and Firm <b>Kendall Schultz</b> <b>Cascade</b>
Distance from Waste/ Source ft	Enf. Stds. Apply <input type="checkbox"/>	Gov. Lot Number _____
Location of Well Relative to Well/Source u _____ s _____ d _____ n _____	Upgradient _____ Sidegradient _____ Downgradient _____ Not Known _____	

A. Protective pipe, top elevation **641.92** ft. MSL  
B. Well casing, top elevation **641.35** ft. MSL  
C. Land surface elevation **639.27** ft. MSL  
D. Surface seal, bottom **637.77** ft. MSL or **1.5** ft.

12. USCS classification of soil near screen:  
GP  GM  GC  GW  SW  SP   
SM  SC  ML  MH  CL  CH   
Bedrock

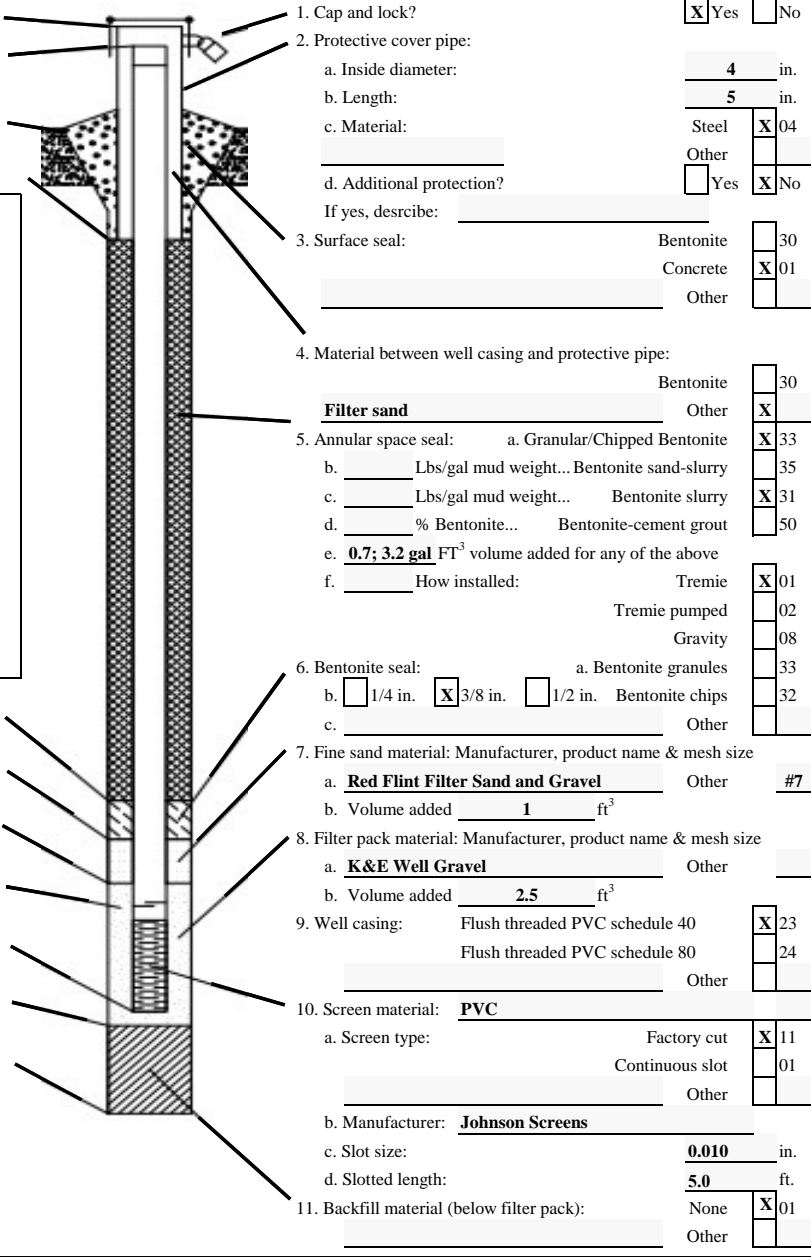
13. Sieve analysis performed?  Yes  No

14. Drilling method used: Rotary  50  
Hollow stem auger  41  
**Sonic** Other  X

15. Drilling fluid used: Water  02 Air  01  
Drilling Mud  03 None  99

16. Drilling additives used:  Yes  No  
Describe \_\_\_\_\_

17. Source of water (attach analysis, if required):  
**City of Milwaukee**



E. Bentonite seal, top **618.27** ft. MSL or **21** ft.  
F. Fine sand, top **614.27** ft. MSL or **25** ft.  
G. Filter pack, top **612.27** ft. MSL or **27** ft.  
H. Screen joint, top **611.27** ft. MSL or **28** ft.  
I. Well bottom **606.27** ft. MSL or **33** ft.  
J. Filter pack, bottom **606.27** ft. MSL or **33** ft.  
K. Borehole, bottom **606.27** ft. MSL or **33** ft.  
L. Borehole diameter **6** in.  
M. O.D. well casing **2.36** in.  
N. I.D. well casing **2.06** in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
Signature \_\_\_\_\_ Firm **Geosyntec Consultants**

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name Milwaukee Die Casting Company Site	County Name Milwaukee	Well Name PZ-6
Facility License, Permit or Monitoring Number BRRS# 02-41-000023	County Code 4 1	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry?  Yes  No

2. Well development method
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - Other pumped and surged with pump  \_\_\_\_\_

3. Time spent developing well \_\_\_\_\_ 20 \_\_\_\_\_ min.

4. Depth of well (from top of well casing) \_\_\_\_\_ 3 5 . 2 \_\_\_\_\_ ft.

5. Inside diameter of well \_\_\_\_\_ 2 . 0 6 \_\_\_\_\_ in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ 5 . 3 \_\_\_\_\_ gal.

7. Volume of water removed from well \_\_\_\_\_ 6 . 0 \_\_\_\_\_ gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added N/A

10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

17. Additional comments on development:

10:55- surge prior to pumping  
10:58- start purge  
11:10 - dry  
11:15- pump  
11:18- surge

11. Depth to Water Before Development After Development

(from top of well casing) a. 2 0 . 3 3 ft. 3 5 . 0 0 ft.

Date b. 1 0 / 1 1 / 2 0 2 1 1 0 / 1 1 / 2 0 2 1  
m m d d y y y y m m d d y y y y

Time c. 1 0 : 5 0  p.m. 1 1 : 3 0  a.m.  p.m.

12. Sediment in well bottom \_\_\_\_\_ inches \_\_\_\_\_ inches

13. Water clarity Clear  1 0 Clear  2 0  
Turbid  1 5 Turbid  2 5  
(Describe) (Describe)  
brown, turbid light brown, less turbid

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended \_\_\_\_\_ mg/l \_\_\_\_\_ mg/l  
solids

15. COD \_\_\_\_\_ mg/l \_\_\_\_\_ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: David Last Name: Zolp

Firm: Geosyntec Consultants

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Christopher Last Name: Clark

Facility/Firm: Pharmacia, LLC.

Street: 235 East 42nd Street, 219/5/1

City/State/Zip: New York, NY 10017

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: 

Print Name: David Zolp

Firm: Geosyntec Consultants





191 W. Edgerton Ave  
Milwaukee, WI 53207  
(414)933-7444

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**Report On: Test Report Attachment**

**Lab No: 21-13408**

**Report No: 21-13408**

**Project No: 21399-40**

**Cust No: 001**

**Page 1 of 2**

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**Client:** Geosyntec  
David Zolp  
10600 N Port Washington Rd.  
Suite 100  
Mequon, WI 53092

**Project:** Milwaukee Die Cast

**Location:**

**Report Date:** 12/03/2021

**Sample Date:** 12/03/2021

**Sampled By:** Thomas Stevens

---

Remarks: Please see attached Hydrometer for Milwaukee Die Cast project, Sample ID PZ-6 @ 32' depth

Test Methods (If Applicable):D422

Charge: Geosyntec Attn: David Zolp  
Orig: Geosyntec Attn: David Zolp (1-ec copy)  
1-cc Laboratory

Respectfully Submitted,

---

Thomas Stevens, Lab Manager



### Laboratory Test Results of Mechanical Analysis & Hydrometer of Soil or Aggregate

Project Name: Milwaukee Die Cast (Geosyntec)  
 Project Number: 21399-40  
 Project Location: Milwaukee, WI  
 ASTM Designation: D422

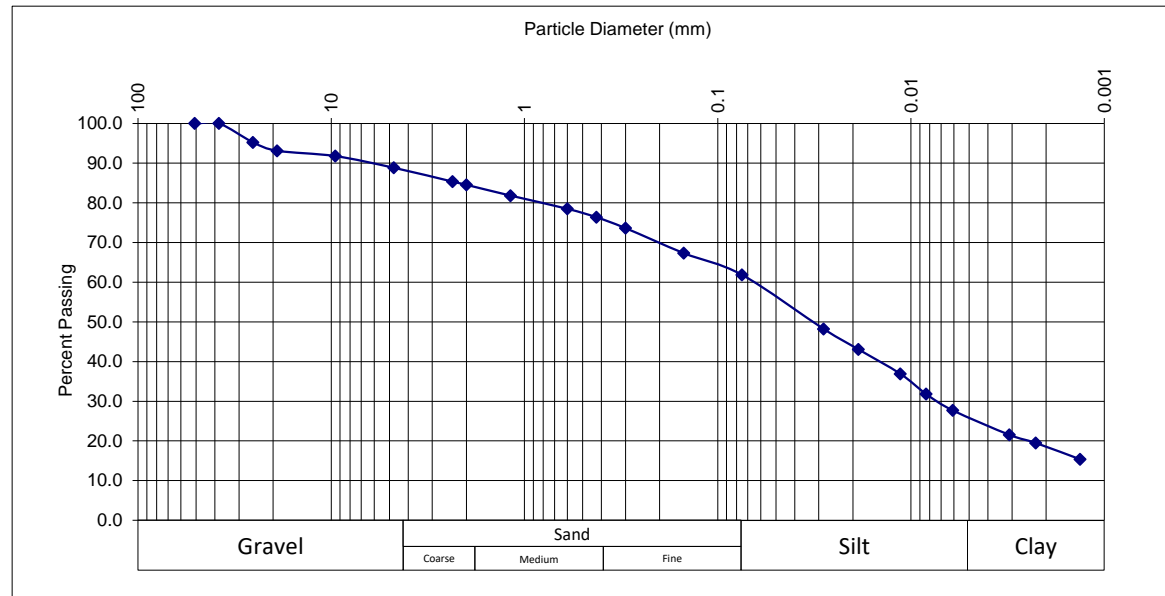
Date: December 3, 2021  
 Reported To: Geosyntec Consultants

#### Sample Information

Type of Sample: Bag Sample Number: 1  
 Boring Number: PZ-6 Depth of Sample: 32'

#### Mechanical Analysis Data

Sieve	Sieve Opening (mm)	Percent Passing (%)
2 in.	50.800	100
1 1/2 in.	38.100	100
1 in.	25.400	95
3/4 in.	19.050	93
3/8 in.	9.525	91.8
#4	4.750	88.8
#8	2.360	85.4
#10	2.000	84.5
#16	1.180	81.8
#30	0.600	78.5
#40	0.425	76.4
#50	0.300	73.6
#100	0.150	67.3
#200	0.075	61.9



Graph of size distribution based on AASHTO Classification

Remarks: Gravel 11.2 %    Sand 27.0 %  
Fines 61.9 %

Performed by: B. Bills

Reviewed by: T Stevens  
 GESTRA Engineering, Inc.

# ATTACHMENT 3

## Tables

**TABLE 1**  
**Summary of Groundwater Elevation Data**  
Milwaukee Die Casting Company Site  
4132 North Holton Street  
Milwaukee, Wisconsin

Well	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Screen Interval Elevations		Groundwater Level <sup>1</sup>																			
					9/23/2020		1/18/2021		4/26/2021		7/20/2021		10/26/2021		1/31/2022									
			Bottom (ft amsl)	Top (ft amsl)	Depth (ft bTOC)	Elevation (ft bgs)	Depth (ft bTOC)	Elevation (ft bgs)	Depth (ft amsl)	Elevation (ft bTOC)	Depth (ft bgs)	Elevation (ft amsl)	Depth (ft bTOC)	Elevation (ft bgs)	Depth (ft amsl)	Elevation (ft bTOC)	Depth (ft bgs)	Elevation (ft amsl)	Depth (ft bTOC)	Elevation (ft bgs)	Depth (ft amsl)	Elevation (ft bTOC)	Depth (ft bgs)	Elevation (ft amsl)
			MW-1	646.55	648.74	631.15	641.15	6.64	4.45	642.10	6.09	3.90	642.65	5.62	3.43	643.12	7.37	5.18	641.37	7.75	5.56	640.99	7.82	5.63
MW-2	647.67	650.20	632.67	642.67	8.17	5.64	642.03	8.03	5.50	642.17	7.10	4.57	643.10	9.22	6.69	640.98	9.74	7.21	640.46	9.85	7.32	640.35		
MW-3	648.57	650.91	633.07	643.07	10.13	7.79	640.78	8.46	6.12	642.45	7.94	5.60	642.97	11.20	8.86	639.71	12.14	9.80	638.77	13.13	10.79	637.78		
MW-4	641.68	644.48	624.18	634.18	7.89	5.09	636.59	6.78	3.98	637.70	6.94	4.14	637.54	8.80	6.00	635.68	9.23	6.43	635.25	9.37	6.57	635.11		
MW-5	638.52	641.49	621.22	631.22	16.68	13.70	624.81	11.94	8.96	629.55	10.28	7.30	631.21	13.09	10.11	628.40	13.04	10.06	628.45	14.00	11.02	627.49		
MW-6	639.26	641.59	621.26	631.26	11.76	9.43	629.83	11.83	9.50	629.76	11.46	9.13	630.13	12.33	10.00	629.26	12.70	10.37	628.89	12.92	10.59	628.67		
MW-7	641.78	644.17	626.88	636.88	4.82	2.43	639.35	4.05	1.66	640.12	4.26	1.87	639.91	5.29	2.90	638.88	6.08	3.69	638.09	6.50	4.11	637.67		
MW-8	638.03	640.47	621.23	631.23	11.40	8.96	629.07	6.96	4.52	633.51	7.18	4.74	633.29	10.04	7.60	630.43	10.53	8.09	629.94	11.97	9.53	628.50		
MW-9	635.74	638.33	620.54	630.54	10.63	8.05	627.70	8.05	5.47	630.28	6.87	4.29	631.46	10.63	8.05	627.70	11.21	8.63	627.12	12.40	9.82	625.93		
MW-10	637.28	639.42	618.98	628.98	17.81	15.67	621.61	11.31	9.16	628.11	10.05	7.90	629.37	13.97	11.83	625.45	14.36	12.22	625.06	16.29	14.15	623.13		
MW-11	637.66	640.29	622.36	632.36	16.97	14.35	623.32	5.15	2.53	635.14	6.15	3.53	634.14	10.45	7.83	629.84	10.90	8.28	629.39	13.43	10.81	626.86		
MW-12	651.07	653.30	635.67	645.67	11.39	9.15	641.91	10.84	8.60	642.46	10.19	7.95	643.11	12.34	10.10	640.96	12.87	10.63	640.43	13.28	11.04	640.02		
MW-13	650.91	653.17	635.61	645.61	10.44	8.19	642.73	9.72	7.47	643.45	9.52	7.27	643.65	11.31	9.06	641.86	11.40	9.15	641.77	11.58	9.33	641.59		
MW-14	640.35	642.81	622.55	632.55	8.06	5.59	634.75	6.46	3.99	636.35	7.92	5.45	634.89	8.37	5.90	634.44	8.06	5.59	634.75	9.10	6.63	633.71		
PZ-1	646.74	648.89	610.64	615.64	6.93	4.78	641.96	6.42	4.27	642.47	6.01	3.86	642.88	7.70	5.55	641.19	8.09	5.94	640.80	8.22	6.07	640.67		
PZ-1A	646.79	648.62	598.79	603.79	--	--	--	--	--	--	--	--	--	--	--	--	8.99	7.16	639.63	9.29	7.46	639.33		
PZ-2	648.21	650.86	611.11	616.11	9.98	7.33	640.88	9.69	7.04	641.17	9.17	6.52	641.69	10.91	8.26	639.95	11.42	8.77	639.44	11.75	9.10	639.11		
PZ-6	639.27	641.35	606.27	611.27	--	--	--	--	--	--	--	--	--	--	--	--	19.42	17.35	621.93	19.84	17.77	621.51		
PZ-10	637.53	640.15	604.83	609.83	23.55	20.93	616.60	23.74	21.12	616.41	23.25	20.63	616.90	23.83	21.21	616.32	24.20	21.58	615.95	24.43	21.81	615.72		

Notes:

- <sup>1</sup> - measured prior to groundwater sampling
- ft amsl - feet above mean sea level
- ft bgs - feet below ground surface
- ft bTOC - feet below top of casing
- TOC - top of casing

**TABLE 2**  
**Summary of Groundwater Sample Analytical Results**  
 Milwaukee Die Casting Company Site  
 4132 North Holton Street  
 Milwaukee, Wisconsin

Well Identification	MW-1						PZ-1						PZ-1A			MW-2						PZ-2						NR 140 Groundwater					
	5-15						31-36						43-48			5-15						32-37						Quality Standard					
Approximate Screen Interval (ft bgs)	9/25/2020	1/21/2021	4/28/2021	7/22/2021	10/27/2021	2/1/2022	9/25/2020	1/20/2021	1/20/2021	4/28/2021	7/22/2021	10/27/2021	2/2/2022	2/2/2022	10/27/2021	10/27/2021	2/1/2022	9/24/2020	1/20/2021	4/28/2021	4/28/2021	7/22/2021	7/22/2021	10/27/2021	2/1/2022	9/25/2020	1/19/2021	4/28/2021	7/22/2021	10/26/2021	1/31/2022	PAL	ES
Analytical Parameters									DUP					DUP						DUP													
<b>Detected VOCs (µg/L)</b>																																	
<b>CVOCs</b>																																	
1,1,1-Trichloroethane	< 2.00	< 2.00	< 1.00	< 7.6	< 7.6	< 7.6	< 2.00	< 2.00	< 2.00	< 1.00	< 3.0	< 3.0	< 3.0	< 3.0	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 1.00	< 0.30	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	40	200
1,1-Dichloroethane	< 2.00	< 2.00	< 1.00	< 7.4	< 7.4	< 7.4	< 2.00	< 2.00	< 2.00	< 1.00	< 3.0	< 3.0	< 3.0	< 3.0	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 1.00	< 0.30	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	85	850
1,1-Dichloroethene	<b>9.52</b>	<b>13.9</b>	<b>14.2</b>	< 14.6	< 14.6	< 14.6	< 4.00	< 4.00	< 4.00	2.75	< 5.8	< 5.8	< 5.8	< 5.8	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 1.00	< 0.58	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	0.7	7
cis-1,2-Dichloroethene	<b>3150</b>	<b>5440</b>	<b>4680</b>	<b>5230</b>	<b>8740</b>	<b>4090</b>	<b>128 J</b>	<b>896</b>	<b>837</b>	<b>1390</b>	<b>1450</b>	<b>1450</b>	<b>1220</b>	<b>1320</b>	< 0.47	< 0.47	< 0.47	4.35	5.31	<b>28.8</b>	<b>32.6</b>	1.5	2.0	<b>15.3</b>	3.1	< 2.00	< 2.00	< 1.00	< 0.47	< 0.47	< 0.47	7	70
Tetrachloroethene	<b>2230</b>	<b>4190</b>	<b>3110</b>	<b>2880</b>	<b>5480</b>	<b>2770</b>	<b>325</b>	<b>192</b>	<b>188</b>	<b>147</b>	<b>144</b>	<b>174</b>	<b>162</b>	<b>172</b>	<b>0.74 J</b>	<b>0.80 J</b>	< 0.41	<b>5.55</b>	<b>6.99</b>	<b>22.0</b>	<b>28.2</b>	<b>3.8</b>	<b>3.9</b>	<b>9.8</b>	<b>3.9</b>	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	0.5	5
trans-1,2-Dichloroethene	<b>22.2</b>	<b>34.8</b>	<b>63.4</b>	<b>23.8 J</b>	<b>206</b>	18.2 J	< 2.00	4.07	4.29	10.6	<b>45.8</b>	<b>21.5</b>	<b>31.1 J</b>	<b>21 J</b>	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	0.700 J	0.900 J	< 0.53	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	20	100
Trichloroethene	<b>2580</b>	<b>4080</b>	<b>3000</b>	<b>3240</b>	<b>5800</b>	<b>2550</b>	<b>109</b>	<b>110</b>	<b>108</b>	<b>115</b>	<b>87.4</b>	<b>82.8</b>	<b>66.5</b>	<b>70.6</b>	< 0.32	< 0.32	< 0.32	< 2.00	< 2.00	<b>11.6</b>	<b>12.8</b>	<b>1.1</b>	<b>1.3</b>	<b>6.8</b>	<b>2.7</b>	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	0.5	5
Vinyl chloride	<b>217</b>	<b>475</b>	<b>540</b>	<b>352</b>	<b>497</b>	<b>404</b>	<b>10.9</b>	<b>8.32</b>	<b>8.27</b>	<b>6.80</b>	<b>7.9 J</b>	<b>18.3</b>	<b>94.7</b>	<b>98.1</b>	< 0.17	< 0.17	< 0.17	< 2.00	< 2.00	<b>5.90</b>	<b>6.05</b>	<b>0.62 J</b>	<b>0.81 J</b>	<b>1.3</b>	<b>0.62 J</b>	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	0.02	0.2
<b>Other Reported VOCs</b>																																	
Carbon disulfide	< 2.00	< 2.00	1.90 J	< 27.6	--	--	< 2.00	< 2.00	< 2.00	2.10 J	< 11.0	--	--	--	--	--	--	< 2.00	< 2.00	2.40 J	2.30 J	< 1.1	< 1.1	--	--	< 2.00	< 2.00	2.00 J	< 1.1	--	--	200	1000
Chloromethane	< 4.00	< 4.00	< 2.50	< 40.9	--	--	< 4.00	< 4.00	< 4.00	< 2.50	< 16.4	--	--	--	--	--	--	< 4.00	< 4.00	< 2.50	< 2.50	< 1.6	< 1.6	--	--	< 4.00	< 4.00	< 2.50	< 1.6	--	--	3	30
Ethylbenzene	< 1.00	< 1.00	< 1.00	< 8.1	--	--	< 1.00	< 1.00	< 1.00	< 1.00	< 3.3	--	--	--	--	--	--	< 1.00	< 1.00	< 1.00	0.150 J U	< 0.33	< 0.33	--	--	< 1.00	< 1.00	< 1.00	< 0.33	--	--	140	700
m,p-Xylene	< 4.00	< 4.00	0.550 J	< 17.5	--	--	< 4.00	< 4.00	< 4.00	0.500 J	< 7.0	--	--	--	--	--	--	< 4.00	< 4.00	0.550 J	< 2.00	< 0.70	< 0.70	--	--	< 4.00	< 4.00	< 2.00	< 0.70	--	--	--	--
Methylene chloride (2)	< 4.00	< 4.00	3.75 J U	< 8.0	--	--	< 4.00	< 4.00	< 4.00	3.50 J U	< 3.2	--	--	--	--	--	--	< 4.00	< 4.00	5.00 J U	4.70 J U	< 0.32	< 0.32	--	--	< 4.00	< 4.00	3.70 J U	< 0.32	--	--	0.5	5
o-Xylene	< 1.00	< 1.00	0.450 J	< 8.7	--	--	< 1.00	< 1.00	< 1.00	0.300 J	< 3.5	--	--	--	--	--	--	< 1.00	< 1.00	0.300 J	0.250 J	< 0.35	< 0.35	--	--	< 1.00	< 1.00	0.250 J	< 0.35	--	--	--	--
Styrene	< 4.00	< 4.00	< 1.00	< 8.9	--	--	< 4.00	< 4.00	< 4.00	0.250 J U	< 3.6	--	--	--	--	--	--	< 4.00	< 4.00	0.250 J U	< 1.00	< 0.36	< 0.36	--	--	< 4.00	< 4.00	< 1.00	< 0.36	--	--	10	100
Toluene	< 2.00	< 2.00	1.20 J	< 7.2	--	--	< 2.00	< 2.00	< 2.00	< 1.00	< 2.9	--	--	--	--	--	--	< 2.00	< 2.00	< 1.00	< 1.00	< 0.29	< 0.29	--	--	< 2.00	< 2.00	< 1.00	< 0.29	--	--	160	800
Xylenes, Total	< 6.00	< 6.00	1.00 J	< 26.2	--	--	< 6.00	< 6.00	< 6.00	0.800 J	< 10.5	--	--	--	--	--	--	< 6.00	< 6.00	0.850 J	< 3.00	< 1.05	< 1.05	--	--	< 6.00	< 6.00	< 3.00	< 1.05	--	--	400	2000
<b>PCBs, Total (unfiltered)</b>	< 0.515	< 0.522	--	--	--	--	< 0.519	< 0.518	< 0.525	--	--	--	--	--	--	--	--	< 0.529	< 0.525	--	--	--	--	--	--	< 0.511	< 0.522	--	--	--	--	0.003	0.03
<b>PCBs, Total (filtered)</b>	< 0.531	< 0.516	--	--	--	--	< 0.510	< 0.528	< 0.525	--	--	--	--	--	--	--	--	< 0.540	< 0.519	--	--	--	--	--	--	< 0.508	< 0.520	--	--	--	--	0.003	0.03
<b>Detected SVOCs (µg/L)</b>																																	
Benzo(a)anthracene	< 0.315	< 0.313	--	--	--	--	< 0.335	< 0.320	0.222 J	--	--	--	--	--	--	--	--	< 0.339	< 0.314	--	--	--	--	--	--	< 0.311	< 0.311	--	--	--	--	--	--
Chrysene	< 0.315	< 0.313	--	--	--	--	< 0.335	< 0.320	0.159 J	--	--	--	--	--	--	--	--	< 0.339	< 0.314	--	--	--	--	--	--	< 0.311	< 0.311	--	--	--	--	0.02	0.2
Phenol	< 0.526	< 0.521	--	--	--	--	< 0.559	< 0.534	< 0.529	--	--	--	--	--	--	--	--	< 0.564	< 0.523	--	--	--	--	--	--	< 0.518	< 0.519	--	--	--	--	400	2000
<b>1,4-Dioxane (µg/L)</b>	< 0.200 UJ	< 0.200	0.120 J	< 0.082 UJ	< 0.0447	< 0.078	< 0.200	< 0.200	< 0.200	< 0.200	0.092 J, B U	< 0.0447	< 0.078	< 0.078	< 0.0469	< 0.0447	< 0.086	< 0.200	< 0.200	< 0.200	< 0.200	0.095 J, B U	0.096 J, B U	0.194 L0 J	< 0.082	< 0.200	< 0.200	< 0.200	0.19 J, B U	0.144 J, H3 J	< 0.078	0.3	3
<b>MNA Geochemical Parameters</b>																																	
Ethane (µg/L)	< 1.2	1.3 J	4.0 J	2.7 J	--	25.0	< 1.2	< 1.2	< 1.2	< 1.2	< 0.39	--	< 0.39	< 0.39	--	--	< 0.39	< 1.2	< 1.2	5.8	7.1	0.66 J	0.40 J	--	0.89 J	2.1 J	2.1 J	1.6 J	< 0.39	--	2.2 J	--	--
Ethene (µg/L)	33.3	33.8	40.9	17.5	--	46.6	1.8 J	1.4 J	1.5 J	< 1.2	0.63 J	--	52.2	52.0	--	--	< 0.25	< 1.2	< 1.2	< 1.2	1.3 J	< 0.25	< 0.25	--	< 0.25	1.2 J	< 1.2	< 1.2	< 0.25	--	0.32 J	--	--
Methane (µg/L)	147	241	1030	496	--	2740	5.0	4.1	4.1	2.9	2.4 J	--	4.4	4.2	--	--	< 0.58	2.0 J	234	892 J	1420 J	124	168	--	288	26.6	35.8	40.1	12.0	--	89.2	--	--
TOC (mg/L)	3.25 J	2.80	3.03	3.0	--	2.7	3.92 J	8.57	9.04	6.60	6.5	--	4.5	4.6	--	--	0.88	1.93 J	1.40	7.38	7.29	1.7	1.9	--	1.5	2.98 J	2.27	1.63	1.6	--	1.5	--	--
<b>Field Parameters (3)</b>																																	
Temperature (deg C)	16.3	8.3	9.2	17.6	14.5	7.7	13.5	8.3	--	10.6	15.3	12.5	8.2	--	12.4	--	8.4	16.1	5.3	9.3	--	15	--	14.5	7.5	12.3	9.8	10.7	11.5	12.0	9.3	--	--
pH	7.09	6.9	7.32	6.88	7.25	7.02	7.35	7.19	--	7.33	7	7.24	7.19	--	7.35	--	7.39	7.4	7.36	7.33	--	7.16	--	6.95	7.08	7.34	7.39	7.74	7.24	7.22	7.46	--	--
Conductivity (mS/cm)	2.01	1.815	1.695	1.238	1.285	1.062	1.141	1.619	--	1.72	1.059	0.989	0.856	--	1.120	--	0.48	1.027	0.892	1.319	--	0.788	--	1.448	0.782	1.497	1.328	1.378	1.3	1.134	0.984	--	--
Dissolved Oxygen (mg/L)	0.3	--(4)	0.24	0.16	0.14	0.38	0.84	--(4)	--	0.79	0.11	0.14	0.34	--	0.56	--	0.62	0.6	--(4)	0.82	--	0.2	--	0.48	0.35	1.7	0.1	5.55	2.4	0.62	1.92	--	--
ORP (mV)	-85.5	83.9	-5	-18.2	-52.8	27.7	-179.5	-24	--	-62.2	-98.6	-118.4	-52.0	--	-92.4	--	-212.1	-															

