

Ms. Linda Stanek Wisconsin Department of Natural Resources 1027 W. St. Paul Avenue Milwaukee, WI 53233

SEMI-ANNUAL PROGRESS REPORT AND GROUNDWATER MONITORING PROGRAM MODIFICATION REQUEST FORMER ONE-HR VALET DRY CLEANERS (TAXMAN) 1214 WEST WELLS STREET, MILWAUKEE, WISCONSIN BRRTS NO. 02-41-152248

Dear Ms. Stanek:

Ramboll US Consulting, Inc. (Ramboll), on behalf of Marquette University (Marquette), has prepared the attached *Semi-Annual Progress Report: January 1 to June 30, 2023,* to document groundwater monitoring activities performed at the former Taxman/One-Hour Valet Dry Cleaner site located at 1214 West Wells Street in Milwaukee, Wisconsin (the "Site"). Based on the data collected to date, including nine semi-annual groundwater sampling events completed since the 2018 soil mixing event, substantial reductive dechlorination is occurring; however, additional time is likely needed for concentrations to be reduced to levels where regulatory case closure is considered viable. Given the stable and reducing groundwater concentrations within the former source area, Ramboll requests Wisconsin Department of Natural Resources' (WDNR) approval to reduce the sampling frequency from the current semi-annual schedule to annual. This reduced sampling frequency would allow for continued monitoring of site remediation progress while cost effectively utilizing the limited remaining Drycleaner Environmental Response Fund (DERF) Program funds and Marquette resources.

August 3, 2023

Ramboll 234 W. Florida Street Fifth Floor Milwaukee, WI 53204 USA

T +1 414 837 3607 F +1 414 837 3608 www.ramboll.com

Ref. 1690005819

We appreciate your consideration of this request. A completed Form 4400-237 and a check for the associated \$700 review fee is attached. If you have any questions or need additional information, please contact us at your convenience.

Yours sincerely,

**Susan Petrofske** 

Senior Managing Consultant

D +1 262 901 3501 spetrofske@ramboll.com eanne M. Tarvin, PG, CPG
E&H Americas Country Market Director

D +1 262 901 0085 jtarvin@ramboll.com

#### **Attachments**

Semi-Annual Progress Report Form 4400-237 Check No. 30915

cc: Joel Smullen, Marquette University

Clear Data Print... Save...

**Note:** In order to fill and save this form electronically, it must be opened using Adobe Reader or Acrobat software. Save a copy of the file, open Adobe Reader, select File > Open and browse for the file you saved.

State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Page 1 of 7

Form 4400-237 (R 10/21)

**Notice:** Use this form to request **a written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31 - 19.39, Wis. Stats.].

#### **Definitions**

- "Property" refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.
- "Liability Clarification" refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.
- "Technical Assistance" refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.
- "Post-closure modification" refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

#### **Select the Correct Form**

This from should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

#### Do not use this form if one of the following applies:

- Request for an off-site liability exemption or clarification for Property that has been or is perceived to be contaminated by one
  or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site
  Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the Lender Liability Exemption, s 292.21, Wis. Stats., if no response or review by DNR is requested. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an exemption to develop on a historic fill site or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- Request for closure for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: dnr.wi.gov/topic/Brownfields/Pubs.html.

#### Instructions

- 1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
- 2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
- 3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
- 4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located. See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf</a>"

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

Clear Data Print... Save...

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# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request Form 4400-237 (R 10/21)

		Form	1 4400-237 (R 10/21)		Page 2 of 7				
Section 1. Contact and Rec	ipient Information								
Requester Information									
This is the person requesting te	chnical assistance or a post-of- lentified as the requester in S	closure ection	modification review, that his or her liability 7. DNR will address its response letter to the	be clarific	ed or a n.				
Last Name	First	MI	Organization/ Business Name						
Smullen	Joel		Marquette University						
Mailing Address		City	State	ZIP Code					
517 North 14th Street			Milwaukee	WI	53233				
Phone # (include area code)	Fax # (include area code)		Email						
(414) 288-4620			Joel.Smullen@marquette.edu						
The requester listed above: (se	lect all that apply)								
Is currently the owner			Is considering selling the Property						
Is renting or leasing the F	Property		☐ Is considering acquiring the Property	/					
Is a lender with a mortga	gee interest in the Property								
Other. Explain the status	of the Property with respect t	o the a	applicant:						
	or the Property Marrospect	0 1110 0	ppiloant.						
Contact Information (to be	contacted with questions a	bout 1	his request)	ect if san	ne as requester				
Contact Last Name	First	MI	Organization/ Business Name		-				
Petrofske	Susan		Ramboll US Consulting, Inc.						
Mailing Address			City	State	ZIP Code				
234 W. Florida Street, Fifth	Floor		Milwaukee	WI	53204				
Phone # (include area code)	Fax # (include area code)		Email		•				
(262) 901-3501			spetrofske@ramboll.com						
Contact Last Name	First	MI	Organization/ Business Name						
Tarvin	Jeanne		Ramboll US Consulting, Inc.	_					
Mailing Address			City	State	ZIP Code				
234 W. Florida Street, Fifth	Floor		Milwaukee	WI	53204				
Phone # (include area code)	Fax # (include area code)		Email						
(262) 901-0085			jtarvin@ramboll.com						
Contact Last Name	First	MI	Organization/ Business Name						
Mailing Address			City	State	ZIP Code				
Phone # (include area code)	Fax # (include area code)		Email						
Operator All a 151	Einst.		Opposition / P						
Contact Last Name	First	MI	Organization/ Business Name						
A4 ::: A 1 1					1710.0				
Mailing Address			City	State	ZIP Code				
	<del>1-</del>								
Phone # (include area code)	Fax # (include area code)		Email						