**TABLE 2**  
**Summary of Groundwater Sample Analytical Results**  
 Milwaukee Die Casting Company Site  
 4132 North Holton Street  
 Milwaukee, Wisconsin

Well Identification	MW-3					MW-4					MW-5					MW-6					PZ-6		NR 140 Groundwater								
	5.5-15.5					7.5-17.5					7-17					8-18					28-33		PAL	ES							
Approximate Screen Interval (ft bgs)	9/23/2020	9/23/2020	1/18/2021	4/27/2021	7/21/2021	9/24/2020	1/20/2021	4/28/2021	7/22/2021	10/27/2021	2/1/2022	10/29/2020	1/21/2021	4/27/2021	7/21/2021	10/26/2021	2/1/2022	9/25/2020	1/20/2021	1/20/2021	4/28/2021	4/28/2021	7/22/2021	7/22/2021	10/27/2021	2/1/2022	2/1/2022	10/26/2021	2/1/2022	PAL	ES
Analytical Parameters	DUP																			DUP	DUP	DUP	DUP	DUP	DUP	DUP	DUP				
<b>Detected VOCs (µg/L)</b>																															
CVOCs																															
1,1,1-Trichloroethane	< 2.00	< 2.00	< 2.00	< 1.00	< 0.30	17.3	13.7	7.90	6.9	8.6	10.4	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 2.00	5.70	6.45	2.0	2.5	1.6	2.7	2.4	< 0.30	< 0.30	40	200
1,1-Dichloroethane	< 2.00	< 2.00	< 2.00	< 1.00	< 0.30	7.21	8.53	10.2	9.7	11.6	10.5	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	4.33 J	< 2.00 UJ	6.30	6.65	4.9	5.8	4.1	4.2	3.9	< 0.30	< 0.30	85	850
1,1-Dichloroethene	< 4.00	< 4.00	< 4.00	< 1.00	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 4.00	< 1.00	< 1.00	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	0.7	7
cis-1,2-Dichloroethene	< 2.00	< 2.00	< 2.00	< 1.00	< 0.47	<b>27.8</b>	<b>23.4</b>	<b>20.2</b>	<b>19.7</b>	<b>21.3</b>	<b>21.9</b>	< 2.00	< 2.00	1.80 J	1.2	1.1	< 0.47	6.39	<b>22.3</b>	<b>19.0</b>	<b>30.4</b>	<b>31.8</b>	<b>20.2</b>	<b>25.4</b>	<b>16.6</b>	<b>16.6</b>	<b>16.2</b>	< 0.47	< 0.47	7	70
Tetrachloroethene	< 2.00	< 2.00	< 2.00	< 1.00	< 0.41	< 2.00	< 2.00	< 1.00	0.47 J	0.47 J	<b>0.52 J</b>	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	< 2.00	< 2.00	< 2.00	< 1.00	< 1.00	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	0.5	5
trans-1,2-Dichloroethene	< 2.00	< 2.00	< 2.00	< 1.00	< 0.53	< 2.00	< 2.00	1.15 J	0.72 J	0.98 J	1.0	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	< 2.00	1.65 J	2.00 J	1.5	1.6	1.2	0.95 J	0.92 J	< 0.53	< 0.53	20.00	100
Trichloroethene	< 2.00	< 2.00	< 2.00	< 1.00	< 0.32	<b>10.6</b>	<b>7.57</b>	<b>5.15</b>	<b>5.3</b>	<b>6.5</b>	<b>8.2</b>	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	< 2.00	< 2.00	< 2.00	<b>5.9</b>	<b>6.0</b>	<b>3.0</b>	<b>3.5</b>	<b>2.8</b>	<b>5.3</b>	<b>5.0</b>	< 0.32	< 0.32	0.5	5
Vinyl chloride	< 2.00	< 2.00	< 2.00	< 2.50	< 0.17	<b>4.31</b>	<b>12.2</b>	<b>15.9</b>	<b>15.4</b>	<b>15.3</b>	<b>13.4</b>	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	< 2.00	< 2.00	< 2.00	<b>1.15 J</b>	<b>1.15 J</b>	<b>1.2</b>	<b>1.6</b>	<b>0.89 J</b>	<b>0.80 J</b>	<b>0.72 J</b>	< 0.17	< 0.17	0.02	0.2
Other Reported VOCs																															
Carbon disulfide	< 2.00	< 2.00	< 2.00	2.25 J	< 1.1	< 2.00	< 2.00	2.15 J	< 1.1	--	--	< 2.00	< 2.00	2.05 J	< 1.1	--	--	< 2.00	< 2.00	< 2.00	2.25 J	2.25 J	< 1.1	< 1.1	--	--	--	--	200	1000	
Chloromethane	< 4.00	< 4.00	< 4.00	< 2.50	< 1.6	< 4.00	< 4.00	< 2.50	< 1.6	--	--	< 4.00	< 4.00	< 2.50	< 1.6	--	--	< 4.00	< 4.00	< 4.00	< 2.50	< 2.50	< 1.6	< 1.6	--	--	--	--	3	30	
Ethylbenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 0.33	< 1.00	< 1.00	0.150 J U	< 0.33	--	--	< 1.00	< 1.00	0.150 J U	< 0.33	--	--	< 1.00	< 1.00	< 1.00	< 1.00	0.150 J U	< 0.33	< 0.33	--	--	--	--	140	700	
m,p-Xylene	< 4.00	< 4.00	< 4.00	< 2.00	< 0.70	< 4.00	< 4.00	0.500 J	< 0.70	--	--	< 4.00	< 4.00	0.500 J	< 0.70	--	--	< 4.00	< 4.00	< 4.00	0.500 J	0.450 J	< 0.70	< 0.70	--	--	--	--	--	--	
Methylene chloride <sup>(2)</sup>	< 4.00	< 4.00	< 4.00	4.25 J U	< 0.32	< 4.00	< 4.00	4.25 J U	< 0.32	--	--	< 4.00	< 4.00	4.05 J U	< 0.32	--	--	< 4.00	< 4.00	< 4.00	3.95 J U	4.15 J U	< 0.32	< 0.32	--	--	--	--	0.5	5	
o-Xylene	< 1.00	< 1.00	< 1.00	0.250 J	< 0.35	< 1.00	< 1.00	0.250 J	< 0.35	--	--	< 1.00	< 1.00	0.300 J	< 0.35	--	--	< 1.00	< 1.00	< 1.00	0.250 J	< 1.00	< 0.35	< 0.35	--	--	--	--	--	--	
Styrene	< 4.00	< 4.00	< 4.00	< 1.00	< 0.36	< 4.00	< 4.00	< 1.00	< 0.36	--	--	< 4.00	< 4.00	< 1.00	< 0.36	--	--	< 4.00	< 4.00	< 4.00	< 1.00	< 1.00	< 0.36	< 0.36	--	--	--	--	10	100	
Toluene	< 2.00	< 2.00	< 2.00	< 1.00	< 0.29	< 2.00	< 2.00	< 1.00	< 0.29	--	--	< 2.00	< 2.00	< 1.00	< 0.29	--	--	< 2.00	< 2.00	< 2.00	< 1.00	< 1.00	< 0.29	< 0.29	--	--	--	--	160	800	
Xylenes, Total	< 6.00	< 6.00	< 6.00	< 3.00	< 1.05	< 6.00	< 6.00	0.750 J	< 1.05	--	--	< 6.00	< 6.00	0.800 J	< 1.05	--	--	< 6.00	< 6.00	< 6.00	0.750 J	< 3.00	< 1.05	< 1.05	--	--	--	--	400	2000	
<b>PCBs, Total (unfiltered)</b>	< 0.524	< 0.508	< 0.519	--	--	< 0.535	< 0.518	--	--	--	--	< 0.617	< 0.542	--	--	--	--	< 0.568	< 0.524	< 0.506	--	--	--	--	--	--	--	--	0.003	0.03	
<b>PCBs, Total (filtered)</b>	< 0.507	< 0.507	< 0.530	--	--	< 0.532	< 0.520	--	--	--	--	< 0.527	< 0.520	--	--	--	--	< 0.534	< 0.524	< 0.521	--	--	--	--	--	--	--	--	0.003	0.03	
<b>Detected SVOCs (µg/L)</b>																															
Benzo(a)anthracene	< 0.314	< 0.312	< 0.324	--	--	< 0.321	< 0.313	--	--	--	--	< 0.315	< 0.328	--	--	--	--	< 0.340	< 0.315	< 0.303	--	--	--	--	--	--	--	--	--	--	--
Chrysene	< 0.314	< 0.312	< 0.324	--	--	< 0.321	< 0.313	--	--	--	--	< 0.315	< 0.328	--	--	--	--	< 0.340	< 0.315	< 0.303	--	--	--	--	--	--	--	--	--	0.02	0.2
Phenol	< 0.523	< 0.521	< 0.539	--	--	< 0.535	< 0.521	--	--	--	--	< 0.526	< 0.547	--	--	--	--	< 0.567	< 0.524	< 0.505	--	--	--	--	--	--	--	--	--	400	2000
<b>1,4-Dioxane (µg/L)</b>	< 0.200	< 0.200	< 0.200	< 0.200	0.11 J, B U	< 0.200	< 0.200	< 0.200 UJ	0.12 J, B U	< 0.0447	< 0.086	< 0.200	< 0.200	0.0700 J	0.20 J, B U	0.246 H3 J	< 0.086	<b>28.2</b>	<b>23.9</b>	<b>23.4</b>	<b>19.0</b>	<b>19.6</b>	<b>18.2</b>	<b>19.1</b>	<b>22.5</b>	<b>21.7</b>	<b>20.1</b>	0.106 J, H3 J	< 0.078	0.3	3
<b>MNA Geochemical Parameters</b>																															
Ethane (µg/L)	< 1.2	< 1.2	< 1.2	< 1.2	< 0.39	< 1.2	< 1.2	< 1.2	< 0.39	--	0.50 J	< 1.2	< 1.2	< 1.2	< 0.39	--	< 0.39	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.39	< 0.39	--	< 0.39	< 0.39	--	< 0.39	--	
Ethene (µg/L)	< 1.2	< 1.2	< 1.2	< 1.2	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	--	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	--	< 0.25	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.25	< 0.25	--	< 0.25	< 0.25	--	< 0.25	--	
Methane (µg/L)	1.8J	1.4 J	< 0.66	< 0.66	< 0.58	< 0.66	58.1	134	79.1	--	141	1.2 J	< 0.66	< 0.66	< 0.58	--	< 0.58	9.4	23.9	20.3	27.6	32.0	63.8	48.2	--	543 J	788 J	--	< 0.58	--	
TOC (mg/L)	3.83 J	3.82 J	2.69	2.48	2.7	10.8 J	6.38	2.52	7.3	--	6.4	3.86	2.17	1.78	1.9	--	1.6	6.84 J	3.78	3.76	3.12	3.04	3.3	3.3	--	2.9	2.9	--	1.3	--	
<b>Field Parameters <sup>(3)</sup></b>																															
Temperature (deg C)	16.1	--	8.8	8.5	13.1	16.2	9.9	8.4	12.6	13.2	9.2	11.2	8.7	8	13.8	14.3	10.1	14.3	8.9	--	8.6	--	13	--	14.0	9.6	--	11.6	10.2	--	--
pH	6.88	--	6.69	6.83	6.66	6.8	4.86	6.99	6.43	6.65	6.86	6.95	7	7	6.72	6.76	7.03	6.99	7.03	--	7.2	--	6.9	--	7.07	6.99	--	7.41	7.35	--	--
Conductivity (mS/cm)	1.59	--	1.375	1.722	1.286	2.595	2.601	2.349	1.825	2.437	2.266	1.443	1.695	1.503	1.248	1.717	1.361	1.286	1.355	--	1.235	--	1.057	--	0.937	0.813	--	0.671	0.578	--	--
Dissolved Oxygen (mg/L)	3.08	--	0.91	1.66	0.42	2.76	0.21	0.37	0.19	0.54	1.14	6.96	0.57	1.27	0.68	0.48	0.77	0.33	0.25	--	0.35	--	0.23	--	0.18	0.32	--	0.32	0.41	--	--
ORP (mV)	17.9	--	176.1	140.6	210.4	60.8	75.8	25.3	41.8	24.5	84.6	112.8	148	139.9	169.9	104.4	87.4	-101.7	95.6	--	98.5	--	8.4	--	-23.7	40.4	--	-37.9	-127.5	--	--

**Notes:**  
 bold - concentration greater than NR 140 PAL  
 boxed - concentration greater than NR 140 ES  
 italics - data validation qualifier (refer to data validation reports)  
 --<sup>(1)</sup> - slow groundwater recovery prevented the collection of a sufficient volume of water for all the planned laboratory analytical parameters for MW-10 and MW-11 for September 2020 sampling event  
 --<sup>(2)</sup> - presumed laboratory artifact  
<sup>(3)</sup> - stabilized field parameters obtained prior to sample collection  
 --<sup>(4)</sup> - faulty dissolved oxygen (DO) sensor  
 -- - not analyzed or not established  
 B - analyte detected in associated laboratory method blank  
 CVOCs - chlorinated volatile organic compounds  
 deg C - degrees Celsius  
 DUP - duplicate  
 ES - NR 140 Enforcement Standard  
 ft bgs - feet below ground surface  
 H3 - sample was received or analysis requested beyond the recognized method holding time  
 J - estimated concentration at or above the limit of detection and below the limit of quantitation  
 LO - analyte recovery in the laboratory control sample (LCS) was outside QC limits  
 mg/L - milligrams per liter  
 MNA - monitored natural attenuation  
 mS/cm - millisiemens per centimeter  
 mV - millivolts  
 ORP - oxidation-reduction potential  
 PAL - NR 140 Preventive Action Limit  
 PCBs - polychlor

**TABLE 2**  
**Summary of Groundwater Sample Analytical Results**  
 Milwaukee Die Casting Company Site  
 4132 North Holton Street  
 Milwaukee, Wisconsin

Well Identification	MW-7						MW-8						MW-9						MW-10						PZ-10						NR 140 Groundwater			
	5-15						7-17						5-15						8-18						28-33						Quality Standard			
Approximate Screen Interval (ft bgs)	9/24/2020	1/19/2021	4/28/2021	7/22/2021	10/27/2021	2/1/2022	9/24/2020	1/19/2021	4/27/2021	7/22/2021	10/26/2021	1/31/2022	9/24/2020	1/19/2021	4/27/2021	7/21/2021	10/27/2021	10/27/2021	1/31/2022	10/29/2020	1/20/2021	4/27/2021	7/21/2021	9/25/2020	1/20/2021	4/26/2021	7/21/2021	10/26/2021	1/31/2022	PAL	ES			
Analytical Parameters																																		
Detected VOCs (µg/L)																																		
CVOCs																																		
1,1,1-Trichloroethane	< 2.00	< 2.00	5.55	2.7	3.8	3.5	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	40	200		
1,1-Dichloroethane	< 2.00	< 2.00	4.00	2.9	3.5	3.2	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	85	850		
1,1-Dichloroethene	< 4.00	< 4.00	<b>1.30 J</b>	< 1.5	< 1.5	< 1.5	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	0.7	7		
cis-1,2-Dichloroethene	<b>48.8</b>	<b>222</b>	<b>402</b>	<b>279</b>	<b>291</b>	<b>293</b>	< 2.00	< 2.00	< 1.00	< 0.47	< 0.47	< 0.47	< 2.00	< 2.00	< 1.00	< 0.47	< 0.47	< 0.47	< 2.00	< 2.00	< 1.00	< 0.47	< 0.47	< 0.47	< 2.00	< 2.00	< 1.00	< 0.47	< 0.47	< 0.47	7	70		
Tetrachloroethene	< 2.00	< 2.00	<b>1.35 J</b>	<b>2.9</b>	<b>2.0 J</b>	<b>6.7</b>	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	0.5	5		
trans-1,2-Dichloroethene	< 2.00	10.4	<b>21.6</b>	16.7	17.1	14.5	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	20	100		
Trichloroethene	< 2.00	<b>7.12</b>	<b>18.4</b>	<b>10.3</b>	<b>12.3</b>	<b>14.4</b>	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	0.5	5		
Vinyl chloride	< 2.00	< 2.00	< 2.50	< 0.44	<b>1.1 J</b>	<b>1.4 J</b>	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	0.02	0.2		
Other Reported VOCs																																		
Carbon disulfide	< 2.00	< 2.00	2.35 J	< 2.8	--	--	< 2.00	< 2.00	2.15 J	< 1.1	--	--	< 2.00	< 2.00	2.40 J	< 1.1	--	--	< 2.00	< 2.00	2.20 J	< 1.1	< 2.00	< 2.00	2.20 J	< 1.1	--	--	--	200	1000			
Chloromethane	< 4.00	< 4.00	< 2.50	< 4.1	--	--	< 4.00	< 4.00	1.35 J	< 1.6	--	--	< 4.00	< 4.00	< 2.50	< 1.6	--	--	< 4.00	< 4.00	< 2.50	< 1.6	< 4.00	< 4.00	< 2.50	< 1.6	--	--	--	3	30			
Ethylbenzene	< 1.00	< 1.00	< 1.00	< 0.81	--	--	< 1.00	< 1.00	< 1.00	< 0.33	--	--	< 1.00	< 1.00	< 1.00	< 0.33	--	--	< 1.00	< 1.00	< 1.00	< 0.33	< 1.00	< 1.00	< 1.00	< 0.33	--	--	--	140	700			
m,p-Xylene	< 4.00	< 4.00	0.450 J	< 1.8	--	--	< 4.00	< 4.00	0.450 J	< 0.70	--	--	< 4.00	< 4.00	0.450 J	< 0.70	--	--	< 4.00	< 4.00	0.450 J	< 0.70	< 4.00	< 4.00	0.500 J	< 0.70	--	--	--	--	--			
Methylene chloride <sup>(2)</sup>	< 4.00	< 4.00	3.05 J U	< 0.80	--	--	< 4.00	< 4.00	4.45 J U	< 0.32	--	--	< 4.00	< 4.00	4.90 J U	< 0.32	--	--	< 4.00	< 4.00	4.00 J U	< 0.32	< 4.00	< 4.00	4.05 J U	< 0.32	--	--	--	0.5	5			
o-Xylene	< 1.00	< 1.00	0.300 J	< 0.87	--	--	< 1.00	< 1.00	< 1.00	< 0.35	--	--	< 1.00	< 1.00	0.300 J	< 0.35	--	--	< 1.00	< 1.00	< 1.00	< 0.35	< 1.00	< 1.00	0.300 J	< 0.35	--	--	--	--	--			
Styrene	< 4.00	< 4.00	< 1.00	< 0.89	--	--	< 4.00	< 4.00	< 1.00	< 0.36	--	--	< 4.00	< 4.00	< 1.00	< 0.36	--	--	< 4.00	< 4.00	< 1.00	< 0.36	< 4.00	< 4.00	< 1.00	< 0.36	--	--	--	10	100			
Toluene	< 2.00	< 2.00	< 1.00	< 0.72	--	--	< 2.00	< 2.00	< 1.00	< 0.29	--	--	< 2.00	< 2.00	< 1.00	< 0.29	--	--	< 2.00	< 2.00	< 1.00	< 0.29	< 2.00	< 2.00	< 1.00	< 0.29	--	--	--	160	800			
Xylenes, Total	< 6.00	< 6.00	0.750 J	< 2.67	--	--	< 6.00	< 6.00	< 3.00	< 1.05	--	--	< 6.00	< 6.00	0.750 J	< 1.05	--	--	< 6.00	< 6.00	< 3.00	< 1.05	< 6.00	< 6.00	0.800 J	< 1.05	--	--	--	400	2000			
PCBs, Total (unfiltered)	< 0.508	< 0.514	--	--	--	--	< 0.508	< 0.509	--	--	--	--	< 0.515	< 0.524	--	--	--	--	< 0.546	< 0.508	--	--	< 0.572	< 0.560	--	--	--	--	--	0.003	0.03			
PCBs, Total (filtered)	< 0.520	< 0.523	--	--	--	--	< 0.508	< 0.517	--	--	--	--	< 0.518	< 0.531	--	--	--	--	< 0.512	< 0.526	--	--	< 0.533	< 0.559	--	--	--	--	--	0.003	0.03			
Detected SVOCs (µg/L)																																		
Benzo(a)anthracene	< 0.315	< 0.306	--	--	--	--	< 0.310	< 0.311	--	--	--	--	< 0.307	< 0.313	--	--	--	--	-- <sup>(1)</sup>	< 0.315	--	--	< 0.329	< 0.307	--	--	--	--	--	--	--			
Chrysene	< 0.315	< 0.306	--	--	--	--	< 0.310	< 0.311	--	--	--	--	< 0.307	< 0.313	--	--	--	--	-- <sup>(1)</sup>	< 0.315	--	--	< 0.329	< 0.307	--	--	--	--	--	--	0.02	0.2		
Phenol	< 0.526	< 0.510	--	--	--	--	< 0.517	< 0.518	--	--	--	--	< 0.512	0.772 J	--	--	--	--	-- <sup>(1)</sup>	< 0.524	--	--	< 0.549	< 0.511	--	--	--	--	--	--	400	2000		
1,4-Dioxane (µg/L)	< 0.200	< 0.200	0.120 J	<b>0.39 B J+</b>	0.208	< 0.078	< 0.200	< 0.200	< 0.200	0.14 J, B U	0.176 H3 J-	< 0.086	< 0.200	< 0.200	< 0.200	0.12 J, B U	< 0.0447	< 0.0447	< 0.078	< 0.200	< 0.200	< 0.082	< 0.200	< 0.200	< 0.200	0.16 J, B U	0.109 J, H3 J	<b>0.43</b>	0.3	3				
MNA Geochemical Parameters																																		
Ethane (µg/L)	< 1.2	< 1.2	< 1.2	< 0.39	--	< 0.39	< 1.2	< 1.2	< 1.2	< 0.39	--	< 0.39	< 1.2	< 1.2	< 1.2	< 0.39	--	--	< 0.39	-- <sup>(1)</sup>	< 1.2	< 1.2	< 0.39	< 1.2	< 1.2	< 1.2	< 0.39	< 1.2	< 1.2	< 0.39	--	--		
Ethene (µg/L)	< 1.2	< 1.2	< 1.2	< 0.25	--	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	--	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	--	--	< 0.25	-- <sup>(1)</sup>	< 1.2	< 1.2	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	< 1.2	< 1.2	< 0.25	--	--		
Methane (µg/L)	4.3	73.3	218	42.7	--	19.5	0.74 J	< 0.66	< 0.66	< 0.58	--	< 0.58	1.7 J	1.1 J	< 0.66	1.5 J	--	--	1.9 J	-- <sup>(1)</sup>	< 0.66	2.7 J	8.4	0.81 J	1.5 J	< 0.66	< 0.58	--	1.2 J	--	--			
TOC (mg/L)	3.05 J	2.29	2.11	2.1	--	1.8	3.88 J	2.74	2.86	3.3	--	2.6	3.85 J	4.20	2.64	3.3	--	--	3.0	-- <sup>(1)</sup>	1.99	1.22	1.6	2.13 J	1.24	0.941 J	1.0	--	0.79	--	--			
Field Parameters <sup>(3)</sup>																																		
Temperature (deg C)	14.2	8.5	8.4	14.8	14.3	8.3	15	8.4	8.8	11.9	12.6	8.5	15.6	8.3	8.5	13.2	13.5	--	8.5	12.6	6.7	9.1	12.5	14.5	9.7	11.1	12	13.0	9.4	--	--			
pH	7.05	9.1	7.28	7	6.95	7.2	6.92	7	7.06	6.73	6.70	6.69	6.69	6.57	6.95	6.49	6.75	--	6.64	7.01	6.06	7.02	6.91	7.17	6.94	7.21	7.08	7.19	7.11	--	--			
Conductivity (mS/cm)	1.25	1.316	1.379	1.035	1.524	1.107	1.547	2.172	2.375	2.081	2.307	1.694	0.932	0.859	0.837	0.801	0.718	--	0.947	1.831	2.865	1.466	1.254	1.253	1.024	1.085	0.982	0.878	0.746	--	--			
Dissolved Oxygen (mg/L)	2.38	0.14	0.8	0.2	0.47	0.69	3.21	0.49	0.24	0.24	0.50	1.84	1.63	0.07	0.27	0.28	0.22	--	0.67	2.97	3.72	2.42	0.28	2.52	11.92	0.5	0.22	0.37	0.32	--	--			
ORP (mV)	-38.1	99.3	64.2	26.1	33.7	85.1	27.3	121.9	122.4	144.7	115.0	174.0	37.3	175	109.2	87.7	33.9	--	93.0	82.1	203.8	137.4	61.7	60.5	106	88.7	-4	-49.5	68.3	--	--			



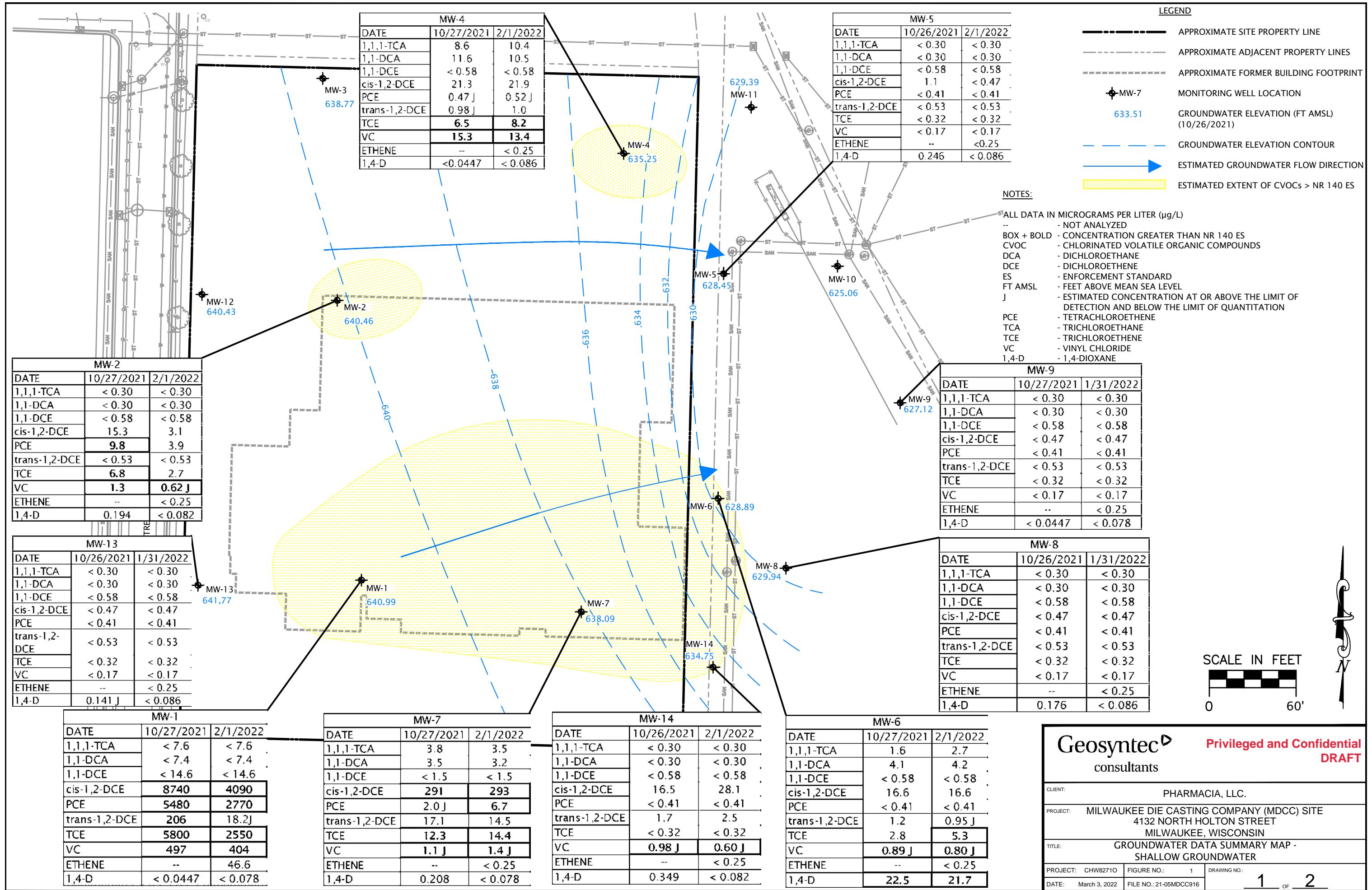
**TABLE 2**  
**Summary of Groundwater Sample Analytical Results**  
 Milwaukee Die Casting Company Site  
 4132 North Holton Street  
 Milwaukee, Wisconsin

Well Identification	MW-11				MW-12				MW-13					MW-14					NR 140 Groundwater					
	5-15				5-15				5-15					8-18					Quality Standard					
Approximate Screen Interval (ft bgs)	10/29/2020	1/19/2021	4/27/2021	7/21/2021	9/23/2020	9/23/2020	1/18/2021	4/27/2021	7/21/2021	9/23/2020	1/18/2021	4/27/2021	7/21/2021	10/26/2021	1/31/2022	9/23/2020	1/19/2021	4/28/2021	7/21/2021	10/26/2021	2/1/2022	PAL	ES	
Sample Date																								
Analytical Parameters						DUP																		
Detected VOCs (µg/L)																								
CVOCs																								
1,1,1-Trichloroethane	< 2.00	< 2.00	< 1.00	< 0.30	< 2.00	< 2.00	< 2.00	< 1.00	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 0.30	40	200
1,1-Dichloroethane	< 2.00	< 2.00	< 1.00	< 0.30	< 2.00	< 2.00	< 2.00	< 1.00	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 2.00	< 2.00	< 1.00	< 0.30	< 0.30	< 0.30	< 0.30	85	850
1,1-Dichloroethene	< 4.00	< 4.00	< 1.00	< 0.58	< 4.00	< 4.00	< 4.00	< 1.00	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 4.00	< 4.00	< 1.00	< 0.58	< 0.58	< 0.58	< 0.58	0.7	7
cis-1,2-Dichloroethene	< 2.00	< 2.00	< 1.00	< 0.47	< 2.00	< 2.00	< 2.00	< 1.00	< 0.47	< 2.00	< 2.00	< 1.00	< 0.47	< 0.47	< 0.47	<b>21.7</b>	<b>20.3</b>	<b>28.7</b>	<b>16.4</b>	<b>16.5</b>	<b>28.1</b>	< 0.41	7	70
Tetrachloroethene	< 2.00	< 2.00	< 1.00	< 0.41	< 2.00	< 2.00	< 2.00	< 1.00	<b>0.75 J</b>	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	< 2.00	< 2.00	< 1.00	< 0.41	< 0.41	< 0.41	< 0.41	0.5	5
trans-1,2-Dichloroethene	< 2.00	< 2.00	< 1.00	< 0.53	< 2.00	< 2.00	< 2.00	< 1.00	< 0.53	< 2.00	< 2.00	< 1.00	< 0.53	< 0.53	< 0.53	< 2.00	< 2.00	2.9	1.4	1.7	2.5	20	100	
Trichloroethene	< 2.00	< 2.00	< 1.00	< 0.32	< 2.00	< 2.00	< 2.00	< 1.00	< 0.32	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	< 2.00	< 2.00	< 1.00	< 0.32	< 0.32	< 0.32	< 0.32	0.5	5
Vinyl chloride	< 2.00	< 2.00	< 2.50	< 0.17	< 2.00	< 2.00	< 2.00	< 2.50	< 0.17	< 2.00	< 2.00	< 2.50	< 0.17	< 0.17	< 0.17	< 2.00	< 2.00	<b>2.0 J</b>	<b>1.1</b>	<b>0.98 J</b>	<b>0.60 J</b>	0.02	0.2	
Other Reported VOCs																								
Carbon disulfide	< 2.00	< 2.00	2.15 J	< 1.1	< 2.00	< 2.00	< 2.00	2.00 J	< 1.1	< 2.00	< 2.00	2.15 J	< 1.1	--	--	< 2.00	< 2.00	2.20 J	< 1.1	--	--	200	1000	
Chloromethane	< 4.00	< 4.00	1.40 J	< 1.6	< 4.00	< 4.00	< 4.00	< 2.50	< 1.6	< 4.00	< 4.00	< 2.50	< 1.6	--	--	< 4.00	< 4.00	< 2.50	< 1.6	--	--	3	30	
Ethylbenzene	< 1.00	< 1.00	< 1.00	< 0.33	< 1.00	< 1.00	< 1.00	< 1.00	< 0.33	< 1.00	< 1.00	< 1.00	< 0.33	--	--	< 1.00	< 1.00	< 1.00	< 0.33	--	--	140	700	
m,p-Xylene	< 4.00	< 4.00	< 2.00	< 0.70	< 4.00	< 4.00	< 4.00	0.450 J	< 0.70	< 4.00	< 4.00	0.450 J	< 0.70	--	--	< 4.00	< 4.00	< 2.00	< 0.70	--	--	--	--	
Methylene chloride <sup>(2)</sup>	< 4.00	< 4.00	4.00 J U	< 0.32	< 4.00	< 4.00	< 4.00	4.05 J U	< 0.32	< 4.00	< 4.00	3.75 J U	< 0.32	--	--	< 4.00	< 4.00	3.65 J U	< 0.32	--	--	0.5	5	
o-Xylene	< 1.00	< 1.00	0.250 J	< 0.35	< 1.00	< 1.00	< 1.00	< 1.00	< 0.35	< 1.00	< 1.00	< 1.00	< 0.35	--	--	< 1.00	< 1.00	0.250 J	< 0.35	--	--	--	--	
Styrene	< 4.00	< 4.00	< 1.00	< 0.36	< 4.00	< 4.00	< 4.00	< 1.00	< 0.36	< 4.00	< 4.00	< 1.00	< 0.36	--	--	< 4.00	< 4.00	< 1.00	< 0.36	--	--	10	100	
Toluene	< 2.00	< 2.00	< 1.00	< 0.29	< 2.00	< 2.00	< 2.00	< 1.00	< 0.29	< 2.00	< 2.00	< 1.00	< 0.29	--	--	< 2.00	< 2.00	< 1.00	< 0.29	--	--	160	800	
Xylenes, Total	< 6.00	< 6.00	< 3.00	--	< 6.00	< 6.00	< 6.00	< 3.00	--	< 6.00	< 6.00	< 3.00	--	--	< 6.00	< 6.00	< 3.00	--	--	--	--	400	2000	
<b>PCBs, Total (unfiltered)</b>	< 0.533	< 0.532	--	--	< 0.524	< 0.534	< 0.519	--	--	< 0.517	< 0.508	--	--	--	--	< 0.531	< 0.529	--	--	--	--	0.003	0.03	
<b>PCBs, Total (filtered)</b>	-- <sup>(1)</sup>	< 0.515	--	--	< 0.532	< 0.525	< 0.517	--	--	< 0.513	< 0.510	--	--	--	--	< 0.530	< 0.523	--	--	--	--	0.003	0.03	
Detected SVOCs (µg/L)																								
Benzo(a)anthracene	-- <sup>(1)</sup>	< 0.320	--	--	< 0.326	< 0.324	< 0.318	--	--	< 0.311	< 0.307	--	--	--	--	< 0.318	< 0.320	--	--	--	--	--	--	
Chrysene	-- <sup>(1)</sup>	< 0.320	--	--	< 0.326	< 0.324	< 0.318	--	--	< 0.311	< 0.307	--	--	--	--	< 0.318	< 0.320	--	--	--	--	0.02	0.2	
Phenol	-- <sup>(1)</sup>	< 0.534	--	--	< 0.544	< 0.539	< 0.531	--	--	< 0.518	< 0.511	--	--	--	--	< 0.531	< 0.533	--	--	--	--	400	2000	
<b>1,4-Dioxane (µg/L)</b>	< 0.200	< 0.200	< 0.200	0.11 J, B U	< 0.200	< 0.200	< 0.200	< 0.200	0.14 J, B U	< 0.200	< 0.200	< 0.200	0.093 J, B U	0.141 J, H3 J	< 0.086	< 0.200	< 0.200	0.230 J	<b>0.35 B J+</b>	<b>0.349 H3 J-</b>	< 0.082	0.3	3	
MNA Geochemical Parameters																								
Ethane (µg/L)	-- <sup>(1)</sup>	< 1.2	< 1.2	< 0.39	< 1.2	< 1.2	< 1.2	< 1.2	< 0.39	< 1.2	< 1.2	< 1.2	< 0.39	--	< 0.39	< 1.2	< 1.2	< 1.2	< 0.39	--	< 0.39	--	--	
Ethene (µg/L)	-- <sup>(1)</sup>	< 1.2	< 1.2	< 0.25	< 1.2	< 1.2	< 1.2	< 1.2	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	--	< 0.25	< 1.2	< 1.2	< 1.2	< 0.25	--	< 0.25	--	--	
Methane (µg/L)	-- <sup>(1)</sup>	< 0.66	< 0.66	< 0.58	1.1 J	0.81 J	< 0.66	< 0.66	< 0.58	1.3 J	15.6	< 0.66	149	--	44.4	1.3 J	1.2 J	9.6	3.0	--	< 0.58	--	--	
TOC (mg/L)	-- <sup>(1)</sup>	2.40	1.81	2.1	2.75 J	2.44 J	1.08	1.09	1.2	2.39 J	1.66	1.22	1.5	--	1.1	2.84 J	2.04	1.59	2.5	--	1.6	--	--	
Field Parameters <sup>(3)</sup>																								
Temperature (deg C)	12.1	8.8	8.7	13.2	17.0	--	6.5	9.2	13.1	18.7	7.8	9.5	14.7	14.7	8.0	17.1	6.7	8.3	12.6	14.3	8.9	--	--	
pH	6.82	6.80	7.16	6.75	7.02	--	6.69	6.99	6.88	6.91	6.88	7.02	6.69	6.69	6.69	6.99	6.31	7.05	6.94	6.79	7.06	--	--	
Conductivity (mS/cm)	2.728	1.194	1.135	1.099	1.002	--	1.046	0.950	0.903	1.756	1.591	1.024	1.340	2.134	1.27	1.240	1.100	1.345	1.073	1.512	1.174	--	--	
Dissolved Oxygen (mg/L)	1.97	1.45	1.48	0.92	1.83	--	0.65	3.56	0.48	1.38	0.79	4.86	0.35	0.74	0.70	3.05	4.2	0.82	0.13	0.56	1.21	--	--	
ORP (mV)	90.5	174.0	158	199.7	38.0	--	105.4	153.1	219.9	-66.4	120.9	144.7	66.3	67.6	72.8	70.9	230	145.3	31.6	77.5	29.4	--	--	

**Notes:**  
 bold - concentration greater than NR 140 PAL  
 boxed - concentration greater than NR 140 ES  
 italics - data validation qualifier (refer to data validation reports)  
 --<sup>(1)</sup> - slow groundwater recovery prevented the collection of a sufficient volume of water for all the planned laboratory analytical parameters for MW-10 and MW-11 for September 2020 sampling event  
 --<sup>(2)</sup> - presumed laboratory artifact  
 --<sup>(3)</sup> - stabilized field parameters obtained prior to sample collection  
 --<sup>(4)</sup> - faulty dissolved oxygen (DO) sensor  
 -- - not analyzed or not established  
 B - analyte detected in associated laboratory method blank  
 CVOCs - chlorinated volatile organic compounds  
 deg C - degrees Celsius  
 DUP - duplicate  
 ES - NR 140 Enforcement Standard  
 ft bgs - feet below ground surface  
 H3 - sample was received or analysis requested beyond the recognized method holding time  
 J - estimated concentration at or above the limit of detection and below the limit of quantitation  
 L0 - analyte recovery in the laboratory control sample (LCS) was outside QC limits  
 mg/L - milligrams per liter  
 MNA - monitored natural attenuation  
 mS/cm - millisiemens per centimeter  
 mV - millivolts  
 ORP - oxidation-reduction potential  
 PAL - NR 140 Preventive Action Limit  
 PCBs - polychlorinated biphenyls  
 SVOCs - semi-volatile organic compounds  
 TOC - total organic carbon  
 µg/L - micrograms per liter  
 VOCs - volatile organics compounds

# ATTACHMENT 4

## Figures



MW-4		
DATE	10/27/2021	2/1/2022
1,1,1-TCA	8.6	10.4
1,1-DCA	11.6	10.5
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	21.3	21.9
PCE	0.47 J	0.52 J
trans-1,2-DCE	0.98 J	1.0
TCE	<b>6.5</b>	<b>8.2</b>
VC	<b>15.3</b>	<b>13.4</b>
ETHENE	--	< 0.25
1,4-D	< 0.0447	< 0.086

MW-5		
DATE	10/26/2021	2/1/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	1.1	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	0.246	< 0.086

- LEGEND**
- APPROXIMATE SITE PROPERTY LINE
  - - - APPROXIMATE ADJACENT PROPERTY LINES
  - APPROXIMATE FORMER BUILDING FOOTPRINT
  - ⊕ MW-7 MONITORING WELL LOCATION
  - 633.51 GROUNDWATER ELEVATION (FT AMSL) (10/26/2021)
  - - - - - GROUNDWATER ELEVATION CONTOUR
  - ESTIMATED GROUNDWATER FLOW DIRECTION
  - ESTIMATED EXTENT OF CVOCs > NR 140 ES

- NOTES:**
- ALL DATA IN MICROGRAMS PER LITER (µg/L)
  - NOT ANALYZED
  - BOX + BOLD - CONCENTRATION GREATER THAN NR 140 ES
  - CVOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
  - DCA - DICHLOROETHANE
  - DCE - DICHLOROETHENE
  - ES - ENFORCEMENT STANDARD
  - FT AMSL - FEET ABOVE MEAN SEA LEVEL
  - J - ESTIMATED CONCENTRATION AT OR ABOVE THE LIMIT OF DETECTION AND BELOW THE LIMIT OF QUANTITATION
  - PCE - TETRACHLOROETHENE
  - TCA - TRICHLOROETHANE
  - TCE - TRICHLOROETHENE
  - VC - VINYL CHLORIDE
  - 1,4-D - 1,4-DIOXANE

MW-2		
DATE	10/27/2021	2/1/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	15.3	3.1
PCE	<b>9.8</b>	3.9
trans-1,2-DCE	< 0.53	< 0.53
TCE	<b>6.8</b>	2.7
VC	<b>1.3</b>	<b>0.62 J</b>
ETHENE	--	< 0.25
1,4-D	0.194	< 0.082

MW-9		
DATE	10/27/2021	1/31/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	< 0.0447	< 0.078

MW-13		
DATE	10/26/2021	1/31/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	0.141 J	< 0.086

MW-8		
DATE	10/26/2021	1/31/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	0.176	< 0.086

MW-1		
DATE	10/27/2021	2/1/2022
1,1,1-TCA	< 7.6	< 7.6
1,1-DCA	< 7.4	< 7.4
1,1-DCE	< 14.6	< 14.6
cis-1,2-DCE	<b>8740</b>	<b>4090</b>
PCE	<b>5480</b>	<b>2770</b>
trans-1,2-DCE	<b>206</b>	<b>18.2 J</b>
TCE	<b>5800</b>	<b>2550</b>
VC	<b>497</b>	<b>404</b>
ETHENE	--	46.6
1,4-D	< 0.0447	< 0.078

MW-7		
DATE	10/27/2021	2/1/2022
1,1,1-TCA	3.8	3.5
1,1-DCA	3.5	3.2
1,1-DCE	< 1.5	< 1.5
cis-1,2-DCE	<b>291</b>	<b>293</b>
PCE	2.0 J	<b>6.7</b>
trans-1,2-DCE	17.1	14.5
TCE	<b>12.3</b>	<b>14.4</b>
VC	<b>1.1 J</b>	<b>1.4 J</b>
ETHENE	--	< 0.25
1,4-D	0.208	< 0.078

MW-14		
DATE	10/26/2021	2/1/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	16.5	28.1
PCE	< 0.41	< 0.41
trans-1,2-DCE	1.7	2.5
TCE	< 0.32	< 0.32
VC	<b>0.98 J</b>	<b>0.60 J</b>
ETHENE	--	< 0.25
1,4-D	0.349	< 0.082

MW-6		
DATE	10/27/2021	2/1/2022
1,1,1-TCA	1.6	2.7
1,1-DCA	4.1	4.2
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	16.6	16.6
PCE	< 0.41	< 0.41
trans-1,2-DCE	1.2	0.95 J
TCE	2.8	<b>5.3</b>
VC	<b>0.89 J</b>	<b>0.80 J</b>
ETHENE	--	< 0.25
1,4-D	<b>22.5</b>	<b>21.7</b>



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




CLIENT: PHARMACIA, LLC.

PROJECT: MILWAUKEE DIE CASTING COMPANY (MDCC) SITE  
4132 NORTH HOLTON STREET  
MILWAUKEE, WISCONSIN

TITLE: GROUNDWATER DATA SUMMARY MAP -  
SHALLOW GROUNDWATER

PROJECT: CHW82710    FIGURE NO.: 1    DRAWING NO.: 1 OF 2  
DATE: March 3, 2022    FILE NO.: 21-05MDCC916

LEGEND

-  APPROXIMATE SITE PROPERTY LINE
-  APPROXIMATE ADJACENT PROPERTY LINES
-  APPROXIMATE FORMER BUILDING FOOTPRINT
-  PZ-2
-  633.51
-  632
-  ESTIMATED GROUNDWATER FLOW DIRECTION
-  ESTIMATED EXTENT OF CVOCs > NR 140 ES

NOTES:

- ALL DATA IN MICROGRAMS PER LITER (µg/L)
- NOT ANALYZED
- BOX + BOLD - CONCENTRATION GREATER THAN NR 140 ES
- CVOC - CHLORINATED VOLATILE ORGANIC COMPOUNDS
- DCA - DICHLOROETHANE
- DCE - DICHLOROETHENE
- ES - ENFORCEMENT STANDARD
- FT AMSL - FEET ABOVE MEAN SEA LEVEL
- J - ESTIMATED CONCENTRATION AT OR ABOVE THE LIMIT OF DETECTION AND BELOW THE LIMIT OF QUANTITATION
- PCE - TETRACHLOROETHENE
- TCA - TRICHLOROETHANE
- TCE - TRICHLOROETHENE
- VC - VINYL CHLORIDE
- 1,4-D - 1,4-DIOXANE

PZ-2		
DATE	10/26/2021	1/31/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	0.32 J
1,4-D	0.144 J	< 0.078

PZ-10		
DATE	10/26/2021	1/31/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	0.109 J	0.43

PZ-1A		
Date	10/27/2021	2/1/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	0.74 J	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	< 0.0469	< 0.086

PZ-6		
DATE	10/26/2021	2/1/2022
1,1,1-TCA	< 0.30	< 0.30
1,1-DCA	< 0.30	< 0.30
1,1-DCE	< 0.58	< 0.58
cis-1,2-DCE	< 0.47	< 0.47
PCE	< 0.41	< 0.41
trans-1,2-DCE	< 0.53	< 0.53
TCE	< 0.32	< 0.32
VC	< 0.17	< 0.17
ETHENE	--	< 0.25
1,4-D	0.106 J	< 0.078

PZ-1		
DATE	10/27/2021	2/2/2022
1,1,1-TCA	< 3.0	< 3.0
1,1-DCA	< 3.0	< 3.0
1,1-DCE	< 5.8	< 5.8
cis-1,2-DCE	1450	1220
PCE	174	162
trans-1,2-DCE	21.5	31.1
TCE	82.8	66.5
VC	18.3	94.7
ETHENE	--	52.2
1,4-D	< 0.0447	< 0.078



**Geosyntec** consultants Privileged and Confidential  
**DRAFT**

CLIENT: PHARMACIA, LLC.

PROJECT: MILWAUKEE DIE CASTING COMPANY (MDCC) SITE  
4132 NORTH HOLTON STREET  
MILWAUKEE, WISCONSIN

TITLE: GROUNDWATER DATA SUMMARY MAP -  
DEEPER GROUNDWATER

PROJECT: CHW82710    FIGURE NO.: 2    DRAWING NO.: 2 OF 2  
DATE: March 3, 2022    FILE NO.: 2105MDCC916

# **ATTACHMENT 5**

## **Laboratory Reports Data Validation Reports**

November 16, 2021

Dave Zolp  
GEOSYNTEC CONSULTANTS  
10600 North Port Washington Rd  
Suite 100  
Thiensville, WI 53092

RE: Project: CHW82710 MDCC  
Pace Project No.: 40235989

Dear Dave Zolp:

Enclosed are the analytical results for sample(s) received by the laboratory on October 29, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Jeremiah Johnson, GEOSYNTEC CONSULTANTS



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: CHW82710 MDCC  
Pace Project No.: 40235989

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

Virginia VELAP ID: 460263  
South Carolina Certification #: 83006001  
Texas Certification #: T104704529-14-1  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-16-00157  
Federal Fish & Wildlife Permit #: LE51774A-0

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### **Pace Analytical Services National**

12065 Lebanon Road, Mt. Juliet, TN 37122  
Alabama Certification #: 40660  
Alaska Certification 17-026  
Arizona Certification #: AZ0612  
Arkansas Certification #: 88-0469  
California Certification #: 2932  
Canada Certification #: 1461.01  
Colorado Certification #: TN00003  
Connecticut Certification #: PH-0197  
DOD Certification: #1461.01  
EPA# TN00003  
Florida Certification #: E87487  
Georgia DW Certification #: 923  
Georgia Certification: NELAP  
Idaho Certification #: TN00003  
Illinois Certification #: 200008  
Indiana Certification #: C-TN-01  
Iowa Certification #: 364  
Kansas Certification #: E-10277  
Kentucky UST Certification #: 16  
Kentucky Certification #: 90010  
Louisiana Certification #: AI30792  
Louisiana DW Certification #: LA180010  
Maine Certification #: TN0002  
Maryland Certification #: 324  
Massachusetts Certification #: M-TN003  
Michigan Certification #: 9958  
Minnesota Certification #: 047-999-395  
Mississippi Certification #: TN00003  
Missouri Certification #: 340  
Montana Certification #: CERT0086  
Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34  
New Hampshire Certification #: 2975  
New Jersey Certification #: TN002  
New Mexico DW Certification  
New York Certification #: 11742  
North Carolina Aquatic Toxicity Certification #: 41  
North Carolina Drinking Water Certification #: 21704  
North Carolina Environmental Certificate #: 375  
North Dakota Certification #: R-140  
Ohio VAP Certification #: CL0069  
Oklahoma Certification #: 9915  
Oregon Certification #: TN200002  
Pennsylvania Certification #: 68-02979  
Rhode Island Certification #: LAO00356  
South Carolina Certification #: 84004  
South Dakota Certification  
Tennessee DW/Chem/Micro Certification #: 2006  
Texas Certification #: T 104704245-17-14  
Texas Mold Certification #: LAB0152  
USDA Soil Permit #: P330-15-00234  
Utah Certification #: TN00003  
Virginia Certification #: VT2006  
Vermont Dept. of Health: ID# VT-2006  
Virginia Certification #: 460132  
Washington Certification #: C847  
West Virginia Certification #: 233  
Wisconsin Certification #: 998093910  
Wyoming UST Certification #: via A2LA 2926.01  
A2LA-ISO 17025 Certification #: 1461.01  
A2LA-ISO 17025 Certification #: 1461.02  
AIHA-LAP/LLC EMLAP Certification #:100789

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: CHW82710 MDCC  
Pace Project No.: 40235989

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40235989001	MW-1	Water	10/27/21 14:15	10/29/21 07:20
40235989002	MW-2	Water	10/27/21 12:19	10/29/21 07:20
40235989003	MW-4	Water	10/27/21 13:35	10/29/21 07:20
40235989004	MW-5	Water	10/26/21 14:15	10/29/21 07:20
40235989005	MW-6	Water	10/27/21 11:55	10/29/21 07:20
40235989006	MW-7	Water	10/27/21 11:20	10/29/21 07:20
40235989007	MW-8	Water	10/26/21 15:40	10/29/21 07:20
40235989008	MW-9	Water	10/27/21 09:55	10/29/21 07:20
40235989009	MW-9 DUP	Water	10/27/21 09:55	10/29/21 07:20
40235989010	MW-13	Water	10/26/21 12:40	10/29/21 07:20
40235989011	MW-14	Water	10/26/21 11:30	10/29/21 07:20
40235989012	PZ-1	Water	10/27/21 13:25	10/29/21 07:20
40235989013	PZ-1A	Water	10/27/21 09:53	10/29/21 07:20
40235989014	PZ-1A DUP	Water	10/27/21 09:53	10/29/21 07:20
40235989015	PZ-2	Water	10/26/21 16:05	10/29/21 07:20
40235989016	PZ-6	Water	10/26/21 15:30	10/29/21 07:20
40235989017	PZ-10	Water	10/26/21 12:35	10/29/21 07:20
40235989018	TB102621	Water	10/26/21 09:00	10/29/21 07:20
40235989019	EB102721	Water	10/27/21 16:15	10/29/21 07:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: CHW82710 MDCC  
Pace Project No.: 40235989

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40235989001	MW-1	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989002	MW-2	EPA 8270D by SIM	ADF	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989003	MW-4	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989004	MW-5	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989005	MW-6	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989006	MW-7	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989007	MW-8	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989008	MW-9	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989009	MW-9 DUP	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989010	MW-13	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989011	MW-14	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989012	PZ-1	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989013	PZ-1A	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989014	PZ-1A DUP	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989015	PZ-2	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989016	PZ-6	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989017	PZ-10	EPA 8270D by SIM	AGW	2	PAN
		EPA 8260	LAP	12	PASI-G
40235989018	TB102621	EPA 8260	LAP	12	PASI-G
40235989019	EB102721	EPA 8270D by SIM	JNJ	2	PAN
		EPA 8260	LAP	12	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: CHW82710 MDCC  
Pace Project No.: 40235989

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PAN = Pace National - Mt. Juliet  
PASI-G = Pace Analytical Services - Green Bay

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-1</b> <b>Lab ID: 40235989001</b> Collected: 10/27/21 14:15      Received: 10/29/21 07:20      Matrix: Water									
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 19:13	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	50.4	%	10.0-120		1	11/03/21 11:51	11/03/21 19:13	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<7.6	ug/L	25.0	7.6	25		11/05/21 01:32	71-55-6	
1,1-Dichloroethane	<7.4	ug/L	25.0	7.4	25		11/05/21 01:32	75-34-3	
1,1-Dichloroethene	<14.6	ug/L	25.0	14.6	25		11/05/21 01:32	75-35-4	
Chloroethane	<34.5	ug/L	125	34.5	25		11/05/21 01:32	75-00-3	
Tetrachloroethene	5480	ug/L	25.0	10.2	25		11/05/21 01:32	127-18-4	
Trichloroethene	5800	ug/L	25.0	8.0	25		11/05/21 01:32	79-01-6	
Vinyl chloride	497	ug/L	25.0	4.4	25		11/05/21 01:32	75-01-4	
cis-1,2-Dichloroethene	8740	ug/L	100	47.2	100		11/05/21 07:57	156-59-2	
trans-1,2-Dichloroethene	206	ug/L	25.0	13.2	25		11/05/21 01:32	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		25		11/05/21 01:32	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		25		11/05/21 01:32	2199-69-1	
Toluene-d8 (S)	96	%	70-130		25		11/05/21 01:32	2037-26-5	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-2</b> <b>Lab ID: 40235989002</b> Collected: 10/27/21 12:19      Received: 10/29/21 07:20      Matrix: Water									
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	0.194	ug/L	0.149	0.0447	1	11/03/21 11:51	11/08/21 23:31	123-91-1	L0
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	83.3	%	10.0-120		1	11/03/21 11:51	11/08/21 23:31	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 21:16	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 21:16	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 21:16	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 21:16	75-00-3	
Tetrachloroethene	9.8	ug/L	1.0	0.41	1		11/04/21 21:16	127-18-4	
Trichloroethene	6.8	ug/L	1.0	0.32	1		11/04/21 21:16	79-01-6	
Vinyl chloride	1.3	ug/L	1.0	0.17	1		11/04/21 21:16	75-01-4	
cis-1,2-Dichloroethene	15.3	ug/L	1.0	0.47	1		11/04/21 21:16	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 21:16	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/04/21 21:16	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		11/04/21 21:16	2199-69-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC  
Pace Project No.: 40235989

**Sample: MW-2**      **Lab ID: 40235989002**      Collected: 10/27/21 12:19      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
Toluene-d8 (S)	97	%	70-130		1		11/04/21 21:16	2037-26-5	

**Sample: MW-4**      **Lab ID: 40235989003**      Collected: 10/27/21 13:35      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 19:52	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	53.3	%	10.0-120		1	11/03/21 11:51	11/03/21 19:52	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	8.6	ug/L	1.0	0.30	1		11/04/21 21:36	71-55-6	
1,1-Dichloroethane	11.6	ug/L	1.0	0.30	1		11/04/21 21:36	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 21:36	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 21:36	75-00-3	
Tetrachloroethene	0.47J	ug/L	1.0	0.41	1		11/04/21 21:36	127-18-4	
Trichloroethene	6.5	ug/L	1.0	0.32	1		11/04/21 21:36	79-01-6	
Vinyl chloride	15.3	ug/L	1.0	0.17	1		11/04/21 21:36	75-01-4	
cis-1,2-Dichloroethene	21.3	ug/L	1.0	0.47	1		11/04/21 21:36	156-59-2	
trans-1,2-Dichloroethene	0.98J	ug/L	1.0	0.53	1		11/04/21 21:36	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/04/21 21:36	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/04/21 21:36	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/04/21 21:36	2037-26-5	