# **Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request**

Form 4400-237 (R 10/21) Page 3 of 7

Section 2	2. Property Information					
Property I	Name			FID No. (if I	known)	
	One-Hr Valet (Former Taxman Investments Co.)			241086120	)	
BRRTS N	lo. (if known)	Parcel Identificat	ion Number			
02-41-15		3910901000				
Street Add	dress	City		S	State Z	ZIP Code
	Wells Street	Milwaukee			WI	53223
County Milwauk	Municipality where the Property is loc ee Oity Town Village of	eated	Property is com Single tax parcel			erty Size Acres
1. Is a resp	ponse needed by a specific date? (e.g., Property closing cordingly.  Yes  Date requested by:  Reason:	date) Note: Most re	· · · · · · · · · · · · · · · · · · ·	•	 ı 60 day	/s. Please
<ul><li>No.</li><li>Yes</li><li>Fill out</li><li>Sect</li></ul>	Requester" enrolled as a Voluntary Party in the Voluntary Include the fee that is required for your request in S a. Do not include a separate fee. This request will be bil a the information in Section 3, 4 or 5 which correspon ion 3. Technical Assistance or Post-Closure Modification 4. Liability Clarification; or Section 5. Specialized	ection 3, 4 or 5. led separately through the type of ations;	ugh the VPLE Pr	_		
	3. Request for Technical Assistance or Post-Closure					
Select the	e type of technical assistance requested: [Numbers in br		-			
	No Further Action Letter (NFA) (Immediate Actions) - No to an immediate action after a discharge of a hazardous					
	Review of Site Investigation Work Plan - NR 716.09, [13	35] - Include a fee	of \$700.			
	Review of Site Investigation Report - NR 716.15, [137]	- Include a fee of	\$1050.			
	Approval of a Site-Specific Soil Cleanup Standard - NR	720.10 or 12, [67]	- Include a fee	of \$1050.		
	Review of a Remedial Action Options Report - NR 722.	13, [143] - Includ	e a fee of \$1050			
	Review of a Remedial Action Design Report - NR 724.0	)9, [148]  - Include	a fee of \$1050.			
	Review of a Remedial Action Documentation Report - N			\$350		
	Review of a Long-term Monitoring Plan - NR 724.17, [2	=				
	Review of an Operation and Maintenance Plan - NR 724	4.13, [192] - <b>Inclu</b>	de a fee of \$425			
Other ·	Technical Assistance - s. 292.55, Wis. Stats. [97] (For reschedule a Technical Assistance Meeting - Include a Hazardous Waste Determination - Include a fee of \$700. Editor Technical Assistance - Include a fee of \$700.	fee of \$700. 0.			n 4400-	-226)
Post-C	Closure Modifications - NR 727, [181]					
	Post-Closure Modifications: Modification to Property bo sites may be on the GIS Registry. This also includes re \$1050, and:	undaries and/or co moval of a site or P	ntinuing obligatio Property from the	ns of a close GIS Registr	ed site ( y. <b>Incl</b> u	or Property; ıde a fee of
	☐ Include a fee of \$300 for sites with residual soil con	tamination; and				
	Include a fee of \$350 for sites with residual grounds continuing obligations.	vater contamination	n, monitoring wel	ls or for vapo	or intrus	sion
	A(( )   ( ) ( ) ( ) ( ) ( ) ( )					1.000