**Sample: MW-5**      **Lab ID: 40235989004**      Collected: 10/26/21 14:15      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	0.246	ug/L	0.149	0.0447	1	11/08/21 06:22	11/09/21 00:48	123-91-1	H3
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	53.5	%	10.0-120		1	11/08/21 06:22	11/09/21 00:48	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 21:56	71-55-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: MW-5**      **Lab ID: 40235989004**      Collected: 10/26/21 14:15      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 21:56	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 21:56	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 21:56	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 21:56	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 21:56	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 21:56	75-01-4	
cis-1,2-Dichloroethene	1.1	ug/L	1.0	0.47	1		11/04/21 21:56	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 21:56	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/04/21 21:56	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		11/04/21 21:56	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/04/21 21:56	2037-26-5	

**Sample: MW-6**      **Lab ID: 40235989005**      Collected: 10/27/21 11:55      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	22.5	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 20:11	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	55.2	%	10.0-120		1	11/03/21 11:51	11/03/21 20:11	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	1.6	ug/L	1.0	0.30	1		11/04/21 22:15	71-55-6	
1,1-Dichloroethane	4.1	ug/L	1.0	0.30	1		11/04/21 22:15	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 22:15	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 22:15	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 22:15	127-18-4	
Trichloroethene	2.8	ug/L	1.0	0.32	1		11/04/21 22:15	79-01-6	
Vinyl chloride	0.89J	ug/L	1.0	0.17	1		11/04/21 22:15	75-01-4	
cis-1,2-Dichloroethene	16.6	ug/L	1.0	0.47	1		11/04/21 22:15	156-59-2	
trans-1,2-Dichloroethene	1.2	ug/L	1.0	0.53	1		11/04/21 22:15	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/04/21 22:15	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		1		11/04/21 22:15	2199-69-1	
Toluene-d8 (S)	95	%	70-130		1		11/04/21 22:15	2037-26-5	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: MW-7**      **Lab ID: 40235989006**      Collected: 10/27/21 11:20      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM    Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<b>0.208</b>	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 20:30	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	59.5	%	10.0-120		1	11/03/21 11:51	11/03/21 20:30	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>3.8</b>	ug/L	2.5	0.76	2.5		11/05/21 02:11	71-55-6	
1,1-Dichloroethane	<b>3.5</b>	ug/L	2.5	0.74	2.5		11/05/21 02:11	75-34-3	
1,1-Dichloroethene	<b>&lt;1.5</b>	ug/L	2.5	1.5	2.5		11/05/21 02:11	75-35-4	
Chloroethane	<b>&lt;3.4</b>	ug/L	12.5	3.4	2.5		11/05/21 02:11	75-00-3	
Tetrachloroethene	<b>2.0J</b>	ug/L	2.5	1.0	2.5		11/05/21 02:11	127-18-4	
Trichloroethene	<b>12.3</b>	ug/L	2.5	0.80	2.5		11/05/21 02:11	79-01-6	
Vinyl chloride	<b>1.1J</b>	ug/L	2.5	0.44	2.5		11/05/21 02:11	75-01-4	
cis-1,2-Dichloroethene	<b>291</b>	ug/L	2.5	1.2	2.5		11/05/21 02:11	156-59-2	
trans-1,2-Dichloroethene	<b>17.1</b>	ug/L	2.5	1.3	2.5		11/05/21 02:11	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94	%	70-130		2.5		11/05/21 02:11	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		2.5		11/05/21 02:11	2199-69-1	
Toluene-d8 (S)	96	%	70-130		2.5		11/05/21 02:11	2037-26-5	

**Sample: MW-8**      **Lab ID: 40235989007**      Collected: 10/26/21 15:40      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM    Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<b>0.176</b>	ug/L	0.149	0.0447	1	11/08/21 06:22	11/09/21 01:07	123-91-1	H3
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	51.3	%	10.0-120		1	11/08/21 06:22	11/09/21 01:07	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/04/21 22:35	71-55-6	
1,1-Dichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/04/21 22:35	75-34-3	
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		11/04/21 22:35	75-35-4	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		11/04/21 22:35	75-00-3	
Tetrachloroethene	<b>&lt;0.41</b>	ug/L	1.0	0.41	1		11/04/21 22:35	127-18-4	
Trichloroethene	<b>&lt;0.32</b>	ug/L	1.0	0.32	1		11/04/21 22:35	79-01-6	
Vinyl chloride	<b>&lt;0.17</b>	ug/L	1.0	0.17	1		11/04/21 22:35	75-01-4	
cis-1,2-Dichloroethene	<b>&lt;0.47</b>	ug/L	1.0	0.47	1		11/04/21 22:35	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;0.53</b>	ug/L	1.0	0.53	1		11/04/21 22:35	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/04/21 22:35	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		11/04/21 22:35	2199-69-1	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC  
Pace Project No.: 40235989

Sample: MW-8									
Lab ID: 40235989007									
Collected: 10/26/21 15:40									
Received: 10/29/21 07:20									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
Toluene-d8 (S)	96	%	70-130		1		11/04/21 22:35	2037-26-5	

Sample: MW-9									
Lab ID: 40235989008									
Collected: 10/27/21 09:55									
Received: 10/29/21 07:20									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM									
Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 20:50	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	61.1	%	10.0-120		1	11/03/21 11:51	11/03/21 20:50	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 22:55	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 22:55	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 22:55	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 22:55	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 22:55	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 22:55	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 22:55	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/04/21 22:55	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 22:55	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/04/21 22:55	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/04/21 22:55	2199-69-1	
Toluene-d8 (S)	97	%	70-130		1		11/04/21 22:55	2037-26-5	

Sample: MW-9 DUP									
Lab ID: 40235989009									
Collected: 10/27/21 09:55									
Received: 10/29/21 07:20									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM									
Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 21:09	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	64.4	%	10.0-120		1	11/03/21 11:51	11/03/21 21:09	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 23:14	71-55-6	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: MW-9 DUP**      **Lab ID: 40235989009**      Collected: 10/27/21 09:55      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 23:14	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 23:14	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 23:14	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 23:14	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 23:14	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 23:14	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/04/21 23:14	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 23:14	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/04/21 23:14	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		1		11/04/21 23:14	2199-69-1	
Toluene-d8 (S)	95	%	70-130		1		11/04/21 23:14	2037-26-5	

**Sample: MW-13**      **Lab ID: 40235989010**      Collected: 10/26/21 12:40      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	0.141J	ug/L	0.149	0.0447	1	11/08/21 06:22	11/08/21 23:50	123-91-1	H3,J
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	50.4	%	10.0-120		1	11/08/21 06:22	11/08/21 23:50	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 20:57	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 20:57	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 20:57	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 20:57	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 20:57	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 20:57	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 20:57	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/04/21 20:57	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 20:57	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/04/21 20:57	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/04/21 20:57	2199-69-1	
Toluene-d8 (S)	97	%	70-130		1		11/04/21 20:57	2037-26-5	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: MW-14**      **Lab ID: 40235989011**      Collected: 10/26/21 11:30      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM    Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<b>0.349</b>	ug/L	0.149	0.0447	1	11/08/21 06:22	11/09/21 01:27	123-91-1	H3
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	53.2	%	10.0-120		1	11/08/21 06:22	11/09/21 01:27	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/04/21 23:34	71-55-6	
1,1-Dichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/04/21 23:34	75-34-3	
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		11/04/21 23:34	75-35-4	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		11/04/21 23:34	75-00-3	
Tetrachloroethene	<b>&lt;0.41</b>	ug/L	1.0	0.41	1		11/04/21 23:34	127-18-4	
Trichloroethene	<b>&lt;0.32</b>	ug/L	1.0	0.32	1		11/04/21 23:34	79-01-6	
Vinyl chloride	<b>0.98J</b>	ug/L	1.0	0.17	1		11/04/21 23:34	75-01-4	
cis-1,2-Dichloroethene	<b>16.5</b>	ug/L	1.0	0.47	1		11/04/21 23:34	156-59-2	
trans-1,2-Dichloroethene	<b>1.7</b>	ug/L	1.0	0.53	1		11/04/21 23:34	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/04/21 23:34	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		11/04/21 23:34	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/04/21 23:34	2037-26-5	

**Sample: PZ-1**      **Lab ID: 40235989012**      Collected: 10/27/21 13:25      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM    Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<b>&lt;0.0447</b>	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 21:28	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	66.0	%	10.0-120		1	11/03/21 11:51	11/03/21 21:28	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>&lt;3.0</b>	ug/L	10.0	3.0	10		11/05/21 01:51	71-55-6	
1,1-Dichloroethane	<b>&lt;3.0</b>	ug/L	10.0	3.0	10		11/05/21 01:51	75-34-3	
1,1-Dichloroethene	<b>&lt;5.8</b>	ug/L	10.0	5.8	10		11/05/21 01:51	75-35-4	
Chloroethane	<b>&lt;13.8</b>	ug/L	50.0	13.8	10		11/05/21 01:51	75-00-3	
Tetrachloroethene	<b>174</b>	ug/L	10.0	4.1	10		11/05/21 01:51	127-18-4	
Trichloroethene	<b>82.8</b>	ug/L	10.0	3.2	10		11/05/21 01:51	79-01-6	
Vinyl chloride	<b>18.3</b>	ug/L	10.0	1.7	10		11/05/21 01:51	75-01-4	
cis-1,2-Dichloroethene	<b>1450</b>	ug/L	10.0	4.7	10		11/05/21 01:51	156-59-2	
trans-1,2-Dichloroethene	<b>21.5</b>	ug/L	10.0	5.3	10		11/05/21 01:51	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		10		11/05/21 01:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		10		11/05/21 01:51	2199-69-1	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: PZ-1**      **Lab ID: 40235989012**      Collected: 10/27/21 13:25      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
Toluene-d8 (S)	95	%	70-130		10		11/05/21 01:51	2037-26-5	

**Sample: PZ-1A**      **Lab ID: 40235989013**      Collected: 10/27/21 09:53      Received: 10/29/21 07:20      Matrix: Water

Comments: • Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM - Dilution due to sample volume.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0469	ug/L	0.156	0.0469	1.05	11/03/21 11:51	11/03/21 21:47	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	64.2	%	10.0-120		1.05	11/03/21 11:51	11/03/21 21:47	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 23:53	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 23:53	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 23:53	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 23:53	75-00-3	
Tetrachloroethene	0.74J	ug/L	1.0	0.41	1		11/04/21 23:53	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 23:53	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 23:53	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/04/21 23:53	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 23:53	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/04/21 23:53	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/04/21 23:53	2199-69-1	
Toluene-d8 (S)	95	%	70-130		1		11/04/21 23:53	2037-26-5	

**Sample: PZ-1A DUP**      **Lab ID: 40235989014**      Collected: 10/27/21 09:53      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 22:07	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	61.8	%	10.0-120		1	11/03/21 11:51	11/03/21 22:07	4165-60-0	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: PZ-1A DUP**      **Lab ID: 40235989014**      Collected: 10/27/21 09:53      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/05/21 00:13	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/05/21 00:13	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/05/21 00:13	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/05/21 00:13	75-00-3	
Tetrachloroethene	0.80J	ug/L	1.0	0.41	1		11/05/21 00:13	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/05/21 00:13	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/05/21 00:13	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/05/21 00:13	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/05/21 00:13	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/05/21 00:13	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/05/21 00:13	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/05/21 00:13	2037-26-5	

**Sample: PZ-2**      **Lab ID: 40235989015**      Collected: 10/26/21 16:05      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	0.144J	ug/L	0.149	0.0447	1	11/08/21 06:22	11/09/21 01:46	123-91-1	H3,J
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	42.3	%	10.0-120		1	11/08/21 06:22	11/09/21 01:46	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/05/21 00:33	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/05/21 00:33	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/05/21 00:33	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/05/21 00:33	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/05/21 00:33	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/05/21 00:33	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/05/21 00:33	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/05/21 00:33	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/05/21 00:33	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/05/21 00:33	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/05/21 00:33	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/05/21 00:33	2037-26-5	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC  
Pace Project No.: 40235989

Sample: PZ-6									
Lab ID: 40235989016 Collected: 10/26/21 15:30 Received: 10/29/21 07:20 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<b>0.106J</b>	ug/L	0.149	0.0447	1	11/08/21 06:22	11/09/21 02:05	123-91-1	H3,J
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	37.1	%	10.0-120		1	11/08/21 06:22	11/09/21 02:05	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/05/21 00:52	71-55-6	
1,1-Dichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/05/21 00:52	75-34-3	
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		11/05/21 00:52	75-35-4	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		11/05/21 00:52	75-00-3	
Tetrachloroethene	<b>&lt;0.41</b>	ug/L	1.0	0.41	1		11/05/21 00:52	127-18-4	
Trichloroethene	<b>&lt;0.32</b>	ug/L	1.0	0.32	1		11/05/21 00:52	79-01-6	
Vinyl chloride	<b>&lt;0.17</b>	ug/L	1.0	0.17	1		11/05/21 00:52	75-01-4	
cis-1,2-Dichloroethene	<b>&lt;0.47</b>	ug/L	1.0	0.47	1		11/05/21 00:52	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;0.53</b>	ug/L	1.0	0.53	1		11/05/21 00:52	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/05/21 00:52	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/05/21 00:52	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/05/21 00:52	2037-26-5	

Sample: PZ-10									
Lab ID: 40235989017 Collected: 10/26/21 12:35 Received: 10/29/21 07:20 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<b>0.109J</b>	ug/L	0.149	0.0447	1	11/08/21 06:22	11/09/21 02:24	123-91-1	H3,J
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	44.1	%	10.0-120		1	11/08/21 06:22	11/09/21 02:24	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/05/21 01:12	71-55-6	
1,1-Dichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		11/05/21 01:12	75-34-3	
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		11/05/21 01:12	75-35-4	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		11/05/21 01:12	75-00-3	
Tetrachloroethene	<b>&lt;0.41</b>	ug/L	1.0	0.41	1		11/05/21 01:12	127-18-4	
Trichloroethene	<b>&lt;0.32</b>	ug/L	1.0	0.32	1		11/05/21 01:12	79-01-6	
Vinyl chloride	<b>&lt;0.17</b>	ug/L	1.0	0.17	1		11/05/21 01:12	75-01-4	
cis-1,2-Dichloroethene	<b>&lt;0.47</b>	ug/L	1.0	0.47	1		11/05/21 01:12	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;0.53</b>	ug/L	1.0	0.53	1		11/05/21 01:12	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/05/21 01:12	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		11/05/21 01:12	2199-69-1	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: PZ-10**      **Lab ID: 40235989017**      Collected: 10/26/21 12:35      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
Toluene-d8 (S)	96	%	70-130		1		11/05/21 01:12	2037-26-5	

**Sample: TB102621**      **Lab ID: 40235989018**      Collected: 10/26/21 09:00      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 20:17	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 20:17	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 20:17	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 20:17	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 20:17	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 20:17	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 20:17	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/04/21 20:17	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 20:17	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/04/21 20:17	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		1		11/04/21 20:17	2199-69-1	
Toluene-d8 (S)	97	%	70-130		1		11/04/21 20:17	2037-26-5	

**Sample: EB102721**      **Lab ID: 40235989019**      Collected: 10/27/21 16:15      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>SVOA (GC/MS) 8270 D-SIM</b>									
Analytical Method: EPA 8270D by SIM      Preparation Method: 3510C									
Pace National - Mt. Juliet									
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	11/03/21 11:51	11/03/21 22:26	123-91-1	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	62.5	%	10.0-120		1	11/03/21 11:51	11/03/21 22:26	4165-60-0	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 20:37	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/04/21 20:37	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/04/21 20:37	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/04/21 20:37	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/04/21 20:37	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/04/21 20:37	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/04/21 20:37	75-01-4	

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### ANALYTICAL RESULTS

Project: CHW82710 MDCC

Pace Project No.: 40235989

**Sample: EB102721**      **Lab ID: 40235989019**      Collected: 10/27/21 16:15      Received: 10/29/21 07:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/04/21 20:37	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/04/21 20:37	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		11/04/21 20:37	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		11/04/21 20:37	2199-69-1	
Toluene-d8 (S)	96	%	70-130		1		11/04/21 20:37	2037-26-5	

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### QUALITY CONTROL DATA

Project: CHW82710 MDCC

Pace Project No.: 40235989

QC Batch:	1767535	Analysis Method:	EPA 8270D by SIM
QC Batch Method:	3510C	Analysis Description:	SVOA (GC/MS) 8270 D-SIM
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 40235989001, 40235989003, 40235989005, 40235989006, 40235989008, 40235989009, 40235989012, 40235989013, 40235989014, 40235989019

METHOD BLANK: R3725582-3 Matrix: Water

Associated Lab Samples: 40235989001, 40235989003, 40235989005, 40235989006, 40235989008, 40235989009, 40235989012, 40235989013, 40235989014, 40235989019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	<0.0447	0.149	11/03/21 16:59	
Nitrobenzene-d5 (S)	%	60.8	10.0-120	11/03/21 16:59	

LABORATORY CONTROL SAMPLE & LCSD: R3725582-1 R3725582-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	50.0	42.8	41.2	85.6	82.4	73.0-146	3.81	20	
Nitrobenzene-d5 (S)	%				59.6	55.7	10.0-120			

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### QUALITY CONTROL DATA

Project: CHW82710 MDCC

Pace Project No.: 40235989

QC Batch: 1769083

Analysis Method: EPA 8270D by SIM

QC Batch Method: 3510C

Analysis Description: SVOA (GC/MS) 8270 D-SIM

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 40235989002

METHOD BLANK: R3727408-5

Matrix: Water

Associated Lab Samples: 40235989002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	<0.0447	0.149	11/08/21 22:34	
Nitrobenzene-d5 (S)	%	77.3	10.0-120	11/08/21 22:34	

LABORATORY CONTROL SAMPLE & LCSD: R3727408-1

R3727408-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	50.0	18.5	19.1	37.0	38.2	73.0-146	3.19	20	L0
Nitrobenzene-d5 (S)	%				73.6	70.4	10.0-120			

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### QUALITY CONTROL DATA

Project: CHW82710 MDCC

Pace Project No.: 40235989

QC Batch:	1770345	Analysis Method:	EPA 8270D by SIM
QC Batch Method:	3510C	Analysis Description:	SVOA (GC/MS) 8270 D-SIM
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 40235989004, 40235989007, 40235989010, 40235989011, 40235989015, 40235989016, 40235989017

METHOD BLANK: R3727409-2 Matrix: Water  
Associated Lab Samples: 40235989004, 40235989007, 40235989010, 40235989011, 40235989015, 40235989016, 40235989017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	<0.0447	0.149	11/08/21 23:12	
Nitrobenzene-d5 (S)	%	64.1	10.0-120	11/08/21 23:12	

LABORATORY CONTROL SAMPLE: R3727409-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	50.0	46.0	92.0	73.0-146	
Nitrobenzene-d5 (S)	%			70.6	10.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3727409-3 R3727409-4

Parameter	Units	40235989010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	0.141	47.6	47.6	48.7	51.1	102	107	38.0-160	4.81	21	
Nitrobenzene-d5 (S)	%						59.1	54.8	10.0-120			

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: CHW82710 MDCC  
Pace Project No.: 40235989

QC Batch:	400057	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40235989001, 40235989002, 40235989003, 40235989004, 40235989005, 40235989006, 40235989007, 40235989008, 40235989009, 40235989010, 40235989011, 40235989012, 40235989013, 40235989014, 40235989015, 40235989016, 40235989017, 40235989018, 40235989019

METHOD BLANK: 2310005 Matrix: Water  
Associated Lab Samples: 40235989001, 40235989002, 40235989003, 40235989004, 40235989005, 40235989006, 40235989007, 40235989008, 40235989009, 40235989010, 40235989011, 40235989012, 40235989013, 40235989014, 40235989015, 40235989016, 40235989017, 40235989018, 40235989019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.30	1.0	11/04/21 17:01	
1,1-Dichloroethane	ug/L	<0.30	1.0	11/04/21 17:01	
1,1-Dichloroethene	ug/L	<0.58	1.0	11/04/21 17:01	
Chloroethane	ug/L	<1.4	5.0	11/04/21 17:01	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	11/04/21 17:01	
Tetrachloroethene	ug/L	<0.41	1.0	11/04/21 17:01	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	11/04/21 17:01	
Trichloroethene	ug/L	<0.32	1.0	11/04/21 17:01	
Vinyl chloride	ug/L	<0.17	1.0	11/04/21 17:01	
1,2-Dichlorobenzene-d4 (S)	%	105	70-130	11/04/21 17:01	
4-Bromofluorobenzene (S)	%	98	70-130	11/04/21 17:01	
Toluene-d8 (S)	%	98	70-130	11/04/21 17:01	

LABORATORY CONTROL SAMPLE: 2310006

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1-Dichloroethane	ug/L	50	52.7	105	68-132	
1,1-Dichloroethene	ug/L	50	53.3	107	85-126	
Chloroethane	ug/L	50	51.0	102	73-137	
cis-1,2-Dichloroethene	ug/L	50	50.2	100	70-130	
Tetrachloroethene	ug/L	50	53.8	108	70-130	
trans-1,2-Dichloroethene	ug/L	50	54.5	109	70-130	
Trichloroethene	ug/L	50	52.3	105	70-130	
Vinyl chloride	ug/L	50	48.5	97	63-142	
1,2-Dichlorobenzene-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2310007 2310008

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40235989010	Spike Conc.	Spike Conc.	Conc.							
1,1,1-Trichloroethane	ug/L	<0.30	50	50	50	53.4	51.9	107	104	70-130	3	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: CHW82710 MDCC

Pace Project No.: 40235989

Parameter	Units	2310007		2310008		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40235989010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,1-Dichloroethane	ug/L	<0.30	50	50	52.1	50.7	104	101	68-132	3	20		
1,1-Dichloroethene	ug/L	<0.58	50	50	52.7	51.4	105	103	76-132	3	20		
Chloroethane	ug/L	<1.4	50	50	51.7	50.1	103	100	70-137	3	20		
cis-1,2-Dichloroethene	ug/L	<0.47	50	50	49.9	48.6	100	97	70-130	3	20		
Tetrachloroethene	ug/L	<0.41	50	50	51.7	50.1	103	100	70-130	3	20		
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	52.4	52.2	105	104	70-134	0	20		
Trichloroethene	ug/L	<0.32	50	50	51.7	50.4	103	101	70-130	3	20		
Vinyl chloride	ug/L	<0.17	50	50	48.2	46.9	96	94	61-143	3	20		
1,2-Dichlorobenzene-d4 (S)	%						99	101	70-130				
4-Bromofluorobenzene (S)	%						98	99	70-130				
Toluene-d8 (S)	%						97	98	70-130				

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## QUALIFIERS

Project: CHW82710 MDCC

Pace Project No.: 40235989

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### WORKORDER QUALIFIERS

WO: 40235989

[1] L1425274-02: WG1769083 - 1,4-Dioxane will not be able to report per isotope dilution due to matrix impacting the 1,4-Dioxane-d8 internal standard. This target will be reporting using traditional 8270 internal standard quantification.

### ANALYTE QUALIFIERS

H3 Sample was received or analysis requested beyond the recognized method holding time.

J Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: CHW82710 MDCC  
Pace Project No.: 40235989

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40235989001	MW-1	3510C	1767535	EPA 8270D by SIM	1767535
40235989002	MW-2	3510C	1769083	EPA 8270D by SIM	1769083
40235989003	MW-4	3510C	1767535	EPA 8270D by SIM	1767535
40235989004	MW-5	3510C	1770345	EPA 8270D by SIM	1770345
40235989005	MW-6	3510C	1767535	EPA 8270D by SIM	1767535
40235989006	MW-7	3510C	1767535	EPA 8270D by SIM	1767535
40235989007	MW-8	3510C	1770345	EPA 8270D by SIM	1770345
40235989008	MW-9	3510C	1767535	EPA 8270D by SIM	1767535
40235989009	MW-9 DUP	3510C	1767535	EPA 8270D by SIM	1767535
40235989010	MW-13	3510C	1770345	EPA 8270D by SIM	1770345
40235989011	MW-14	3510C	1770345	EPA 8270D by SIM	1770345
40235989012	PZ-1	3510C	1767535	EPA 8270D by SIM	1767535
40235989013	PZ-1A	3510C	1767535	EPA 8270D by SIM	1767535
40235989014	PZ-1A DUP	3510C	1767535	EPA 8270D by SIM	1767535
40235989015	PZ-2	3510C	1770345	EPA 8270D by SIM	1770345
40235989016	PZ-6	3510C	1770345	EPA 8270D by SIM	1770345
40235989017	PZ-10	3510C	1770345	EPA 8270D by SIM	1770345
40235989019	EB102721	3510C	1767535	EPA 8270D by SIM	1767535
40235989001	MW-1	EPA 8260	400057		
40235989002	MW-2	EPA 8260	400057		
40235989003	MW-4	EPA 8260	400057		
40235989004	MW-5	EPA 8260	400057		
40235989005	MW-6	EPA 8260	400057		
40235989006	MW-7	EPA 8260	400057		
40235989007	MW-8	EPA 8260	400057		
40235989008	MW-9	EPA 8260	400057		
40235989009	MW-9 DUP	EPA 8260	400057		
40235989010	MW-13	EPA 8260	400057		
40235989011	MW-14	EPA 8260	400057		
40235989012	PZ-1	EPA 8260	400057		
40235989013	PZ-1A	EPA 8260	400057		
40235989014	PZ-1A DUP	EPA 8260	400057		
40235989015	PZ-2	EPA 8260	400057		
40235989016	PZ-6	EPA 8260	400057		
40235989017	PZ-10	EPA 8260	400057		
40235989018	TB102621	EPA 8260	400057		
40235989019	EB102721	EPA 8260	400057		

**REPORT OF LABORATORY ANALYSIS**

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# Sample Preservation Receipt Form

Pace Analytical Services, LLC  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302

Client Name: Geosyntec

Project # 40235989

All containers needing preservation have been checked and noted below: Yes No N/A

Initial when completed:

Date/Time:


Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass						Plastic					Vials				Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)								
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WGFU								WPFU	SP5T	ZPLC	GN				
001						2																															2.5 / 5 / 10
002						2																															2.5 / 5 / 10
003						2																															2.5 / 5 / 10
004						2																															2.5 / 5 / 10
005						2																															2.5 / 5 / 10
006						2																															2.5 / 5 / 10
007						2																															2.5 / 5 / 10
008						2																															2.5 / 5 / 10
009						2																															2.5 / 5 / 10
010						6																															2.5 / 5 / 10
011						2																															2.5 / 5 / 10
012						2																															2.5 / 5 / 10
013						2																															2.5 / 5 / 10
014						2																															2.5 / 5 / 10
015						2																															2.5 / 5 / 10
016						2																															2.5 / 5 / 10
017						2																															2.5 / 5 / 10
018						2																															2.5 / 5 / 10
019						2																															2.5 / 5 / 10
020																																					2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) : Yes No N/A \*If yes look in headspace column

AG1U 1 liter amber glass	BP1U 1 liter plastic unpres	VG9A 40 mL clear ascorbic	JGFU 4 oz amber jar unpres
BG1U 1 liter clear glass	BP3U 250 mL plastic unpres	DG9T 40 mL amber Na Thio	JG9U 9 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP3B 250 mL plastic NaOH	VG9U 40 mL clear vial unpres	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9H 40 mL clear vial HCL	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3S 250 mL plastic H2SO4	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG5U 100 mL amber glass unpres		VG9D 40 mL clear vial DI	ZPLC ziploc bag
AG2S 500 mL amber glass H2SO4			GN
BG3U 250 mL clear glass unpres			

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 26Mar2020
	Document No.: <b>ENV-FRM-GBAY-0014-Rev.00</b>	Author: Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Project #:

Client Name: Geosyntec

**WO# : 40235989**



40235989

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - 110    Type of Ice Wet Blue Dry None     Samples on ice, cooling process has begun

Cooler Temperature    Uncorr: 4 /Corr: 4

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:	
Date: <u>10/21/11</u>	Initials: <u>MP</u>
Labeled By Initials: <u>MP</u>	

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>471</u>		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

**Pace Analytical - Green Bay, WI**

Sample Delivery Group: L1425274  
Samples Received: 11/02/2021  
Project Number: 40235989  
Description: CHW82710 MDCC  
Site: 001  
Report To: Brian Basten  
1241 Bellvue Street, Suite 9  
Green Bay, WI 54302

Entire Report Reviewed By:



Nancy McLain  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

Page 29 of 63

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>
<b>Tc: Table of Contents</b>	<b>2</b>
<b>Ss: Sample Summary</b>	<b>3</b>
<b>Cn: Case Narrative</b>	<b>6</b>
<b>Sr: Sample Results</b>	<b>7</b>
MW-1 L1425274-01	7
MW-2 L1425274-02	8
MW-4 L1425274-03	9
MW-5 L1425274-04	10
MW-6 L1425274-05	11
MW-7 L1425274-06	12
MW-8 L1425274-07	13
MW-9 L1425274-08	14
MW-9 DUP L1425274-09	15
MW-13 L1425274-10	16
MW-14 L1425274-11	17
PZ-1 L1425274-12	18
PZ-1A L1425274-13	19
PZ-1A DUP L1425274-14	20
PZ-2 L1425274-15	21
PZ-6 L1425274-16	22
PZ-10 L1425274-17	23
EB102721 L1425274-18	24
<b>Qc: Quality Control Summary</b>	<b>25</b>
<b>Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM</b>	<b>25</b>
<b>Gl: Glossary of Terms</b>	<b>28</b>
<b>Al: Accreditations &amp; Locations</b>	<b>29</b>
<b>Sc: Sample Chain of Custody</b>	<b>30</b>

<sup>1</sup> Cp
<sup>2</sup> Tc
<sup>3</sup> Ss
<sup>4</sup> Cn
<sup>5</sup> Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> Al
<sup>9</sup> Sc

# SAMPLE SUMMARY

## MW-1 L1425274-01 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 19:13	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

1 Cp

2 Tc

## MW-2 L1425274-02 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1769083	1	11/03/21 11:51	11/08/21 23:31	ADF	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

3 Ss

4 Cn

5 Sr

## MW-4 L1425274-03 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 19:52	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

6 Qc

7 Gl

8 Al

## MW-5 L1425274-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/09/21 00:48	AGW	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

9 Sc

## MW-6 L1425274-05 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 20:11	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## MW-7 L1425274-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 20:30	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## MW-8 L1425274-07 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/09/21 01:07	AGW	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## MW-9 L1425274-08 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 20:50	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

# SAMPLE SUMMARY

## MW-9 DUP L1425274-09 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 21:09	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

## MW-13 L1425274-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/08/21 23:50	AGW	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## MW-14 L1425274-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/09/21 01:27	AGW	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## PZ-1 L1425274-12 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 21:28	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## PZ-1A L1425274-13 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1.05	11/03/21 11:51	11/03/21 21:47	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## PZ-1A DUP L1425274-14 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 22:07	JNJ	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## PZ-2 L1425274-15 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/09/21 01:46	AGW	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

## PZ-6 L1425274-16 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/09/21 02:05	AGW	Mt. Juliet, TN

Collected by  
Collected date/time  
Received date/time

# SAMPLE SUMMARY

## PZ-10 L1425274-17 GW

Collected by:   
 Collected date/time: 10/26/21 12:35   
 Received date/time: 11/02/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1770345	1	11/08/21 06:22	11/09/21 02:24	AGW	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

## EB102721 L1425274-18 GW

Collected by:   
 Collected date/time: 10/27/21 16:15   
 Received date/time: 11/02/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG1767535	1	11/03/21 11:51	11/03/21 22:26	JNJ	Mt. Juliet, TN

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

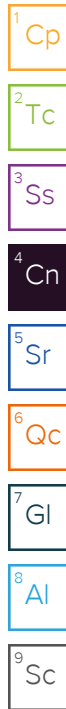


Nancy McLain  
Project Manager

## Project Narrative

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L1425274-02: WG1769083 - 1,4-Dioxane will not be able to report per isotope dilution due to matrix impacting the 1,4-Dioxane-d8 internal standard. This target will be reporting using traditional 8270 internal standard quantification.





Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 19:13	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	50.4			10.0-120		11/03/2021 19:13	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.194	<a href="#">J4</a>	0.0447	0.149	1	11/08/2021 23:31	<a href="#">WG1769083</a>
(S) Nitrobenzene-d5	83.3			10.0-120		11/08/2021 23:31	<a href="#">WG1769083</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 19:52	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	53.3			10.0-120		11/03/2021 19:52	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.246	<u>T8</u>	0.0447	0.149	1	11/09/2021 00:48	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	53.5			10.0-120		11/09/2021 00:48	<a href="#">WG1770345</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	22.5		0.0447	0.149	1	11/03/2021 20:11	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	55.2			10.0-120		11/03/2021 20:11	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.208		0.0447	0.149	1	11/03/2021 20:30	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	59.5			10.0-120		11/03/2021 20:30	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.176	<u>T8</u>	0.0447	0.149	1	11/09/2021 01:07	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	51.3			10.0-120		11/09/2021 01:07	<a href="#">WG1770345</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 20:50	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	61.1			10.0-120		11/03/2021 20:50	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 21:09	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	64.4			10.0-120		11/03/2021 21:09	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.141	<a href="#">J T8</a>	0.0447	0.149	1	11/08/2021 23:50	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	50.4			10.0-120		11/08/2021 23:50	<a href="#">WG1770345</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.349	<u>T8</u>	0.0447	0.149	1	11/09/2021 01:27	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	53.2			10.0-120		11/09/2021 01:27	<a href="#">WG1770345</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 21:28	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	66.0			10.0-120		11/03/2021 21:28	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0469	0.156	1.05	11/03/2021 21:47	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	64.2			10.0-120		11/03/2021 21:47	<a href="#">WG1767535</a>

Sample Narrative:

L1425274-13 WG1767535: Dilution due to sample volume.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 22:07	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	61.8			10.0-120		11/03/2021 22:07	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.144	<a href="#">J T8</a>	0.0447	0.149	1	11/09/2021 01:46	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	42.3			10.0-120		11/09/2021 01:46	<a href="#">WG1770345</a>

- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Sr
- <sup>6</sup> Qc
- <sup>7</sup> Gl
- <sup>8</sup> Al
- <sup>9</sup> Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.106	<a href="#">J T8</a>	0.0447	0.149	1	11/09/2021 02:05	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	37.1			10.0-120		11/09/2021 02:05	<a href="#">WG1770345</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.109	<a href="#">J T8</a>	0.0447	0.149	1	11/09/2021 02:24	<a href="#">WG1770345</a>
(S) Nitrobenzene-d5	44.1			10.0-120		11/09/2021 02:24	<a href="#">WG1770345</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.149	1	11/03/2021 22:26	<a href="#">WG1767535</a>
(S) Nitrobenzene-d5	62.5			10.0-120		11/03/2021 22:26	<a href="#">WG1767535</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3725582-3 11/03/21 16:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,4-Dioxane	U		0.0447	0.149
<i>(S) Nitrobenzene-d5</i>	60.8			10.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3725582-1 11/03/21 16:21 • (LCSD) R3725582-2 11/03/21 16:40

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
1,4-Dioxane	50.0	42.8	41.2	85.6	82.4	73.0-146			3.81	20
<i>(S) Nitrobenzene-d5</i>				59.6	55.7	10.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3727408-5 11/08/21 22:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,4-Dioxane	U		0.0447	0.149
<i>(S) Nitrobenzene-d5</i>	77.3			10.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3727408-1 11/08/21 21:55 • (LCSD) R3727408-2 11/08/21 22:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
1,4-Dioxane	50.0	18.5	19.1	37.0	38.2	73.0-146	<u>J4</u>	<u>J4</u>	3.19	20
<i>(S) Nitrobenzene-d5</i>				73.6	70.4	10.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3727409-2 11/08/21 23:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.0447	0.149
(S) Nitrobenzene-d5	64.1			10.0-120

Laboratory Control Sample (LCS)

(LCS) R3727409-1 11/08/21 22:53

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
1,4-Dioxane	50.0	46.0	92.0	73.0-146	
(S) Nitrobenzene-d5			70.6	10.0-120	

L1425274-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425274-10 11/08/21 23:50 • (MS) R3727409-3 11/09/21 00:10 • (MSD) R3727409-4 11/09/21 00:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	47.6	0.141	48.7	51.1	102	107	1	38.0-160			4.81	21
(S) Nitrobenzene-d5					59.1	54.8		10.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

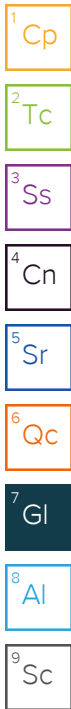
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

### Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

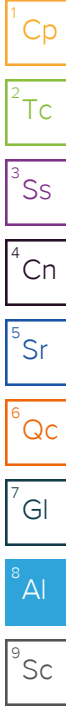
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.








					Comments
Transfers	Released By	Date/Time	Received By	Date/Time	
1	<i>Allen</i>	<i>11/2/00</i>			<i>U425274</i>
2					
3			<i>Triller Colson</i>	<i>11/2/00</i>	
Cooler Temperature on Receipt _____ °C		Custody Seal <input checked="" type="radio"/> or N		Received on Ice <input checked="" type="radio"/> or N	
Samples Intact <input checked="" type="radio"/> or N					

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N      If Applicable  
 COC Signed/Accurate:  Y  N      VOA Zero Headspace:  Y  N  
 Bottles arrive intact:  Y  N      Pres. Correct/Check:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 26Mar2020
	Document No.: <b>ENV-FRM-GBAY-0014-Rev.00</b>	Author: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Client Name: Geosyntec Project #: W0# : 40235989  
 Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_  
 Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no  
 Custody Seal on Samples Present:  yes  no    Seals intact:  yes  no  
 Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
 Thermometer Used: SR - 110    Type of Ice: Wet Blue Dry None     Samples on ice, cooling process has begun  
 Cooler Temperature: Uncorr: 4 / Corr: 4  
 Temp Blank Present:  yes  no    Biological Tissue is Frozen:  yes  no  
 Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents: Date: <u>10/24/14</u> / Initials: <u>[Signature]</u> Labeled By Initials: _____
--

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>471</u>		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_



40235989



### CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)

Company Name: Geosyntec  
 Branch/Location: Mequon  
 Project Contact: D. Zof  
 Phone: 262-496-6103  
 Project Number: CHW 82710  
 Project Name: MDCC  
 Project State: WI  
 Sampled By (Print): D. Zof  
 Sampled By (Sign): [Signature]  
 PO #:  
 Regulatory Program:

Quote #:  
 Mail To Contact: Jeremiah Johnson  
 Mail To Company: Geosyntec  
 Mail To Address: 10600 N. Paul Washington Rd Ste 100 Mequon, WI 53092  
 Invoice To Contact: See Above  
 Invoice To Company:  
 Invoice To Address:  
 Invoice To Phone:  
 CLIENT COMMENTS  
 LAB COMMENTS (Lab Use Only)  
 Profile #

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 Sl = Sludge WP = Wipe

Y/N	Pick Letter	Analyses Requested	DATE	TIME	MATRIX
N	A	1,4-Dioxane (Aoshod 8270 SIM)	10/27/21	953	GW
N	B	CLUC Limited List (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, VC, 1,1,1-TCA, 1,1-DCA, Chloroethane)	10/27/21	1605	W
			10/27/21	1530	W
			10/27/21	1235	W
			10/27/21	900	W
			10/27/21	1615	W

PACE LAB #	CLIENT FIELD ID	DATE	TIME	MATRIX
014	PZ-1A DUP	10/27/21	953	GW
015	PZ-2	10/27/21	1605	W
016	PZ-6	10/27/21	1530	W
017	PZ-10	10/27/21	1235	W
018	TB102621	10/27/21	900	W
019	EB102721	10/27/21	1615	W

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed: 10/28/21; 840

Transmit Prelim Rush Results by (complete what you want):  
 Relinquished By: [Signature] Date/Time: 10/27/21 0720  
 Received By: [Signature] Date/Time: 10/27/21 0720

Relinquished By: CS Logistics Date/Time: 10/27/21 0720  
 Received By: [Signature] Date/Time: 10/27/21 0720

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Recap Temp = 4 °C  
 Sample Receipt pH OK / Adjusted  
 Cooler Custody Seal Present / Not Present  
 Intact Present / Not Present

PACE Project No. 40235989





## Memorandum

Date: January 10, 2022  
To: Jeremiah Johnson  
From: Jennifer Pinion  
CC: J. Caprio  
Subject: **Stage 2A Data Validation – Level II Data Deliverable – Pace Analytical Services Project Number: 40235989**

**SITE: Milwaukee Die Casting Company Site, Milwaukee, WI**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fifteen water samples including one sample for matrix spike/matrix spike duplicate (MS/MSD) analysis, two field duplicate samples, one trip blank and one equipment blank, collected on October 26 and 27, 2021, during a Milwaukee Die Casting Company Site sampling event. The analyses were performed by Pace Analytical Services, LLC, Green Bay, Wisconsin and Pace National, Mt. Juliet, Tennessee. The samples were analyzed for the following tests:

- Volatile Organic Compounds (VOCs) by United States (US) Environmental Protection Agency (EPA) Method 8260
- 1,4-Dioxane by US EPA Methods 3510C/8270D using Selective Ion Monitoring (SIM)

### EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. The qualified data should be used within the limitations of the qualifications.

The data were reviewed based on the pertinent methods referenced by the laboratory report, professional and technical judgment and the following documents:

- Additional Groundwater Investigation Work Plan and Groundwater Monitoring Plan, Milwaukee Die Casting Company Site, 4132 North Holton Street. Milwaukee, Wisconsin, June 15, 2021
- US EPA National Functional Guidelines for Organic Superfund Methods Data Review, November 2020 (USEPA- 540-R-20-005)

The following samples were analyzed in the data set and validated at a Stage 2A level:

Laboratory IDs	Client IDs
40235989001	MW-1
40235989002	MW-2
40235989003	MW-4
40235989004	MW-5
40235989005	MW-6
40235989006	MW-7
40235989007	MW-8
40235989008	MW-9
40235989009	MW-9 DUP
40235989010	MW-13

Laboratory IDs	Client IDs
40235989011	MW-14
40235989012	PZ-1
40235989013	PZ-1A
40235989014	PZ-1A DUP
40235989015	PZ-2
40235989016	PZ-6
40235989017	PZ-10
40235989018	TB102621
40235989019	EB102721

The samples were received at the laboratory at 4.0°C within the temperature criteria of 0-6°C. No sample preservation issues were noted by the laboratory.

The first sample received by signature, date and time were not recorded on the chain of custody (COC).

## 1.0 VOLATILE ORGANIC COMPOUNDS

The samples were analyzed for VOCs per US EPA Method 8260.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine the impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Trip Blank
- ✓ Equipment Blank
- ✓ Surrogates
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

### **1.1 Overall Assessment**

The VOC data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

### **1.2 Holding Times**

The holding time for the VOC analyses of preserved water samples is 14 days from collection to analysis. The holding times were met for the sample analyses.

### **1.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 400057). VOCs were not detected in the method blank above the limits of detection (LODs).

### **1.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample MW-13. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

### **1.5 Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery results were within the laboratory specified acceptance criteria.

### **1.6 Trip Blank**

One trip blank was submitted with the sample set, TB102621. VOCs were not detected in the trip blank greater than the LODs.

### **1.7 Equipment Blank**

One equipment blank was collected with the sample set, EB102721. VOCs were not detected in the equipment blank greater than the LODs.



## 1.8 Surrogates

The surrogate recoveries were within the laboratory specified acceptance criteria.

## 1.9 Field Duplicate

Two field duplicate samples, MW-9 DUP and PZ-1A DUP were collected with the sample set. Acceptable precision ( $RPD \leq 30\%$ ) was demonstrated between the field duplicates and the original samples, MW-9 and PZ-1A, respectively.

## 1.10 Sensitivity

The samples were reported to the LODs. Elevated non-detect results were reported due to the dilutions analyzed.

## 1.11 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## 2.0 1,4-DIOXANE

The samples were analyzed for 1,4-dioxane per US EPA Methods 3510C/8270D SIM.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine the impact on data quality and usability.

- ⊗ Overall Assessment
- ⊗ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Surrogates
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

## 2.1 Overall Assessment

### 2.1.1 Completeness

The 1,4-dioxane data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

### 2.1.2 Analysis Anomaly

The laboratory noted that sample MW-2 was not reported using isotope dilution due to matrix interference with the internal standard, 1,4-dioxane-d8. Due to the potential for interference in the target compound 1,4-dioxane and based on professional and technical judgement, the concentration of 1,4-dioxane in sample MW-2 was J qualified as estimated.

Sample ID	Compound	Laboratory Result (µg/L)	Laboratory Flag	Validation Result (µg/L)	Validation Qualifier*	Reason Code**
MW-2	1,4-Dioxane (p-Dioxane)	0.194	L0	0.194	J	11

µg/l-microgram per liter

L0-laboratory flag indicating the LCS recovery was outside the laboratory specified acceptance criteria

\* Validation qualifiers are defined in Attachment 1 at the end of this report

\*\*Reason codes are defined in Attachment 2 at the end of this report

## 2.2 Holding Times

The holding times for the 1,4-dioxane analyses of preserved water samples are 7 days from collection to extraction and 40 days from extraction to analysis. The holding times were met for the sample analyses, with the following exceptions.

Samples MW-5, MW-8, MW-13, MW-14, PZ-2, PZ-6 and PZ-10 were prepared outside of the 7-day holding time for 1,4-dioxane analysis. Therefore, the concentrations of 1,4-dioxane greater than the RL in these samples were J- qualified as estimated with a low bias and the estimated concentrations greater than the LOD and less than the limit of quantitation (LOQ) were J qualified as estimated.

Sample ID	Compound	Laboratory Result (µg/L)	Laboratory Flag	Validation Result (µg/L)	Validation Qualifier*	Reason Code**
MW-5	1,4-Dioxane (p-Dioxane)	0.246	H3	0.246	J-	2

Sample ID	Compound	Laboratory Result (µg/L)	Laboratory Flag	Validation Result (µg/L)	Validation Qualifier*	Reason Code**
MW-8	1,4-Dioxane (p-Dioxane)	0.176	H3	0.176	J-	2
MW-13	1,4-Dioxane (p-Dioxane)	0.141	JH3	0.141	J	2
MW-14	1,4-Dioxane (p-Dioxane)	0.349	H3	0.349	J-	2
PZ-2	1,4-Dioxane (p-Dioxane)	0.144	JH3	0.144	J	2
PZ-6	1,4-Dioxane (p-Dioxane)	0.106	JH3	0.106	J	2
PZ-10	1,4-Dioxane (p-Dioxane)	0.109	JH3	0.109	J	2

µg/L-microgram per liter

J- the result is less than LOQ but greater than the LOD and the concentration is an approximate value

H3-laboratory flag indicating the samples were received or analyzed past the method specified holding time

### 2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 1767535, 1769083 and 1770345). 1,4-dioxane was not detected greater than the LODs in the method blanks.

### 2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample MW-13. The recovery and RPD results were within the laboratory specified acceptance criteria.

### 2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS and two LCS/LCS duplicate (LCSD) pairs were reported. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of 1,4-dioxane in the LCS/LCSD pair in batch 1769083 were low and outside the laboratory specified acceptance criteria. Therefore, the concentration of 1,4-dioxane in sample MW-2 was J qualified as estimated.

Sample ID	Compound	Laboratory Result (µg/L)	Laboratory Flag	Validation Result (µg/L)	Validation Qualifier*	Reason Code**
MW-2	1,4-Dioxane (p-Dioxane)	0.194	L0	0.194	J	5

µg/l-microgram per liter

L0-laboratory flag indicating the analyte recovery in the LCS and/or LCSD was outside the laboratory specified acceptance criteria

## **2.6 Surrogates**

The surrogate recoveries were within the laboratory specified acceptance criteria.

## **2.7 Field Duplicate**

Two field duplicate samples, MW-9 DUP and PZ-1A DUP were collected with the sample set. Acceptable precision ( $RPD \leq 30\%$ ) was demonstrated between the field duplicates and the original samples, MW-9 and PZ-1A, respectively.

## **2.8 Sensitivity**

The samples were reported to the LODs. Elevated non-detect results were reported for sample PZ-1A due to the dilution analyzed.

## **2.9 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

February 18, 2022

Dave Zolp  
GEOSYNTEC CONSULTANTS  
10600 North Port Washington Rd  
Suite 100  
Thiensville, WI 53092

RE: Project: CHW82710  
Pace Project No.: 40240206

Dear Dave Zolp:

Enclosed are the analytical results for sample(s) received by the laboratory on February 03, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay
- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Jeremiah Johnson, GEOSYNTEC CONSULTANTS



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: CHW82710  
Pace Project No.: 40240206

---

### **Pace Analytical Services, LLC - Minneapolis MN**

1700 Elm Street SE, Minneapolis, MN 55414  
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab  
A2LA Certification #: 2926.01\*  
Alabama Certification #: 40770  
Alaska Contaminated Sites Certification #: 17-009\*  
Alaska DW Certification #: MN00064  
Arizona Certification #: AZ0014\*  
Arkansas DW Certification #: MN00064  
Arkansas WW Certification #: 88-0680  
California Certification #: 2929  
Colorado Certification #: MN00064  
Connecticut Certification #: PH-0256  
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
Florida Certification #: E87605\*  
Georgia Certification #: 959  
Hawaii Certification #: MN00064  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Indiana Certification #: C-MN-01  
Iowa Certification #: 368  
Kansas Certification #: E-10167  
Kentucky DW Certification #: 90062  
Kentucky WW Certification #: 90062  
Louisiana DEQ Certification #: AI-03086\*  
Louisiana DW Certification #: MN00064  
Maine Certification #: MN00064\*  
Maryland Certification #: 322  
Michigan Certification #: 9909  
Minnesota Certification #: 027-053-137\*  
Minnesota Dept of Ag Approval: via MN 027-053-137  
Minnesota Petrofund Registration #: 1240\*  
Mississippi Certification #: MN00064

Missouri Certification #: 10100  
Montana Certification #: CERT0092  
Nebraska Certification #: NE-OS-18-06  
Nevada Certification #: MN00064  
New Hampshire Certification #: 2081\*  
New Jersey Certification #: MN002  
New York Certification #: 11647\*  
North Carolina DW Certification #: 27700  
North Carolina WW Certification #: 530  
North Dakota Certification #: R-036  
Ohio DW Certification #: 41244  
Ohio VAP Certification (1700) #: CL101  
Ohio VAP Certification (1800) #: CL110\*  
Oklahoma Certification #: 9507\*  
Oregon Primary Certification #: MN300001  
Oregon Secondary Certification #: MN200001\*  
Pennsylvania Certification #: 68-00563\*  
Puerto Rico Certification #: MN00064  
South Carolina Certification #:74003001  
Tennessee Certification #: TN02818  
Texas Certification #: T104704192\*  
Utah Certification #: MN00064\*  
Vermont Certification #: VT-027053137  
Virginia Certification #: 460163\*  
Washington Certification #: C486\*  
West Virginia DEP Certification #: 382  
West Virginia DW Certification #: 9952 C  
Wisconsin Certification #: 999407970  
Wyoming UST Certification #: via A2LA 2926.01  
USDA Permit #: P330-19-00208  
\*Please Note: Applicable air certifications are denoted with an asterisk (\*).

### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

Virginia VELAP ID: 460263  
South Carolina Certification #: 83006001  
Texas Certification #: T104704529-14-1  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-16-00157  
Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## SAMPLE SUMMARY

Project: CHW82710

Pace Project No.: 40240206

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40240206001	MW-1	Water	02/01/22 16:10	02/03/22 10:00
40240206002	MW-2	Water	02/01/22 15:20	02/03/22 10:00
40240206003	MW-4	Water	02/01/22 13:55	02/03/22 10:00
40240206004	MW-5	Water	02/01/22 12:35	02/03/22 10:00
40240206005	MW-6	Water	02/01/22 13:15	02/03/22 10:00
40240206006	MW-6 DUP	Water	02/01/22 13:15	02/03/22 10:00
40240206007	MW-7	Water	02/01/22 15:35	02/03/22 10:00
40240206008	MW-8	Water	01/31/22 14:05	02/03/22 10:00
40240206009	MW-9	Water	01/31/22 15:30	02/03/22 10:00
40240206010	MW-13	Water	01/31/22 13:05	02/03/22 10:00
40240206011	MW-14	Water	02/01/22 10:55	02/03/22 10:00
40240206012	PZ-1	Water	02/02/22 10:10	02/03/22 10:00
40240206013	PZ-1 DUP	Water	02/02/22 10:10	02/03/22 10:00
40240206014	PZ-1A	Water	02/01/22 09:45	02/03/22 10:00
40240206015	PZ-2	Water	01/31/22 15:50	02/03/22 10:00
40240206016	PZ-6	Water	02/01/22 11:00	02/03/22 10:00
40240206017	PZ-10	Water	01/31/22 15:15	02/03/22 10:00
40240206018	TB01312022	Water	01/31/22 10:00	02/03/22 10:00
40240206019	EB02022022	Water	02/02/22 14:00	02/03/22 10:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: CHW82710  
Pace Project No.: 40240206

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40240206001	MW-1	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206002	MW-2	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206003	MW-4	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206004	MW-5	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206005	MW-6	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206006	MW-6 DUP	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206007	MW-7	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206008	MW-8	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206009	MW-9	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206010	MW-13	EPA 8015B Modified	KHB	3	PASI-G

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### SAMPLE ANALYTE COUNT

Project: CHW82710  
Pace Project No.: 40240206

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40240206011	MW-14	EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
40240206012	PZ-1	EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
40240206013	PZ-1 DUP	SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206014	PZ-1A	EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
40240206015	PZ-2	EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
40240206016	PZ-6	EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
40240206017	PZ-10	SM 5310C	TJJ	1	PASI-G
		EPA 8015B Modified	KHB	3	PASI-G
		EPA 8270E by SIM	TWH	2	PASI-M
		EPA 8260	LAP	12	PASI-G
		SM 5310C	TJJ	1	PASI-G
40240206018	TB01312022	EPA 8260	LAP	12	PASI-G
40240206019	EB02022022	EPA 8260	JAV	12	PASI-G

PASI-G = Pace Analytical Services - Green Bay  
PASI-M = Pace Analytical Services - Minneapolis

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

Sample: MW-1 Lab ID: 40240206001 Collected: 02/01/22 16:10 Received: 02/03/22 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	25.0	ug/L	5.6	0.39	1		02/04/22 09:43	74-84-0	
Ethene	46.6	ug/L	5.0	0.25	1		02/04/22 09:43	74-85-1	
Methane	2740	ug/L	70.0	14.4	25		02/04/22 12:15	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 14:01	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	912	%	30-125		1	02/04/22 13:58	02/07/22 14:01		S2
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<7.6	ug/L	25.0	7.6	25		02/07/22 09:44	71-55-6	
1,1-Dichloroethane	<7.4	ug/L	25.0	7.4	25		02/07/22 09:44	75-34-3	
1,1-Dichloroethene	<14.6	ug/L	25.0	14.6	25		02/07/22 09:44	75-35-4	
Chloroethane	<34.5	ug/L	125	34.5	25		02/07/22 09:44	75-00-3	
Tetrachloroethene	2770	ug/L	25.0	10.2	25		02/07/22 09:44	127-18-4	
Trichloroethene	2550	ug/L	25.0	8.0	25		02/07/22 09:44	79-01-6	
Vinyl chloride	404	ug/L	25.0	4.4	25		02/07/22 09:44	75-01-4	
cis-1,2-Dichloroethene	4090	ug/L	25.0	11.8	25		02/07/22 09:44	156-59-2	
trans-1,2-Dichloroethene	18.2J	ug/L	25.0	13.2	25		02/07/22 09:44	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	70-130		25		02/07/22 09:44	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		25		02/07/22 09:44	2199-69-1	
Toluene-d8 (S)	99	%	70-130		25		02/07/22 09:44	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	2.7	mg/L	0.50	0.14	1		02/16/22 06:11	7440-44-0	

Sample: MW-2 Lab ID: 40240206002 Collected: 02/01/22 15:20 Received: 02/03/22 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	0.89J	ug/L	5.6	0.39	1		02/04/22 09:50	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 09:50	74-85-1	
Methane	288	ug/L	11.2	2.3	4		02/04/22 12:22	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.082	ug/L	0.24	0.082	1	02/04/22 13:58	02/07/22 14:17	123-91-1	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: MW-2**      **Lab ID: 40240206002**      Collected: 02/01/22 15:20      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	48	%	30-125		1	02/04/22 13:58	02/07/22 14:17		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 13:10	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 13:10	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 13:10	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 13:10	75-00-3	
Tetrachloroethene	3.9	ug/L	1.0	0.41	1		02/04/22 13:10	127-18-4	
Trichloroethene	2.7	ug/L	1.0	0.32	1		02/04/22 13:10	79-01-6	
Vinyl chloride	0.62J	ug/L	1.0	0.17	1		02/04/22 13:10	75-01-4	
cis-1,2-Dichloroethene	3.1	ug/L	1.0	0.47	1		02/04/22 13:10	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 13:10	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		1		02/04/22 13:10	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		1		02/04/22 13:10	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 13:10	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	1.5	mg/L	0.50	0.14	1		02/16/22 07:01	7440-44-0	

**Sample: MW-4**      **Lab ID: 40240206003**      Collected: 02/01/22 13:55      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	0.50J	ug/L	5.6	0.39	1		02/04/22 09:57	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 09:57	74-85-1	
Methane	141	ug/L	2.8	0.58	1		02/04/22 09:57	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.086	ug/L	0.25	0.086	1	02/04/22 13:58	02/07/22 14:34	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	60	%	30-125		1	02/04/22 13:58	02/07/22 14:34		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	10.4	ug/L	1.0	0.30	1		02/04/22 13:28	71-55-6	
1,1-Dichloroethane	10.5	ug/L	1.0	0.30	1		02/04/22 13:28	75-34-3	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: MW-4**      **Lab ID: 40240206003**      Collected: 02/01/22 13:55      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 13:28	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 13:28	75-00-3	
Tetrachloroethene	0.52J	ug/L	1.0	0.41	1		02/04/22 13:28	127-18-4	
Trichloroethene	8.2	ug/L	1.0	0.32	1		02/04/22 13:28	79-01-6	
Vinyl chloride	13.4	ug/L	1.0	0.17	1		02/04/22 13:28	75-01-4	
cis-1,2-Dichloroethene	21.9	ug/L	1.0	0.47	1		02/04/22 13:28	156-59-2	
trans-1,2-Dichloroethene	1.0	ug/L	1.0	0.53	1		02/04/22 13:28	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/04/22 13:28	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		02/04/22 13:28	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 13:28	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Total Organic Carbon	6.4	mg/L	0.50	0.14	1		02/16/22 07:18	7440-44-0	