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 10/21) Page 4 of 7

Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form.
Section 4. Request for Liability Clarification
Select the type of liability clarification requested. Use the available space given or attach information, explanations, or specific questions that you need answered in DNR's reply. Complete Sections 6 and 7 of this form. [Numbers in brackets are for DNR Use]
Lender" liability exemption clarification - s. 292.21, Wis. Stats. [686]
❖ Include a fee of \$700.
Provide the following documentation:
(1) ownership status of the real Property, and/or the personal Property and fixtures;
(2) an environmental assessment, in accordance with s. 292.21, Wis. Stats.;
(3) the date the environmental assessment was conducted by the lender;
(4) the date of the Property acquisition; for foreclosure actions, include a copy of the signed and dated court order confirming the sheriff's sale.
(5) documentation showing how the Property was acquired and the steps followed under the appropriate state statutes.
(6) a copy of the Property deed with the correct legal description; and,
(7) the Lender Liability Exemption Environmental Assessment Tracking Form (Form 4400-196).
(8) If no sampling was done, please provide reasoning as to why it was <b>not</b> conducted. Include this either in the accompanying environmental assessment or as an attachment to this form, and cite language in s. 292. 21(1)(c)2.,hi., Wis. Stats.:
h. The collection and analysis of representative samples of soil or other materials in the ground that are suspected of being contaminated based on observations made during a visual inspection of the real Property or based on aerial photographs, or other information available to the lender, including stained or discolored soil or other materials in the ground and including soil or materials in the ground in areas with dead or distressed vegetation. The collection and analysis shall identify contaminants in the soil or other materials in the ground and shall quantify concentrations.
i. The collection and analysis of representative samples of unknown wastes or potentially hazardous substances found on the real Property and the determination of concentrations of hazardous waste and hazardous substances found in tanks, drums or other containers or in piles or lagoons on the real Property.
"Representative" liability exemption clarification (e.g. trustees, receivers, etc.) - s. 292.21, Wis. Stats. [686]
→ Include a fee of \$700.
Provide the following documentation:
(1) ownership status of the Property;
(2) the date of Property acquisition by the representative;
(3) the means by which the Property was acquired;
(4) documentation that the representative has no beneficial interest in any entity that owns, possesses, or controls the Property;
(5) documentation that the representative has not caused any discharge of a hazardous substance on the Property; and
(6) a copy of the Property deed with the correct legal description.
Clarification of local governmental unit (LGU) liability exemption at sites with: (select all that apply)
hazardous substances spills - s. 292.11(9)(e), Wis. Stats. [649];
Perceived environmental contamination - [649];
hazardous waste - s. 292.24 (2), Wis. Stats. [649]; and/or
solid waste - s. 292.23 (2), Wis. Stats. [649].
Include a fee of \$700, a summary of the environmental liability clarification being requested, and the following:
<ol><li>clear supporting documentation showing the acquisition method used, and the steps followed under the appropriate state statute(s).</li></ol>
(2) current and proposed ownership status of the Property;
(3) date and means by which the Property was acquired by the LGU, where applicable;
(4) a map and the ¼, ¼ section location of the Property;
(5) summary of current uses of the Property;
(6) intended or potential use(s) of the Property;

(7) descriptions of other investigations that have taken place on the Property; and (8) (for solid waste clarifications) a summary of the license history of the facility.

#### Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

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Section 4. Request for Liabilit	y Clarification (cont.)
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Lease liability clarification - s. 292.55, Wis. Stats. [646]

- ❖ Include a fee of \$700 for a single Property, or \$1400 for multiple Properties and the information listed below:
- (1) a copy of the proposed lease;
- (2) the name of the current owner of the Property and the person who will lease the Property;
- (3) a description of the lease holder's association with any persons who have possession, control, or caused a discharge of a hazardous substance on the Property;
- (4) map(s) showing the Property location and any suspected or known sources of contamination detected on the Property;
- (5) a description of the intended use of the Property by the lease holder, with reference to the maps to indicate which areas will be used. Explain how the use will not interfere with any future investigation or cleanup at the Property; and
- (6) all reports or investigations (e.g. Phase I and Phase II Environmental Assessments and/or Site Investigation Reports conducted under s. NR 716, Wis. Adm. Code) that identify areas of the Property where a discharge has occurred.

General or other environmental liability clarification - s. 292.55, Wis. Stats. [682] - Explain your request below.

	*	Include a fee of \$700 and an adequate summary of relevant environmental work to date.
	No	Action Required (NAR) - NR 716.05, [682]
	*	Include a fee of \$700.
	ass	se where an environmental discharge has or has not occurred, and applicant wants a DNR determination that no further sessment or clean-up work is required. Usually this is requested after a Phase I and Phase II environmental assessment has en conducted; the assessment reports should be submitted with this form. This is not a closure letter.
П	Cla	arify the liability associated with a "closed" Property - s. 292.55, Wis. Stats. [682]

❖ Include a fee of \$700.

- Include a copy of any closure documents if a state agency other than DNR approved the closure.