**Sample: MW-5**      **Lab ID: 40240206004**      Collected: 02/01/22 12:35      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified									
Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 10:14	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 10:14	74-85-1	
Methane	<0.58	ug/L	2.8	0.58	1		02/04/22 10:14	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C									
Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.086	ug/L	0.25	0.086	1	02/04/22 13:58	02/07/22 14:51	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	52	%	30-125		1	02/04/22 13:58	02/07/22 14:51		
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/07/22 09:25	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/07/22 09:25	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/07/22 09:25	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/07/22 09:25	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/07/22 09:25	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/07/22 09:25	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/07/22 09:25	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/07/22 09:25	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/07/22 09:25	156-60-5	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: MW-5**      **Lab ID: 40240206004**      Collected: 02/01/22 12:35      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/07/22 09:25	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		02/07/22 09:25	2199-69-1	
Toluene-d8 (S)	99	%	70-130		1		02/07/22 09:25	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	1.6	mg/L	0.50	0.14	1		02/16/22 07:33	7440-44-0	

**Sample: MW-6**      **Lab ID: 40240206005**      Collected: 02/01/22 13:15      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 10:21	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 10:21	74-85-1	
Methane	543	ug/L	11.2	2.3	4		02/04/22 12:29	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	21.7	ug/L	0.24	0.082	1	02/04/22 13:58	02/07/22 15:08	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	58	%	30-125		1	02/04/22 13:58	02/07/22 15:08		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	2.7	ug/L	1.0	0.30	1		02/04/22 13:47	71-55-6	
1,1-Dichloroethane	4.2	ug/L	1.0	0.30	1		02/04/22 13:47	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 13:47	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 13:47	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 13:47	127-18-4	
Trichloroethene	5.3	ug/L	1.0	0.32	1		02/04/22 13:47	79-01-6	
Vinyl chloride	0.80J	ug/L	1.0	0.17	1		02/04/22 13:47	75-01-4	
cis-1,2-Dichloroethene	16.6	ug/L	1.0	0.47	1		02/04/22 13:47	156-59-2	
trans-1,2-Dichloroethene	0.95J	ug/L	1.0	0.53	1		02/04/22 13:47	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		1		02/04/22 13:47	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		02/04/22 13:47	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 13:47	2037-26-5	

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### ANALYTICAL RESULTS

Project: CHW82710

Pace Project No.: 40240206

Sample: MW-6									
Lab ID: 40240206005									
Collected: 02/01/22 13:15									
Received: 02/03/22 10:00									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>5310C TOC</b>									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Total Organic Carbon	2.9	mg/L	0.50	0.14	1		02/16/22 07:48	7440-44-0	

Sample: MW-6 DUP									
Lab ID: 40240206006									
Collected: 02/01/22 13:15									
Received: 02/03/22 10:00									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified									
Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 10:28	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 10:28	74-85-1	
Methane	788	ug/L	11.2	2.3	4		02/04/22 12:36	74-82-8	

<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM									
Preparation Method: EPA Mod. 3510C									
Pace Analytical Services - Minneapolis									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
1,4-Dioxane (SIM)	20.1	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 15:25	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	52	%	30-125		1	02/04/22 13:58	02/07/22 15:25		

<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
1,1,1-Trichloroethane	2.4	ug/L	1.0	0.30	1		02/04/22 14:06	71-55-6	
1,1-Dichloroethane	3.9	ug/L	1.0	0.30	1		02/04/22 14:06	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 14:06	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 14:06	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 14:06	127-18-4	
Trichloroethene	5.0	ug/L	1.0	0.32	1		02/04/22 14:06	79-01-6	
Vinyl chloride	0.72J	ug/L	1.0	0.17	1		02/04/22 14:06	75-01-4	
cis-1,2-Dichloroethene	16.2	ug/L	1.0	0.47	1		02/04/22 14:06	156-59-2	
trans-1,2-Dichloroethene	0.92J	ug/L	1.0	0.53	1		02/04/22 14:06	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/04/22 14:06	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/04/22 14:06	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/04/22 14:06	2037-26-5	

<b>5310C TOC</b>									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon	2.9	mg/L	0.50	0.14	1		02/16/22 08:03	7440-44-0	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: MW-7**      **Lab ID: 40240206007**      Collected: 02/01/22 15:35      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 10:35	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 10:35	74-85-1	
Methane	19.5	ug/L	2.8	0.58	1		02/04/22 10:35	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 15:41	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	44	%	30-125		1	02/04/22 13:58	02/07/22 15:41		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	3.5	ug/L	2.5	0.76	2.5		02/04/22 17:31	71-55-6	
1,1-Dichloroethane	3.2	ug/L	2.5	0.74	2.5		02/04/22 17:31	75-34-3	
1,1-Dichloroethene	<1.5	ug/L	2.5	1.5	2.5		02/04/22 17:31	75-35-4	
Chloroethane	<3.4	ug/L	12.5	3.4	2.5		02/04/22 17:31	75-00-3	
Tetrachloroethene	6.7	ug/L	2.5	1.0	2.5		02/04/22 17:31	127-18-4	
Trichloroethene	14.4	ug/L	2.5	0.80	2.5		02/04/22 17:31	79-01-6	
Vinyl chloride	1.4J	ug/L	2.5	0.44	2.5		02/04/22 17:31	75-01-4	
cis-1,2-Dichloroethene	293	ug/L	2.5	1.2	2.5		02/04/22 17:31	156-59-2	
trans-1,2-Dichloroethene	14.5	ug/L	2.5	1.3	2.5		02/04/22 17:31	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	70-130		2.5		02/04/22 17:31	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		2.5		02/04/22 17:31	2199-69-1	
Toluene-d8 (S)	100	%	70-130		2.5		02/04/22 17:31	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	1.8	mg/L	0.50	0.14	1		02/16/22 08:38	7440-44-0	

**Sample: MW-8**      **Lab ID: 40240206008**      Collected: 01/31/22 14:05      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 10:42	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 10:42	74-85-1	
Methane	<0.58	ug/L	2.8	0.58	1		02/04/22 10:42	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.086	ug/L	0.25	0.086	1	02/04/22 13:58	02/07/22 15:58	123-91-1	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: MW-8**      **Lab ID: 40240206008**      Collected: 01/31/22 14:05      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	56	%	30-125		1	02/04/22 13:58	02/07/22 15:58		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 14:25	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 14:25	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 14:25	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 14:25	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 14:25	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 14:25	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/04/22 14:25	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/04/22 14:25	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 14:25	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	106	%	70-130		1		02/04/22 14:25	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		02/04/22 14:25	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/04/22 14:25	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	2.6	mg/L	0.50	0.14	1		02/16/22 08:55	7440-44-0	

**Sample: MW-9**      **Lab ID: 40240206009**      Collected: 01/31/22 15:30      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 10:49	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 10:49	74-85-1	
Methane	1.9J	ug/L	2.8	0.58	1		02/04/22 10:49	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 16:15	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	49	%	30-125		1	02/04/22 13:58	02/07/22 16:15		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 14:43	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 14:43	75-34-3	

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### ANALYTICAL RESULTS

Project: CHW82710

Pace Project No.: 40240206

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-9</b> <b>Lab ID: 40240206009</b> Collected: 01/31/22 15:30      Received: 02/03/22 10:00      Matrix: Water									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		02/04/22 14:43	75-35-4	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		02/04/22 14:43	75-00-3	
Tetrachloroethene	<b>&lt;0.41</b>	ug/L	1.0	0.41	1		02/04/22 14:43	127-18-4	
Trichloroethene	<b>&lt;0.32</b>	ug/L	1.0	0.32	1		02/04/22 14:43	79-01-6	
Vinyl chloride	<b>&lt;0.17</b>	ug/L	1.0	0.17	1		02/04/22 14:43	75-01-4	
cis-1,2-Dichloroethene	<b>&lt;0.47</b>	ug/L	1.0	0.47	1		02/04/22 14:43	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;0.53</b>	ug/L	1.0	0.53	1		02/04/22 14:43	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		1		02/04/22 14:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		02/04/22 14:43	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 14:43	2037-26-5	
<b>5310C TOC</b> Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	<b>3.0</b>	mg/L	0.50	0.14	1		02/16/22 09:11	7440-44-0	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-13</b> <b>Lab ID: 40240206010</b> Collected: 01/31/22 13:05      Received: 02/03/22 10:00      Matrix: Water									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<b>&lt;0.39</b>	ug/L	5.6	0.39	1		02/04/22 10:56	74-84-0	
Ethene	<b>&lt;0.25</b>	ug/L	5.0	0.25	1		02/04/22 10:56	74-85-1	
Methane	<b>44.4</b>	ug/L	2.8	0.58	1		02/04/22 10:56	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b> Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<b>&lt;0.086</b>	ug/L	0.25	0.086	1	02/04/22 13:58	02/07/22 16:32	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	59	%	30-125		1	02/04/22 13:58	02/07/22 16:32		
<b>8260 MSV</b> Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		02/04/22 16:17	71-55-6	
1,1-Dichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		02/04/22 16:17	75-34-3	
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		02/04/22 16:17	75-35-4	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		02/04/22 16:17	75-00-3	
Tetrachloroethene	<b>&lt;0.41</b>	ug/L	1.0	0.41	1		02/04/22 16:17	127-18-4	
Trichloroethene	<b>&lt;0.32</b>	ug/L	1.0	0.32	1		02/04/22 16:17	79-01-6	
Vinyl chloride	<b>&lt;0.17</b>	ug/L	1.0	0.17	1		02/04/22 16:17	75-01-4	
cis-1,2-Dichloroethene	<b>&lt;0.47</b>	ug/L	1.0	0.47	1		02/04/22 16:17	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;0.53</b>	ug/L	1.0	0.53	1		02/04/22 16:17	156-60-5	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: MW-13**      **Lab ID: 40240206010**      Collected: 01/31/22 13:05      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	106	%	70-130		1		02/04/22 16:17	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/04/22 16:17	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 16:17	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	1.1	mg/L	0.50	0.14	1		02/16/22 09:26	7440-44-0	

**Sample: MW-14**      **Lab ID: 40240206011**      Collected: 02/01/22 10:55      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 11:03	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/04/22 11:03	74-85-1	
Methane	<0.58	ug/L	2.8	0.58	1		02/04/22 11:03	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.082	ug/L	0.24	0.082	1	02/04/22 13:58	02/07/22 16:48	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	45	%	30-125		1	02/04/22 13:58	02/07/22 16:48		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 12:51	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 12:51	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 12:51	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 12:51	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 12:51	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 12:51	79-01-6	
Vinyl chloride	0.60J	ug/L	1.0	0.17	1		02/04/22 12:51	75-01-4	
cis-1,2-Dichloroethene	28.1	ug/L	1.0	0.47	1		02/04/22 12:51	156-59-2	
trans-1,2-Dichloroethene	2.5	ug/L	1.0	0.53	1		02/04/22 12:51	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		1		02/04/22 12:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/04/22 12:51	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/04/22 12:51	2037-26-5	

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### ANALYTICAL RESULTS

Project: CHW82710

Pace Project No.: 40240206

Sample: MW-14      Lab ID: 40240206011      Collected: 02/01/22 10:55      Received: 02/03/22 10:00      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	1.6	mg/L	0.50	0.14	1		02/16/22 09:44	7440-44-0	

Sample: PZ-1      Lab ID: 40240206012      Collected: 02/02/22 10:10      Received: 02/03/22 10:00      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 11:09	74-84-0	
Ethene	52.2	ug/L	5.0	0.25	1		02/04/22 11:09	74-85-1	
Methane	4.4	ug/L	2.8	0.58	1		02/04/22 11:09	74-82-8	

<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 17:39	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	32	%	30-125		1	02/04/22 13:58	02/07/22 17:39		

<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<3.0	ug/L	10.0	3.0	10		02/04/22 17:13	71-55-6	
1,1-Dichloroethane	<3.0	ug/L	10.0	3.0	10		02/04/22 17:13	75-34-3	
1,1-Dichloroethene	<5.8	ug/L	10.0	5.8	10		02/04/22 17:13	75-35-4	
Chloroethane	<13.8	ug/L	50.0	13.8	10		02/04/22 17:13	75-00-3	
Tetrachloroethene	162	ug/L	10.0	4.1	10		02/04/22 17:13	127-18-4	
Trichloroethene	66.5	ug/L	10.0	3.2	10		02/04/22 17:13	79-01-6	
Vinyl chloride	94.7	ug/L	10.0	1.7	10		02/04/22 17:13	75-01-4	
cis-1,2-Dichloroethene	1220	ug/L	10.0	4.7	10		02/04/22 17:13	156-59-2	
trans-1,2-Dichloroethene	31.1	ug/L	10.0	5.3	10		02/04/22 17:13	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		10		02/04/22 17:13	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		10		02/04/22 17:13	2199-69-1	
Toluene-d8 (S)	101	%	70-130		10		02/04/22 17:13	2037-26-5	

<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	4.5	mg/L	0.50	0.14	1		02/16/22 10:31	7440-44-0	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: PZ-1 DUP**      **Lab ID: 40240206013**      Collected: 02/02/22 10:10      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/04/22 11:16	74-84-0	
Ethene	52.0	ug/L	5.0	0.25	1		02/04/22 11:16	74-85-1	
Methane	4.2	ug/L	2.8	0.58	1		02/04/22 11:16	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 17:55	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	33	%	30-125		1	02/04/22 13:58	02/07/22 17:55		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<3.0	ug/L	10.0	3.0	10		02/04/22 16:54	71-55-6	
1,1-Dichloroethane	<3.0	ug/L	10.0	3.0	10		02/04/22 16:54	75-34-3	
1,1-Dichloroethene	<5.8	ug/L	10.0	5.8	10		02/04/22 16:54	75-35-4	
Chloroethane	<13.8	ug/L	50.0	13.8	10		02/04/22 16:54	75-00-3	
Tetrachloroethene	172	ug/L	10.0	4.1	10		02/04/22 16:54	127-18-4	
Trichloroethene	70.6	ug/L	10.0	3.2	10		02/04/22 16:54	79-01-6	
Vinyl chloride	98.1	ug/L	10.0	1.7	10		02/04/22 16:54	75-01-4	
cis-1,2-Dichloroethene	1320	ug/L	10.0	4.7	10		02/04/22 16:54	156-59-2	
trans-1,2-Dichloroethene	21.0	ug/L	10.0	5.3	10		02/04/22 16:54	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		10		02/04/22 16:54	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		10		02/04/22 16:54	2199-69-1	
Toluene-d8 (S)	101	%	70-130		10		02/04/22 16:54	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	4.6	mg/L	0.50	0.14	1		02/16/22 10:47	7440-44-0	

**Sample: PZ-1A**      **Lab ID: 40240206014**      Collected: 02/01/22 09:45      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/10/22 09:29	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/10/22 09:29	74-85-1	
Methane	<0.58	ug/L	2.8	0.58	1		02/10/22 09:29	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.086	ug/L	0.25	0.086	1	02/04/22 13:58	02/07/22 18:12	123-91-1	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: PZ-1A**      **Lab ID: 40240206014**      Collected: 02/01/22 09:45      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	52	%	30-125		1	02/04/22 13:58	02/07/22 18:12		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:02	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:02	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 15:02	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 15:02	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 15:02	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 15:02	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/04/22 15:02	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/04/22 15:02	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 15:02	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	70-130		1		02/04/22 15:02	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/04/22 15:02	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/04/22 15:02	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	0.88	mg/L	0.50	0.14	1		02/16/22 11:02	7440-44-0	

**Sample: PZ-2**      **Lab ID: 40240206015**      Collected: 01/31/22 15:50      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	2.2J	ug/L	5.6	0.39	1		02/10/22 09:35	74-84-0	
Ethene	0.32J	ug/L	5.0	0.25	1		02/10/22 09:35	74-85-1	
Methane	89.2	ug/L	2.8	0.58	1		02/10/22 09:35	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 18:29	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	46	%	30-125		1	02/04/22 13:58	02/07/22 18:29		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:21	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:21	75-34-3	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: PZ-2**      **Lab ID: 40240206015**      Collected: 01/31/22 15:50      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 15:21	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 15:21	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 15:21	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 15:21	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/04/22 15:21	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/04/22 15:21	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 15:21	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	70-130		1		02/04/22 15:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/04/22 15:21	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 15:21	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Total Organic Carbon	1.5	mg/L	0.50	0.14	1		02/16/22 11:38	7440-44-0	

**Sample: PZ-6**      **Lab ID: 40240206016**      Collected: 02/01/22 11:00      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified									
Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/10/22 09:42	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/10/22 09:42	74-85-1	
Methane	<0.58	ug/L	2.8	0.58	1		02/10/22 09:42	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C									
Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	<0.078	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 18:46	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	45	%	30-125		1	02/04/22 13:58	02/07/22 18:46		
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:39	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:39	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 15:39	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 15:39	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 15:39	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 15:39	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/04/22 15:39	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/04/22 15:39	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 15:39	156-60-5	

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### ANALYTICAL RESULTS

Project: CHW82710  
Pace Project No.: 40240206

**Sample: PZ-6**      **Lab ID: 40240206016**      Collected: 02/01/22 11:00      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	105	%	70-130		1		02/04/22 15:39	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		02/04/22 15:39	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/04/22 15:39	2037-26-5	
<b>5310C TOC</b>									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Total Organic Carbon	1.3	mg/L	0.50	0.14	1		02/16/22 11:54	7440-44-0	

**Sample: PZ-10**      **Lab ID: 40240206017**      Collected: 01/31/22 15:15      Received: 02/03/22 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Ethane	<0.39	ug/L	5.6	0.39	1		02/10/22 09:50	74-84-0	
Ethene	<0.25	ug/L	5.0	0.25	1		02/10/22 09:50	74-85-1	
Methane	1.2J	ug/L	2.8	0.58	1		02/10/22 09:50	74-82-8	
<b>8270E MSSV 14 Dioxane By SIM</b>									
Analytical Method: EPA 8270E by SIM      Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis									
1,4-Dioxane (SIM)	0.43	ug/L	0.23	0.078	1	02/04/22 13:58	02/07/22 19:02	123-91-1	
<b>Surrogates</b>									
1,4-Dioxane-d8 (S)	37	%	30-125		1	02/04/22 13:58	02/07/22 19:02		
<b>8260 MSV</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:58	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 15:58	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 15:58	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 15:58	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 15:58	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 15:58	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/04/22 15:58	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/04/22 15:58	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 15:58	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/04/22 15:58	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/04/22 15:58	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/04/22 15:58	2037-26-5	

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### ANALYTICAL RESULTS

Project: CHW82710

Pace Project No.: 40240206

Sample: PZ-10									
Lab ID: 40240206017									
Collected: 01/31/22 15:15									
Received: 02/03/22 10:00									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>5310C TOC</b>									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Total Organic Carbon	0.79	mg/L	0.50	0.14	1		02/16/22 12:09	7440-44-0	

Sample: TB01312022									
Lab ID: 40240206018									
Collected: 01/31/22 10:00									
Received: 02/03/22 10:00									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 12:33	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/04/22 12:33	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/04/22 12:33	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/04/22 12:33	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/04/22 12:33	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/04/22 12:33	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/04/22 12:33	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/04/22 12:33	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/04/22 12:33	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	106	%	70-130		1		02/04/22 12:33	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		1		02/04/22 12:33	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/04/22 12:33	2037-26-5	

Sample: EB02022022									
Lab ID: 40240206019									
Collected: 02/02/22 14:00									
Received: 02/03/22 10:00									
Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		02/08/22 16:28	71-55-6	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		02/08/22 16:28	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		02/08/22 16:28	75-35-4	
Chloroethane	<1.4	ug/L	5.0	1.4	1		02/08/22 16:28	75-00-3	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		02/08/22 16:28	127-18-4	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		02/08/22 16:28	79-01-6	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		02/08/22 16:28	75-01-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		02/08/22 16:28	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		02/08/22 16:28	156-60-5	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/08/22 16:28	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		02/08/22 16:28	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/08/22 16:28	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: CHW82710  
Pace Project No.: 40240206

QC Batch: 407636 Analysis Method: EPA 8015B Modified  
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40240206001, 40240206002, 40240206003, 40240206004, 40240206005, 40240206006, 40240206007, 40240206008, 40240206009, 40240206010, 40240206011, 40240206012, 40240206013

METHOD BLANK: 2350280 Matrix: Water  
Associated Lab Samples: 40240206001, 40240206002, 40240206003, 40240206004, 40240206005, 40240206006, 40240206007, 40240206008, 40240206009, 40240206010, 40240206011, 40240206012, 40240206013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.39	5.6	02/04/22 08:31	
Ethene	ug/L	<0.25	5.0	02/04/22 08:31	
Methane	ug/L	<0.58	2.8	02/04/22 08:31	

LABORATORY CONTROL SAMPLE & LCSD: 2350281 2350282

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	53.6	50.0	50.5	93	94	80-120	1	20	
Ethene	ug/L	50	46.3	46.9	93	94	80-120	1	20	
Methane	ug/L	28.6	27.5	27.6	96	97	80-121	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2350283 2350284

Parameter	Units	40240206011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<0.39	53.6	53.6	45.8	48.7	86	91	80-122	6	20	
Ethene	ug/L	<0.25	50	50	42.7	45.5	85	91	80-122	6	20	
Methane	ug/L	<0.58	28.6	28.6	25.3	26.9	88	94	10-200	6	20	

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### QUALITY CONTROL DATA

Project: CHW82710  
Pace Project No.: 40240206

QC Batch: 407980      Analysis Method: EPA 8015B Modified  
QC Batch Method: EPA 8015B Modified      Analysis Description: Methane, Ethane, Ethene GCV  
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40240206014, 40240206015, 40240206016, 40240206017

METHOD BLANK: 2351832      Matrix: Water  
Associated Lab Samples: 40240206014, 40240206015, 40240206016, 40240206017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.39	5.6	02/10/22 09:03	
Ethene	ug/L	<0.25	5.0	02/10/22 09:03	
Methane	ug/L	<0.58	2.8	02/10/22 09:03	

LABORATORY CONTROL SAMPLE & LCSD: 2351833

Parameter	Units	2351834								Max RPD	Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD			
Ethane	ug/L	53.6	48.0	50.4	90	94	80-120	5	20		
Ethene	ug/L	50	44.9	47.3	90	95	80-120	5	20		
Methane	ug/L	28.6	26.1	27.6	91	97	80-121	6	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2352013      2352014

Parameter	Units	2352013										Max RPD	Qual
		40240206014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD			
Ethane	ug/L	<0.39	53.6	53.6	48.5	47.5	91	89	80-122	2	20		
Ethene	ug/L	<0.25	50	50	45.0	44.8	90	90	80-122	0	20		
Methane	ug/L	<0.58	28.6	28.6	27.0	26.3	95	92	10-200	3	20		

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### QUALITY CONTROL DATA

Project: CHW82710

Pace Project No.: 40240206

QC Batch:	407622	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40240206001, 40240206002, 40240206003, 40240206004, 40240206005, 40240206006, 40240206007, 40240206008, 40240206009, 40240206010, 40240206011, 40240206012, 40240206013, 40240206014, 40240206015, 40240206016, 40240206017, 40240206018		

METHOD BLANK:	2350237	Matrix:	Water
Associated Lab Samples:	40240206001, 40240206002, 40240206003, 40240206004, 40240206005, 40240206006, 40240206007, 40240206008, 40240206009, 40240206010, 40240206011, 40240206012, 40240206013, 40240206014, 40240206015, 40240206016, 40240206017, 40240206018		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.30	1.0	02/04/22 10:22	
1,1-Dichloroethane	ug/L	<0.30	1.0	02/04/22 10:22	
1,1-Dichloroethene	ug/L	<0.58	1.0	02/04/22 10:22	
Chloroethane	ug/L	<1.4	5.0	02/04/22 10:22	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	02/04/22 10:22	
Tetrachloroethene	ug/L	<0.41	1.0	02/04/22 10:22	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	02/04/22 10:22	
Trichloroethene	ug/L	<0.32	1.0	02/04/22 10:22	
Vinyl chloride	ug/L	<0.17	1.0	02/04/22 10:22	
1,2-Dichlorobenzene-d4 (S)	%	107	70-130	02/04/22 10:22	
4-Bromofluorobenzene (S)	%	100	70-130	02/04/22 10:22	
Toluene-d8 (S)	%	100	70-130	02/04/22 10:22	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.1	106	70-130	
1,1-Dichloroethane	ug/L	50	50.1	100	68-132	
1,1-Dichloroethene	ug/L	50	59.5	119	85-126	
Chloroethane	ug/L	50	56.6	113	73-137	
cis-1,2-Dichloroethene	ug/L	50	49.4	99	70-130	
Tetrachloroethene	ug/L	50	52.6	105	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.9	98	70-130	
Trichloroethene	ug/L	50	52.2	104	70-130	
Vinyl chloride	ug/L	50	61.9	124	63-142	
1,2-Dichlorobenzene-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			107	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2350239		2350240								
Parameter	Units	40240206011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.30	50	50	51.3	51.3	103	103	70-130	0	20	

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### QUALITY CONTROL DATA

Project: CHW82710

Pace Project No.: 40240206

Parameter	Units	2350239		2350240		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40240206011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,1-Dichloroethane	ug/L	<0.30	50	50	48.7	48.6	97	97	68-132	0	20		
1,1-Dichloroethene	ug/L	<0.58	50	50	55.8	54.4	112	109	76-132	3	20		
Chloroethane	ug/L	<1.4	50	50	54.4	51.7	109	103	70-137	5	20		
cis-1,2-Dichloroethene	ug/L	28.1	50	50	79.2	78.2	102	100	70-130	1	20		
Tetrachloroethene	ug/L	<0.41	50	50	51.4	51.3	103	103	70-130	0	20		
trans-1,2-Dichloroethene	ug/L	2.5	50	50	51.9	50.8	99	97	70-134	2	20		
Trichloroethene	ug/L	<0.32	50	50	50.6	51.4	101	103	70-130	2	20		
Vinyl chloride	ug/L	0.60J	50	50	59.1	57.1	117	113	61-143	3	20		
1,2-Dichlorobenzene-d4 (S)	%						104	104	70-130				
4-Bromofluorobenzene (S)	%						108	109	70-130				
Toluene-d8 (S)	%						101	100	70-130				

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### QUALITY CONTROL DATA

Project: CHW82710  
Pace Project No.: 40240206

QC Batch: 407805	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV
	Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40240206019

METHOD BLANK: 2350890 Matrix: Water  
Associated Lab Samples: 40240206019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.30	1.0	02/08/22 14:12	
1,1-Dichloroethane	ug/L	<0.30	1.0	02/08/22 14:12	
1,1-Dichloroethene	ug/L	<0.58	1.0	02/08/22 14:12	
Chloroethane	ug/L	<1.4	5.0	02/08/22 14:12	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	02/08/22 14:12	
Tetrachloroethene	ug/L	<0.41	1.0	02/08/22 14:12	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	02/08/22 14:12	
Trichloroethene	ug/L	<0.32	1.0	02/08/22 14:12	
Vinyl chloride	ug/L	<0.17	1.0	02/08/22 14:12	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	02/08/22 14:12	
4-Bromofluorobenzene (S)	%	98	70-130	02/08/22 14:12	
Toluene-d8 (S)	%	101	70-130	02/08/22 14:12	

LABORATORY CONTROL SAMPLE: 2350891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.2	106	70-130	
1,1-Dichloroethane	ug/L	50	52.4	105	68-132	
1,1-Dichloroethene	ug/L	50	49.5	99	85-126	
Chloroethane	ug/L	50	46.9	94	73-137	
cis-1,2-Dichloroethene	ug/L	50	49.7	99	70-130	
Tetrachloroethene	ug/L	50	52.5	105	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.6	99	70-130	
Trichloroethene	ug/L	50	51.0	102	70-130	
Vinyl chloride	ug/L	50	47.8	96	63-142	
1,2-Dichlorobenzene-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			100	70-130	

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### QUALITY CONTROL DATA

Project: CHW82710  
Pace Project No.: 40240206

QC Batch:	408341	Analysis Method:	SM 5310C
QC Batch Method:	SM 5310C	Analysis Description:	5310C Total Organic Carbon
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40240206001, 40240206002, 40240206003, 40240206004, 40240206005, 40240206006, 40240206007, 40240206008, 40240206009, 40240206010, 40240206011, 40240206012, 40240206013, 40240206014, 40240206015, 40240206016, 40240206017

METHOD BLANK: 2353741 Matrix: Water  
Associated Lab Samples: 40240206001, 40240206002, 40240206003, 40240206004, 40240206005, 40240206006, 40240206007, 40240206008, 40240206009, 40240206010, 40240206011, 40240206012, 40240206013, 40240206014, 40240206015, 40240206016, 40240206017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.14	0.50	02/16/22 05:40	

LABORATORY CONTROL SAMPLE: 2353742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	12.5	11.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2353743 2353744

Parameter	Units	40240206001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.7	6	6	8.2	8.3	92	94	80-120	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2353745 2353746

Parameter	Units	40240206011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.6	6	6	6.9	7.0	89	91	80-120	2	10	

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## QUALIFIERS

Project: CHW82710

Pace Project No.: 40240206

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CHW82710  
Pace Project No.: 40240206

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40240206001	MW-1	EPA 8015B Modified	407636		
40240206002	MW-2	EPA 8015B Modified	407636		
40240206003	MW-4	EPA 8015B Modified	407636		
40240206004	MW-5	EPA 8015B Modified	407636		
40240206005	MW-6	EPA 8015B Modified	407636		
40240206006	MW-6 DUP	EPA 8015B Modified	407636		
40240206007	MW-7	EPA 8015B Modified	407636		
40240206008	MW-8	EPA 8015B Modified	407636		
40240206009	MW-9	EPA 8015B Modified	407636		
40240206010	MW-13	EPA 8015B Modified	407636		
40240206011	MW-14	EPA 8015B Modified	407636		
40240206012	PZ-1	EPA 8015B Modified	407636		
40240206013	PZ-1 DUP	EPA 8015B Modified	407636		
40240206014	PZ-1A	EPA 8015B Modified	407980		
40240206015	PZ-2	EPA 8015B Modified	407980		
40240206016	PZ-6	EPA 8015B Modified	407980		
40240206017	PZ-10	EPA 8015B Modified	407980		
40240206001	MW-1	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206002	MW-2	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206003	MW-4	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206004	MW-5	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206005	MW-6	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206006	MW-6 DUP	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206007	MW-7	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206008	MW-8	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206009	MW-9	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206010	MW-13	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206011	MW-14	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206012	PZ-1	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206013	PZ-1 DUP	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206014	PZ-1A	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206015	PZ-2	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206016	PZ-6	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206017	PZ-10	EPA Mod. 3510C	797273	EPA 8270E by SIM	797486
40240206001	MW-1	EPA 8260	407622		
40240206002	MW-2	EPA 8260	407622		
40240206003	MW-4	EPA 8260	407622		
40240206004	MW-5	EPA 8260	407622		
40240206005	MW-6	EPA 8260	407622		
40240206006	MW-6 DUP	EPA 8260	407622		
40240206007	MW-7	EPA 8260	407622		
40240206008	MW-8	EPA 8260	407622		
40240206009	MW-9	EPA 8260	407622		
40240206010	MW-13	EPA 8260	407622		
40240206011	MW-14	EPA 8260	407622		
40240206012	PZ-1	EPA 8260	407622		
40240206013	PZ-1 DUP	EPA 8260	407622		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CHW82710  
Pace Project No.: 40240206

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40240206014	PZ-1A	EPA 8260	407622		
40240206015	PZ-2	EPA 8260	407622		
40240206016	PZ-6	EPA 8260	407622		
40240206017	PZ-10	EPA 8260	407622		
40240206018	TB01312022	EPA 8260	407622		
40240206019	EB02022022	EPA 8260	407805		
40240206001	MW-1	SM 5310C	408341		
40240206002	MW-2	SM 5310C	408341		
40240206003	MW-4	SM 5310C	408341		
40240206004	MW-5	SM 5310C	408341		
40240206005	MW-6	SM 5310C	408341		
40240206006	MW-6 DUP	SM 5310C	408341		
40240206007	MW-7	SM 5310C	408341		
40240206008	MW-8	SM 5310C	408341		
40240206009	MW-9	SM 5310C	408341		
40240206010	MW-13	SM 5310C	408341		
40240206011	MW-14	SM 5310C	408341		
40240206012	PZ-1	SM 5310C	408341		
40240206013	PZ-1 DUP	SM 5310C	408341		
40240206014	PZ-1A	SM 5310C	408341		
40240206015	PZ-2	SM 5310C	408341		
40240206016	PZ-6	SM 5310C	408341		
40240206017	PZ-10	SM 5310C	408341		

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Client Name: Geosyntec

Sample Preservation Receipt Form

Project # 10740206

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Pace Lab #	Glass							Plastic					Vials					Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)			
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T								ZPLC	GN	
001			1			2										6																		2.5 / 5 / 10
002			1			2										6																		2.5 / 5 / 10
003			1			2										6																		2.5 / 5 / 10
004			1			2										6																		2.5 / 5 / 10
005			1			2										6																		2.5 / 5 / 10
006			1			2										6																		2.5 / 5 / 10
007			1			2										6																		2.5 / 5 / 10
008			1			2										6																		2.5 / 5 / 10
009			1			2										6																		2.5 / 5 / 10
010			1			2										6																		2.5 / 5 / 10
011			3			6										8																		2.5 / 5 / 10
012			1			2										6																		2.5 / 5 / 10
013			1			2										6																		2.5 / 5 / 10
014			1			2										6																		2.5 / 5 / 10
015			1			2										6																		2.5 / 5 / 10
016			1			2										6																		2.5 / 5 / 10
017			1			2										6																		2.5 / 5 / 10
018																2																		2.5 / 5 / 10
019																3																		2.5 / 5 / 10
020																																		2.5 / 5 / 10

2/3/22 *[Signature]*

Exceptions to preservation check:  VOA,  Coliform,  TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9A	40 mL clear ascorbic	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG5U	100 mL amber glass unpres			VG9D	40 mL clear vial DI	ZPLC	ziploc bag
AG2S	500 mL amber glass H2SO4					GN	
BG3U	250 mL clear glass unpres						



**Sample Condition Upon Receipt Form (SCUR)**

Client Name: Geosyntec

Project #: \_\_\_\_\_

**WO# : 40240206**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR-105 Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3.3 / Corr: 3.3

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 2-3-22 / Initials: SKW  
Labeled By Initials: MP

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>478</u>		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments   
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir



## Memorandum

Date: March 21, 2022  
To: Jeremiah Johnson  
From: Jennifer Pinion  
CC: J. Caprio  
**Subject: Stage 2A Data Validation – Level II Data Deliverable – Pace Analytical Services Project Number: 40240206**

**SITE: Milwaukee Die Casting Company Site, Milwaukee, WI**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fifteen water samples including one sample for matrix spike/matrix spike duplicate (MS/MSD) analysis, two field duplicate samples, one trip blank and one equipment blank, collected between January 31 and February 02, 2022, during a Milwaukee Die Casting Company Site sampling event. The analyses were performed by Pace Analytical Services, LLC, Green Bay, Wisconsin and Minneapolis Minnesota. The samples were analyzed for the following tests:

- Volatile Organic Compounds (VOCs) by United States (US) Environmental Protection Agency (EPA) Method 8260
- 1,4-Dioxane by US EPA Methods 3510C/8270E Modified using Selective Ion Monitoring (SIM)
- Dissolved Gases (Methane, Ethane, Ethene) by US EPA Method 8015B Modified
- Total Organic Carbon (TOC) by Standard Method (SM) 5310C

### EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. The qualified data should be used within the limitations of the qualifications.

The data were reviewed based on the pertinent methods referenced by the laboratory report, professional and technical judgment and the following documents:

- Additional Groundwater Investigation Work Plan and Groundwater Monitoring Plan, Milwaukee Die Casting Company Site, 4132 North Holton Street. Milwaukee, Wisconsin, June 15, 2021

- US EPA National Functional Guidelines for Organic Superfund Methods Data Review, November 2020 (USEPA- 540-R-20-005)

The following samples were analyzed in the data set and validated at a Stage 2A level:

Laboratory IDs	Client IDs
40240206001	MW-1
40240206002	MW-2
40240206003	MW-4
40240206004	MW-5
40240206005	MW-6
40240206006	MW-6 DUP
40240206007	MW-7
40240206008	MW-8
40240206009	MW-9
40240206010	MW-13

Laboratory IDs	Client IDs
40240206011	MW-14
40240206012	PZ-1
40240206013	PZ-1 DUP
40240206014	PZ-1A
40240206015	PZ-2
40240206016	PZ-6
40240206017	PZ-10
40240206018	TB01312022
40240206019	EB02022022

The samples were received at the laboratory at 3.0°C within the temperature criteria of 0-6°C. No sample preservation issues were noted by the laboratory.

The first sample *received by* signature, date and time were not recorded on the chain of custody (COC).

Incorrect error corrections executed by the lab were observed on the COC, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

## 1.0 VOLATILE ORGANIC COMPOUNDS

The samples were analyzed for VOCs per US EPA Method 8260.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine the impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Trip Blank
- ✓ Equipment Blank

- ✓ Surrogates
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

### **1.1 Overall Assessment**

The VOC data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

### **1.2 Holding Times**

The holding time for the VOC analyses of a preserved water sample is 14 days from collection to analysis. The holding times were met for the sample analyses.

### **1.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 407622 and 407805). VOCs were not detected in the method blanks above the limits of detection (LODs).

### **1.4 Matrix Spike/Matrix Spike Duplicate**

One sample set specific MS/MSD pair was reported, using sample MW-14. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

### **1.5 Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### **1.6 Trip Blank**

One trip blank was submitted with the sample set, TB01312022. VOCs were not detected in the trip blank greater than the LODs.

**1.7 Equipment Blank**

One equipment blank was collected with the sample set, EB02022022. VOCs were not detected in the equipment blank greater than the LODs.

**1.8 Surrogates**

The surrogate recoveries were within the laboratory specified acceptance criteria.

**1.9 Field Duplicate**

Two field duplicate samples, MW-6 DUP and PZ-1 DUP were collected with the sample set. Acceptable precision (RPD  $\leq$ 30%) was demonstrated between the field duplicates and the original samples, MW-6 and PZ-1, respectively, with the following exceptions.

The RPD for trans-1,2-dichloroethene in the field duplicate pair PZ-1/PZ-1 DUP was greater than 30%. Therefore, based on professional and technical judgement, the concentrations of trans-1,2-dichloroethene in the field duplicate pair were J qualified as estimated.

Sample ID	Compound	Laboratory Result ( $\mu\text{g/L}$ )	Laboratory Flag	RPD	Validation Result ( $\mu\text{g/L}$ )	Validation Qualifier*	Reason Code**
PZ-1	trans-1,2-Dichloroethene	31.1	NA	39	31.1	J	7
PZ-1 DUP	trans-1,2-Dichloroethene	21.0	NA		21.0	J	7

$\mu\text{g/L}$ -microgram per liter

NA-not applicable

RPD-relative percent difference

\* Validation qualifiers are defined in Attachment 1 at the end of this report

\*\*Reason codes are defined in Attachment 2 at the end of this report

**1.10 Sensitivity**

The samples were reported to the LODs. Elevated non-detect results were reported due to the dilutions analyzed.

**1.11 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **2.0 1,4-DIOXANE**

The samples were analyzed for 1,4-dioxane per US EPA Methods 3510C/8270E SIM.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine the impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Surrogates
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

### **2.1 Overall Assessment**

The 1,4-dioxane data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

### **2.2 Holding Times**

The holding time for the 1,4-dioxane analyses of water samples is 7 days from collection to extraction and 40 days from extraction to analysis. The holding times were met for the sample analyses.

### **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 797273). 1,4-dioxane was not detected greater than the LOD in the method blank.

#### **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample MW-14. The recovery and RPD results were within the laboratory specified acceptance criteria.

#### **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

#### **2.6 Surrogates**

The surrogate recoveries were within the laboratory specified acceptance criteria, with the following exception.

The surrogate recovery of 1,4-dioxane d8 in sample MW-1 was high and outside the laboratory specified acceptance criteria. Since 1,4-dioxane was not detected in sample MW-1, no qualifications were applied to the data.

#### **2.7 Field Duplicate**

Two field duplicate samples, MW-6 DUP and PZ-1 DUP were collected with the sample set. Acceptable precision (RPD  $\leq$ 30%) was demonstrated between the field duplicates and the original samples, MW-6 and PZ-1, respectively.

#### **2.8 Sensitivity**

The samples were reported to the LODs. Elevated non-detect results were not reported.

#### **2.9 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

### **3.0 DISSOLVED GASES**

The samples were analyzed for dissolved gases (methane, ethane and ethene) per US EPA Method 8015B Modified.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine the impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

### **3.1 Overall Assessment**

The dissolved gas data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

### **3.2 Holding Times and Preservation**

The holding time for the dissolved gas analyses of a preserved water sample is 14 days from collection to analysis. The holding times were met for the sample analyses.

### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 407636 and 407980). Dissolved gases were not detected in the method blanks above the LODs.

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples MW-14 and PZ-1A. The recovery and RPD results were within the laboratory specified acceptance criteria.

### 3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported. The recovery and RPD results were within the laboratory specified acceptance criteria.

### 3.6 Field Duplicate

Two field duplicate samples, MW-6 DUP and PZ-1 DUP were collected with the sample set. Acceptable precision (RPD  $\leq$ 30%) was demonstrated between the field duplicates and the original samples, MW-6 and PZ-1, respectively, with the following exception.

The RPD for methane in the field duplicate pair MW-6/MW-6 DUP was greater than 30%. Therefore, the concentrations of methane in the field duplicate pair were J qualified as estimated.

Sample ID	Compound	Laboratory Result ( $\mu\text{g/L}$ )	Laboratory Flag	RPD	Validation Result ( $\mu\text{g/L}$ )	Validation Qualifier*	Reason Code**
MW-6	Methane	543	NA	37	543	J	7
MW-6 DUP	Methane	788	NA		788	J	7

$\mu\text{g/L}$ -microgram per liter

NA-not applicable

RPD-relative percent difference

### 3.7 Sensitivity

The samples were reported to the LODs. Elevated non-detect results were not reported.

### 3.8 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## 4.0 TOTAL ORGANIC CARBON

The samples were analyzed for TOC by SM 5310C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised over the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment



- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

#### **4.1 Overall Assessment**

The TOC data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

#### **4.2 Holding Times**

The holding time for the TOC analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

#### **4.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 408341). TOC was not detected greater than the LOD in the method blank.

#### **4.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples MW-1 and MW-14. The recovery and RPD results were within the laboratory specified acceptance criteria.

#### **4.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery results were within the laboratory specified acceptance criteria.

#### **4.6 Field Duplicate**

Two field duplicate samples, MW-6 DUP and PZ-1 DUP were collected with the sample set. Acceptable precision ( $RPD \leq 30\%$ ) was demonstrated between the field duplicates and the original samples, MW-6 and PZ-1, respectively.

#### **4.7 Sensitivity**

The samples were reported to the LODs. Elevated non-detect results were not reported.

#### **4.8 Electronic Data Deliverable Review**

Results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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\* \* \* \* \*

**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

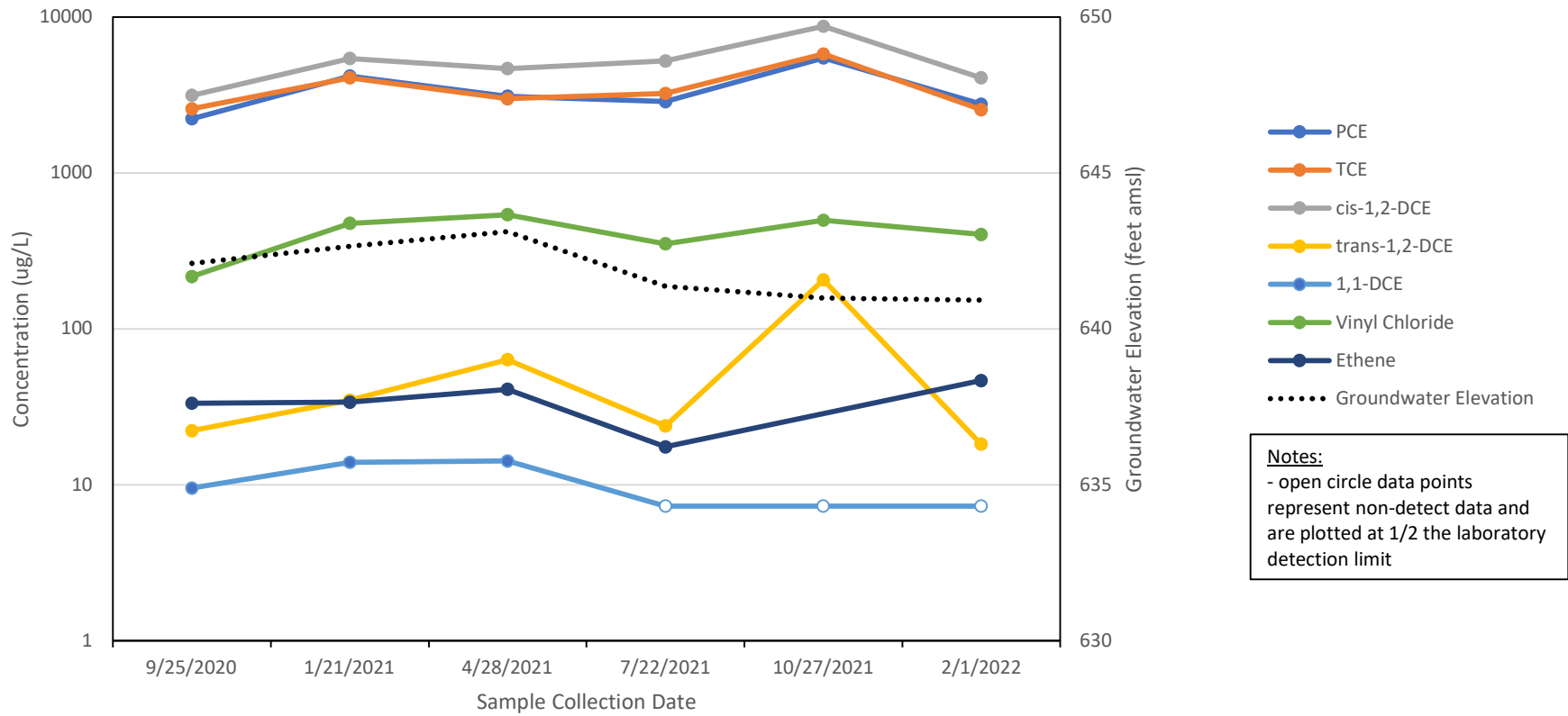
LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

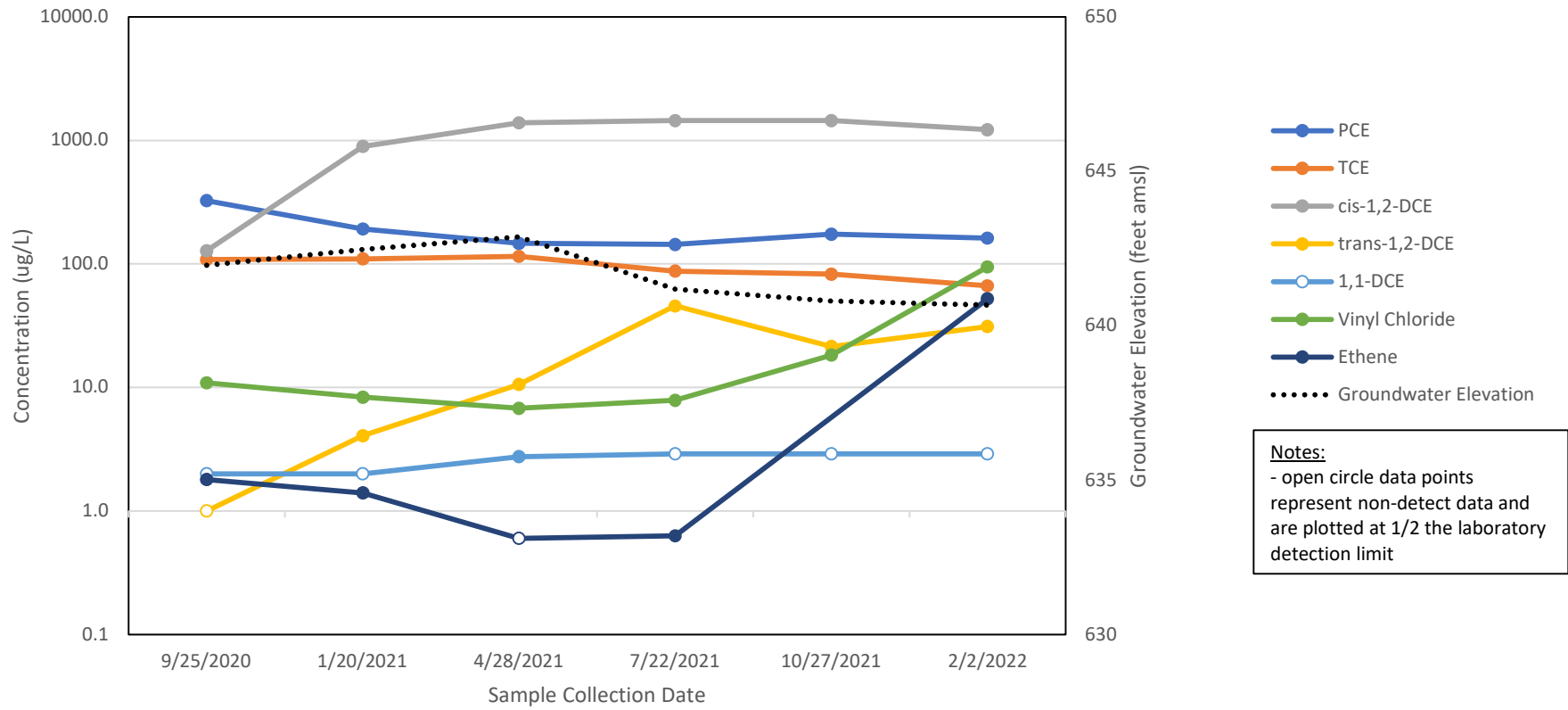
# **ATTACHMENT 6**

## **Data Trend Plots**

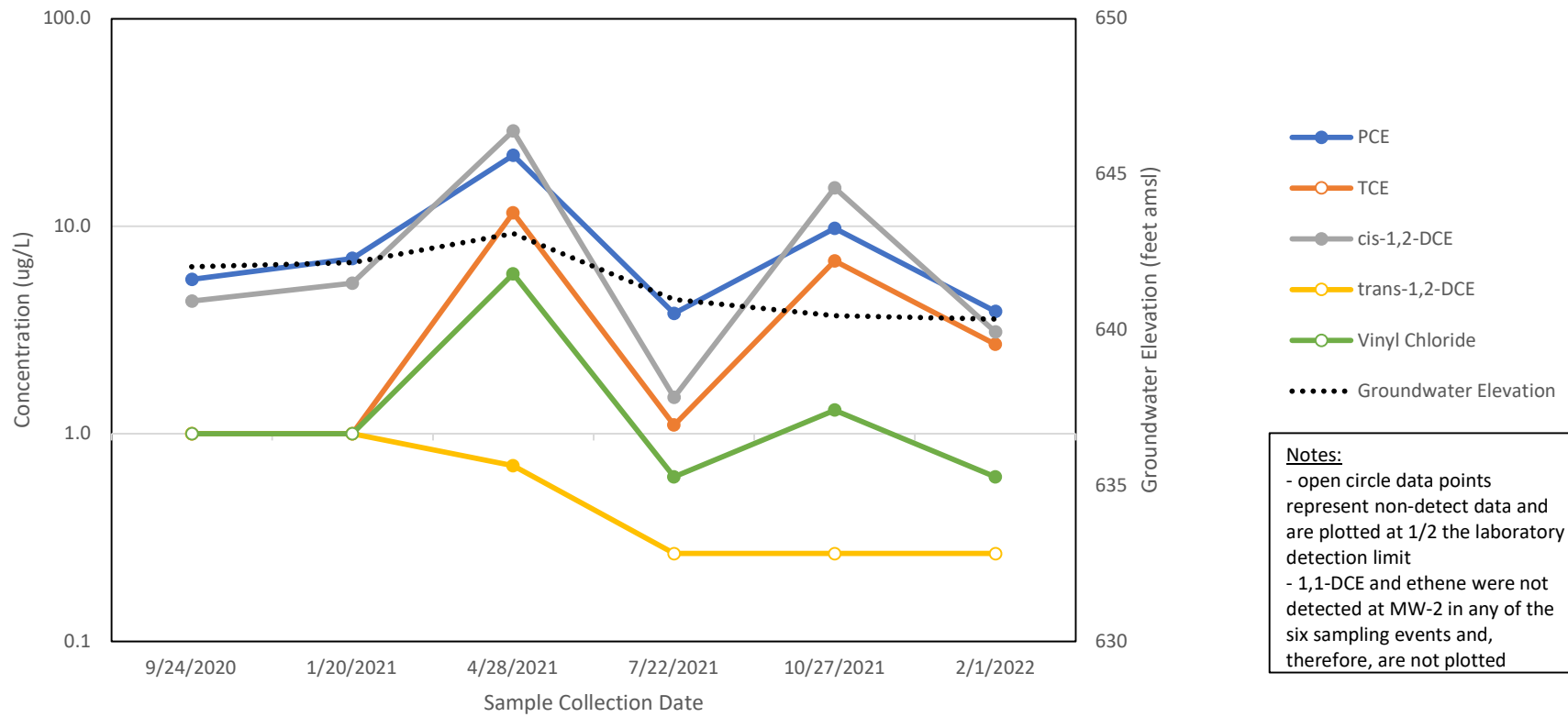
MW-1  
 CVOC Concentration and Groundwater Elevation v. Time Plot



PZ-1  
 CVOC Concentration and Groundwater Elevation v. Time Plot

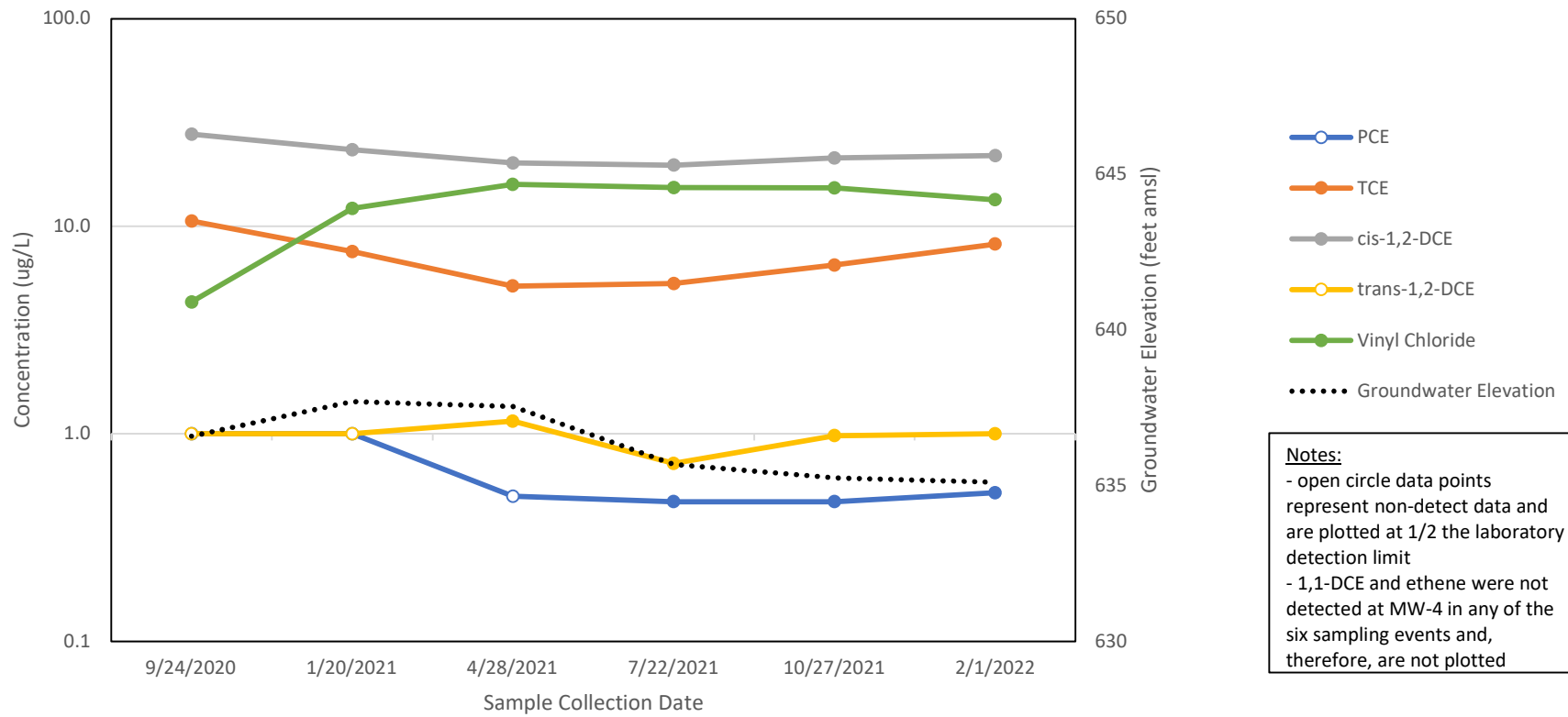


MW-2  
 CVOC Concentration and Groundwater Elevation v. Time Plot

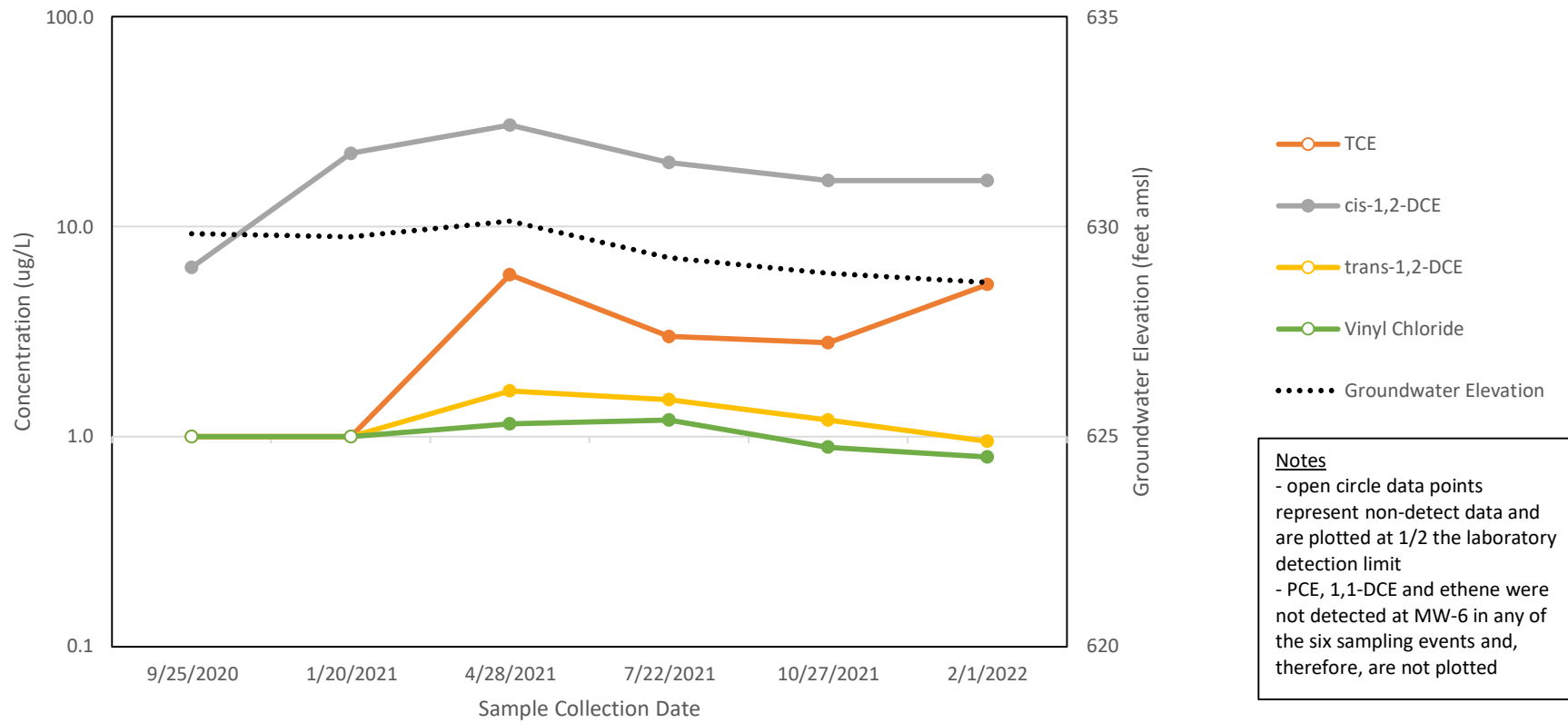




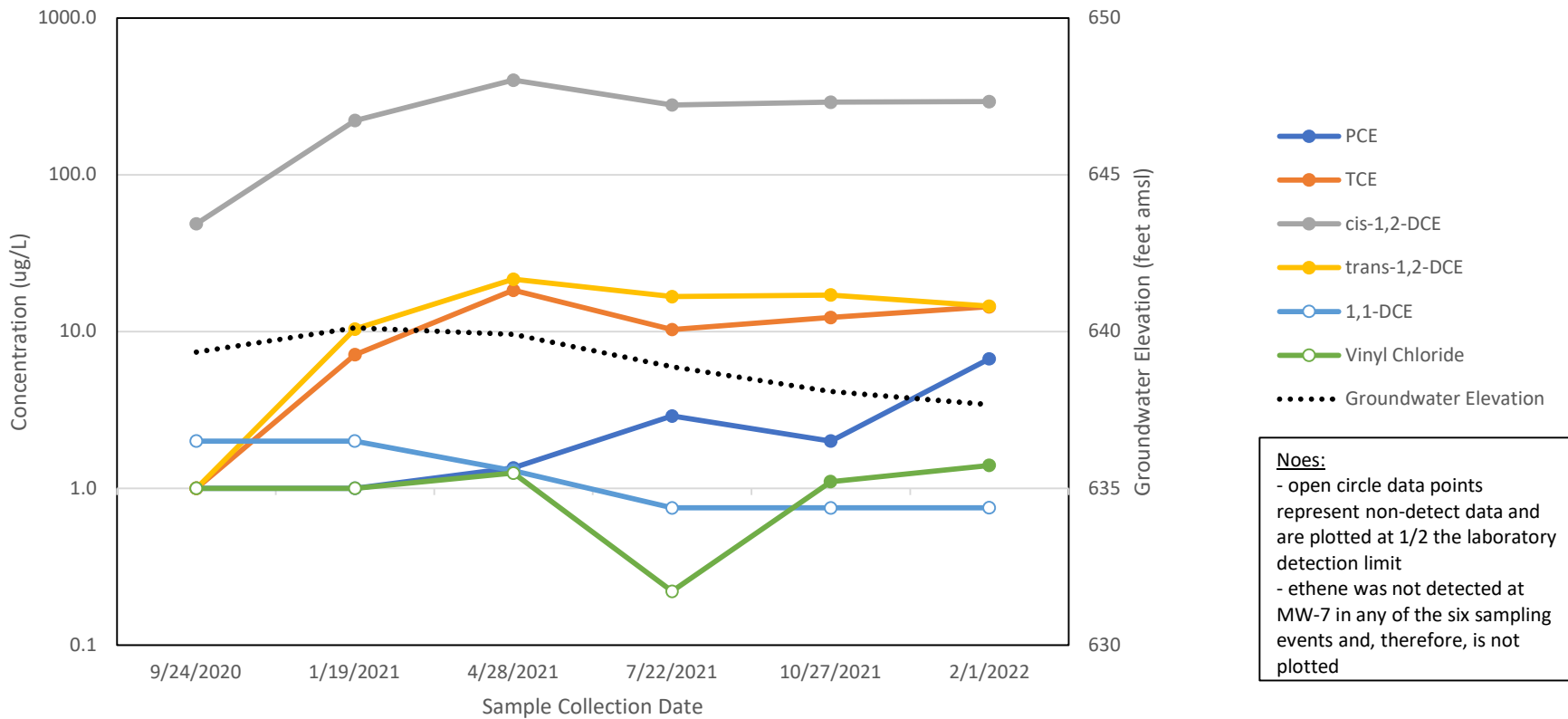
MW-4  
 CVOC Concentration and Groundwater Elevation v. Time Plot



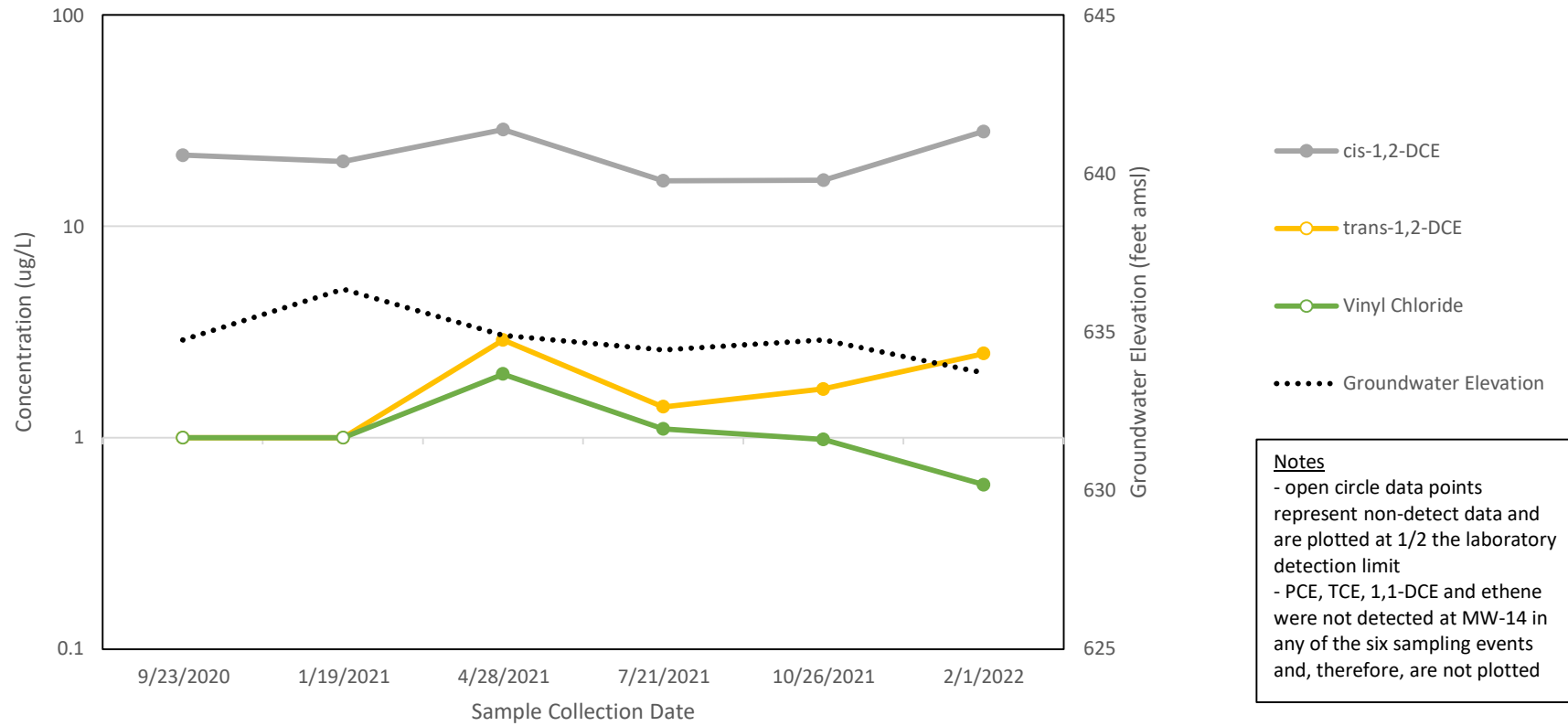
MW-6  
 CVOC Concentration and Groundwater Elevation v. Time Plot



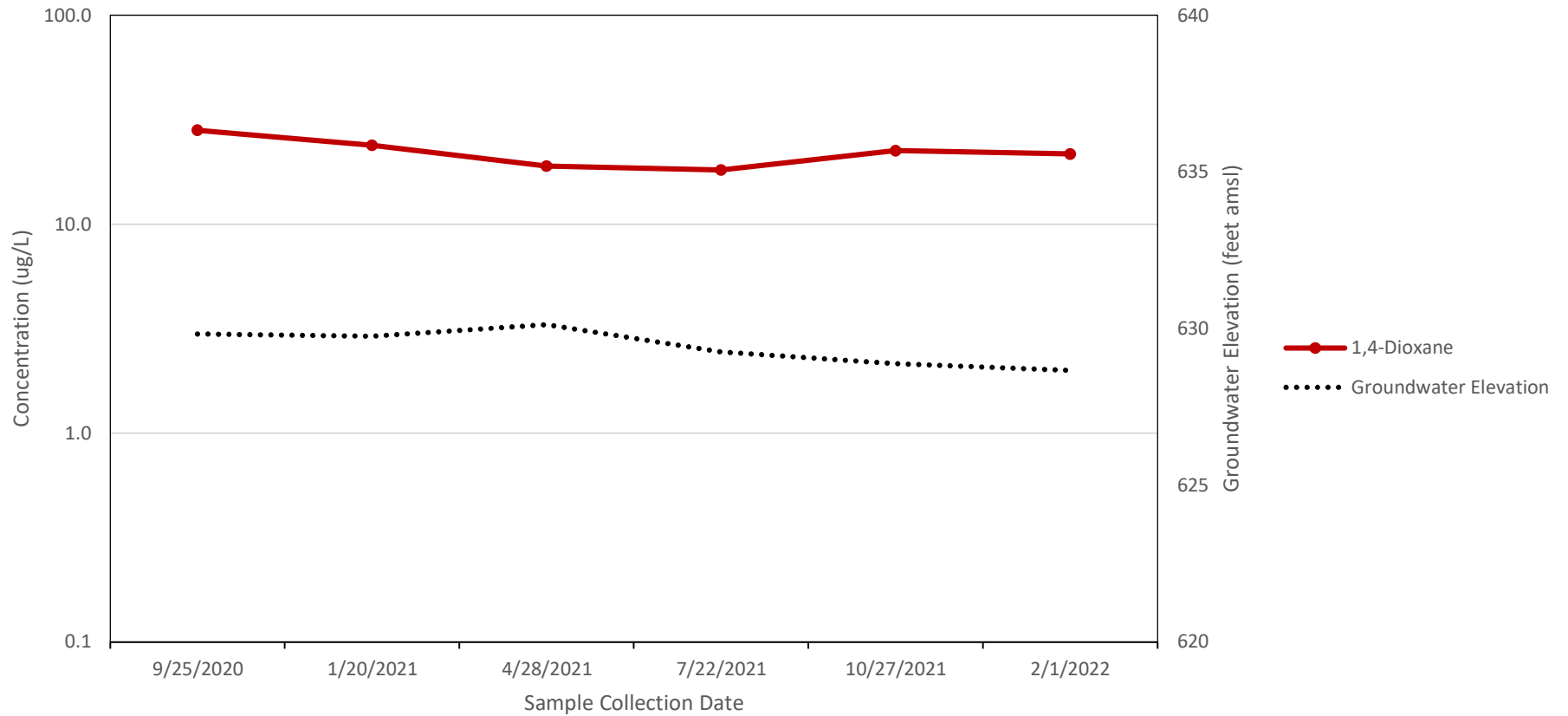
MW-7  
 CVOC Concentration and Groundwater Elevation v. Time Plot



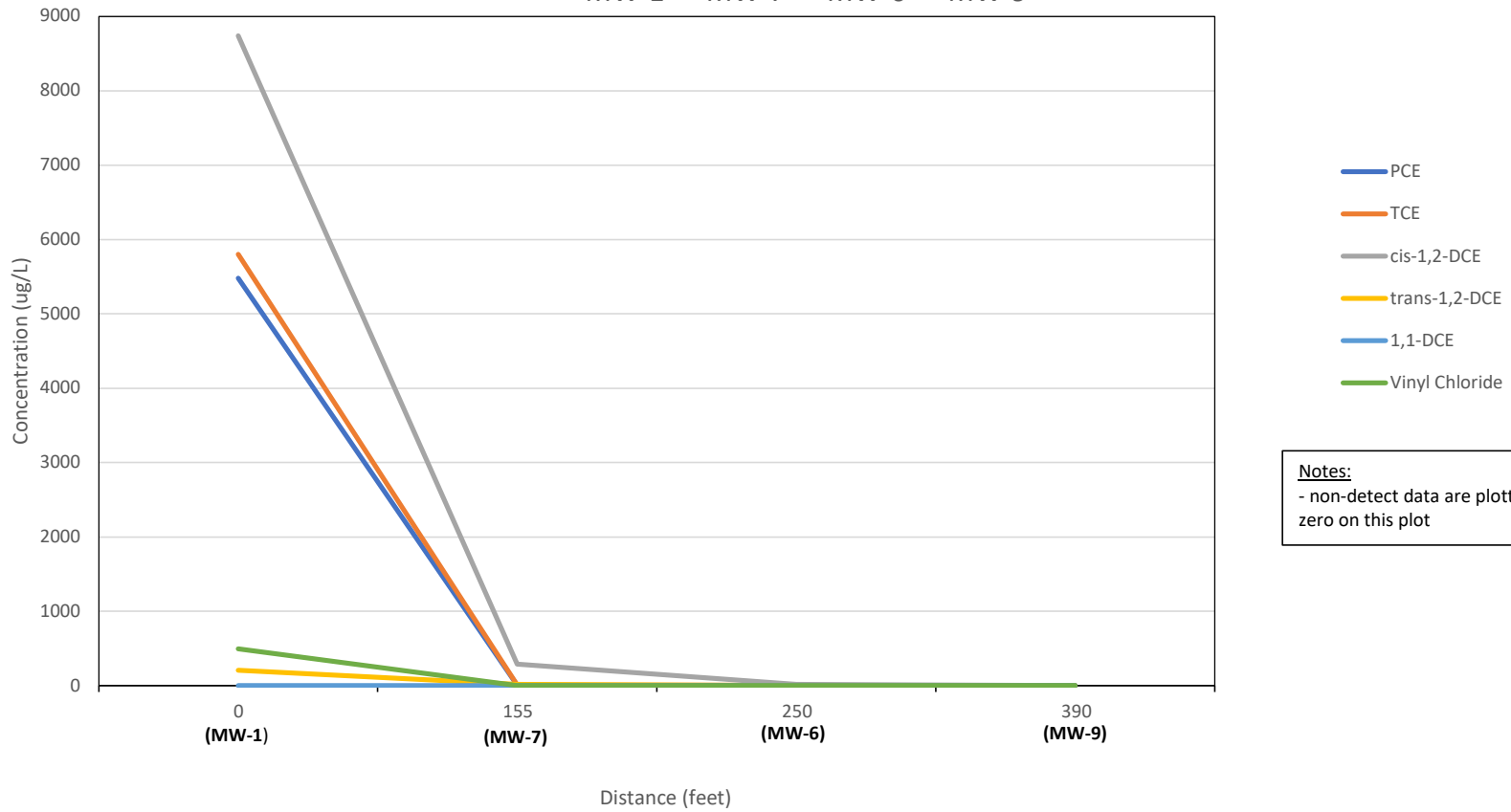
MW-14  
 CVOC Concentration and Groundwater Elevation v. Time Plot



MW-6  
1,4-Dioxane Concentration and Groundwater Elevation v. Time Plot

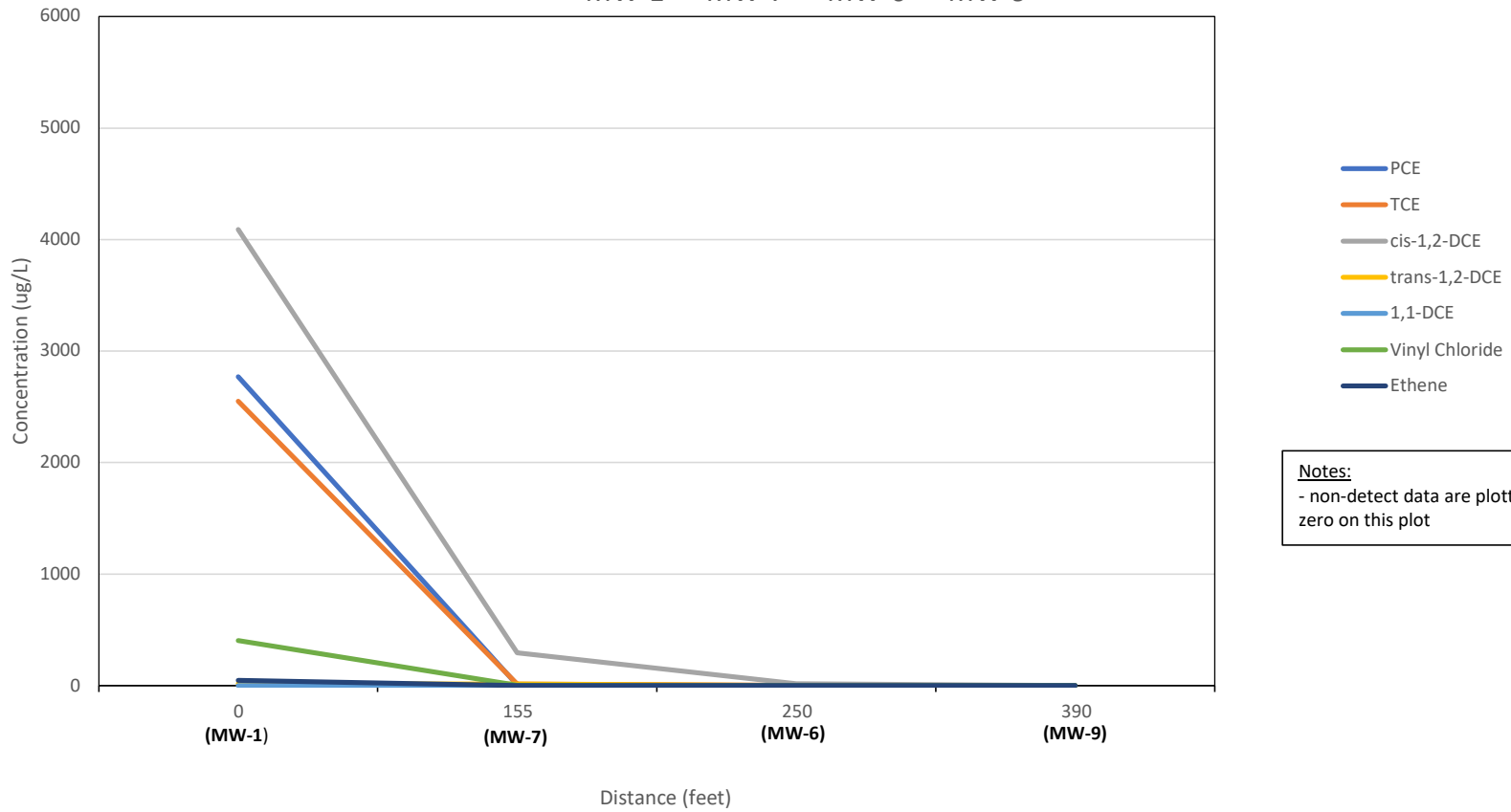


CVOC Concentration v. Distance Plot - October 2021  
 Primary Post-Removal Action Residual CVOC Groundwater Flow Path  
 MW-1 ⇨ MW-7 ⇨ MW-6 ⇨ MW-9



**Notes:**  
 - non-detect data are plotted at zero on this plot

CVOC Concentration v. Distance Plot - January 2022  
 Primary Post-Removal Action Residual CVOC Groundwater Flow Path  
 MW-1 ⇨ MW-7 ⇨ MW-6 ⇨ MW-9



**Notes:**  
 - non-detect data are plotted at zero on this plot

# **ATTACHMENT 7**

## **IDW Disposal Documentation**

**Groundwater Monitoring Progress Report**  
Milwaukee Die Casting Company Site  
4132 North Holton Street  
Milwaukee, Wisconsin  
WDNR BRRS # 02-41-00023  
WDNR FID # 241228240





Please print or type

Form Approved OMB No 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1 Generator ID Number <b>W I D 0 0 6 1 0 2 3 0 5</b>	2 Page 1 of <b>1</b>	3 Emergency Response Phone <b>(800) 326-1221</b>	4 Manifest Tracking Number <b>001997292 VES</b>		
5 Generator's Name and Mailing Address <b>FORMER MILWAUKEE DIE CAST 4132 N HOLSTON ST MILWAUKEE, WI 53212</b>				Generator's Site Address (if different than mailing address): <b>SAME</b>			
Generator's Phone: <del>414-278-9993</del> <b>262-292-6090</b>							
6 Transporter 1 Company Name <b>VEOLIA ES TECHNICAL SOLUTIONS</b>				U.S. EPA ID Number <b>N J D 0 8 0 6 3 1 3 6 9</b>			
7 Transporter 2 Company Name				U.S. EPA ID Number			
8 Designated Facility Name and Site Address <b>VEOLIA ES TECHNICAL SOLUTIONS, W124 N9451 BOUNDARY MENOMONEE FALLS, WI 53051</b>				U.S. EPA ID Number <b>W I D 0 0 3 9 6 7 1 4 8</b>			
Facility's Phone <b>262 255-6655</b>							
9a HM	9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10 Containers		11 Total Quantity	12 Unit Wt./Vol	13 Waste Codes	
		No	Type				
X	1 NA3082, HAZARDOUS WASTE, LIQUID, n.o.s., (TRICHLOROETHENE, VINYL CHLORIDE), 9, III	1	D M	150	P	F002	
X	2 NA3082, HAZARDOUS WASTE, LIQUID, n.o.s., (TRICHLOROETHENE, VINYL CHLORIDE), 9, III	1	D M	350	P	F002 D039	D040 D043
	3 NON-HAZARDOUS WATER, n.o.s., (PURGE WATER)	3	D M	250	P	NONE	
	4						
14 Special Handling Instructions and Additional Information <b>ER Service Contracted by HERITAGE +OU36190 *V8* + Contract returned by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf +- 1) D-36 2) D-37 3) D-33 D-34 D-35</b>							
15 GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name <b>MARY JO ANZIA AS AGENT FOR PHARMACIA LLC</b>				Signature <i>Mary Jo Anzia</i>		Month Day Year <b>10 12 21</b>	
16 International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. <input type="checkbox"/> Port of entry/exit: <input type="checkbox"/> Date leaving U.S.							
17 Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name <b>Alex Swartzlander</b>				Signature <i>Alex Swartzlander</i>		Month Day Year <b>10 12 21</b>	
Transporter 2 Printed/Typed Name				Signature		Month Day Year	
18 Discrepancy							
18a Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number							
18b Alternate Facility (or Generator)				U.S. EPA ID Number			
Facility's Phone							
18c Signature of Alternate Facility (or Generator)						Month Day Year	
19 Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1 H141		2 H141		3 H141		4	
20 Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a							
Printed/Typed Name <b>Michelle Martinson</b>				Signature <i>Michelle Martinson</i>		Month Day Year <b>10 14 21</b>	

136 101421

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY



Please print or type.

Form Approved OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>WI D006102105</b>	2. Page 1 of <b>7</b>	3. Emergency Response Phone <b>(800) 326-1723</b>	4. Manifest Tracking Number <b>002039384 VES</b>		
5. Generator's Name and Mailing Address <b>FORMER MILWACKER DIE CAST 4132 NORTH BOLTON STREET MILWACKER, WI 53212</b> Generator's Phone: <b>262-292-6080</b>				Generator's Site Address (if different than mailing address) <b>SAME</b>			
6. Transporter 1 Company Name <b>VEOLIA EN TECHNICAL SOLUTIONS</b>				U.S. EPA ID Number <b>WI D00611169</b>			
7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address <b>VEOLIA EN TECHNICAL SOLUTIONS, W124 N9451 BOUNDARY MENOMONIE FALLS, WI 53051</b> Facility's Phone: <b>262-266-6015</b>				U.S. EPA ID Number <b>WI D003947144</b>			
<b>GENERATOR</b>	9a. H-M	9b. U.S. DOT Description including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	X	NA3077, HAZARDOUS WASTE, SOLID, 2.01, (TETRACHLOROETHYLENE, 9, III, BQ) (D039)	2	DM	1100	P	D039 D039 <i>MJA</i>
	X	NA3082, HAZARDOUS WASTE, LIQUID, 2.01, (TRICHLOROETHENE, VINYL CHLORIDE, 9, III)	1	DM	4500	P	F002
	X	NA3082, HAZARDOUS WASTE, LIQUID, 2.01, (TRICHLOROETHENE, VINYL CHLORIDE, 9, III)	1	DM	450	P	F002 D040 D039 D041
		NON RCRA AND DOT NON REGULATED SOLID, (NON-TRCA NON-RC RA SOLID IDW)	3	DM	1350	P	NONE
14. Special Handling Instructions and Additional Information <b>ER Service Contracted by HERITAGE + 0136190 *V8* + Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf. + 3)</b> 1) D43 2) D43 D44 D45 D47 D48 D49 D50 D51 D52 D55 3) D55 4) D40 D41 D53							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (I am a large quantity generator) or (b) (I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name <b>MARY JO ANZIA AS AGENT FOR PHARMACIA LLC</b>				Signature <i>Mary Jo Anzia</i>		Month Day Year <b>12 13 24</b>	
<b>INTL</b>	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. (Part of entry/exit Date leaving U.S.)						
	Transporter signature (for exports only)						
<b>TRANSPORTER</b>	17. Transporter Acknowledgment of Receipt of Material's				Month Day Year		
	Transporter 1 Printed/Typed Name <b>Alex Swartzlander</b>		Signature <i>Alex Swartzlander</i>		Month Day Year <b>12 13 21</b>		
Transporter 2 Printed/Typed Name		Signature		Month Day Year			
<b>DESIGNATED FACILITY</b>	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number						
	18b. Alternate Facility (or Generator) U.S. EPA ID Number						
	Facility's Phone						
	18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. <b>H141</b>		2. <b>H141</b>		3. <b>H141</b>		4. <b>H141</b>	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name: <b>Michelle Martinson</b> Signature: <i>Michelle Martinson</i> Month Day Year: <b>12 13 21</b>							