Use this space or attach additional sheets to provide necessary information, explanations or specific questions to be answered by the DNR.

#### Section 5. Request for a Specialized Agreement

Select the type of agreement needed. Include the appropriate draft agreements ar	nd supporting materials	. Complete Sections 6	and 7 o
this form. More information and model draft agreements are available at: <u>dnr.wi.gc</u>	ov/topic/Brownfields/Igu	<u>.html#tabx4</u> .	

to	rm. More information and model draft agreements are available at: <a href="mailto:dnr.wi.gov/topic/Brownfields/lgu.html#tabx4">dnr.wi.gov/topic/Brownfields/lgu.html#tabx4</a> .
	Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]
	❖ Include a fee of \$700, and the information listed below:
	(1) Phase I and II Environmental Site Assessment Reports,
	(2) a copy of the Property deed with the correct legal description.
	Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]
	❖ Include a fee of \$700, and the information listed below:
	(1) Phase I and II Environmental Site Assessment Reports,
	(2) a copy of the Property deed with the correct legal description.
	Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]
	❖ Include a fee of \$1400, and the information listed below:
	(1) a draft schedule for remediation; and,
	(2) the name, mailing address, phone and email for each party to the agreement.

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 10/21) Page 6 of 7

#### Section 6. Other Information Submitted

Identify all materials that are included with this request.

Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.

Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information. Phase I Environmental Site Assessment Report - Date: Phase II Environmental Site Assessment Report - Date: Legal Description of Property (required for all liability requests and specialized agreements) Map of the Property (required for all liability requests and specialized agreements) Analytical results of the following sampled media: Select all that apply and include date of collection. Groundwater Soil Sediment Other medium - Describe: Date of Collection: A copy of the closure letter and submittal materials Draft tax cancellation agreement Draft agreement for assignment of tax foreclosure judgment Other report(s) or information - Describe: Semi-Annual Progress Report: January 1 to June 30, 2023 For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code? Yes - Date (if known): Note: The Notification for Hazardous Substance Discharge Form - Non-Emergency Only (Form 4400-225) is accessible through the RR Program Submittal Portal application. Directions for using the form and the Submittal Portal application are available on the Submittal Portal web page. Section 7. Certification by the Person who completed this form I am the person submitting this request (requester) I prepared this request for: Joel Smullen (Marguette University) Requester Name I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request. August 3, 2023 **Date Signed** Signature **E&H Americas Country Market Director** (262) 901-0085 Telephone Number (include area code) Title

Form 4400-237 (R 10/21) Page 7 of 7

#### Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a <u>DNR regional brownfields specialist</u> with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf</a>.

#### **DNR NORTHERN REGION**

Attn: RR Program Assistant Department of Natural Resources 223 E Steinfest Rd Antigo, WI 54409

#### **DNR NORTHEAST REGION**

Attn: RR Program Assistant Department of Natural Resources 2984 Shawano Avenue Green Bay WI 54313

#### **DNR SOUTH CENTRAL REGION**

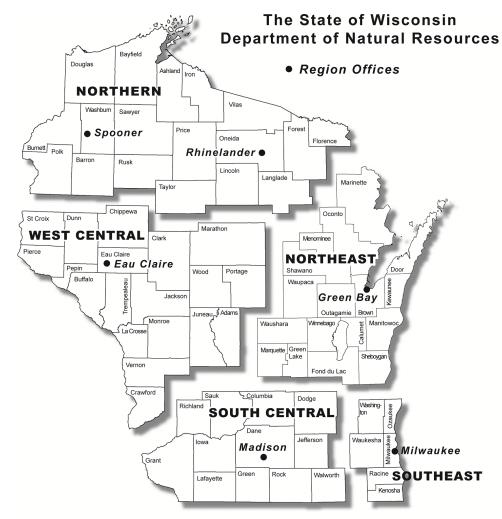
Attn: RR Program Assistant Department of Natural Resources 3911 Fish Hatchery Road Fitchburg WI 53711

#### **DNR SOUTHEAST REGION**

Attn: RR Program Assistant Milwaukee DNR Office 1027 West St. Paul Ave Milwaukee WI 53233

#### **DNR WEST CENTRAL REGION**

Attn: RR Program Assistant Department of Natural Resources 1300 Clairemont Ave. Eau Claire WI 54702



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

		DNR Use Only	
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)
DNR Reviewer	I Co	mments	
DIVICIONE		mmonto	
Fee Enclosed?	Fee Amount	Date Additional Information Requested	Date Requested for DNR Response Letter
◯ Yes ◯ No	\$		
Date Approved	Final Determination		



Ms. Linda Stanek Wisconsin Department of Natural Resources 1027 W. St. Paul Avenue Milwaukee, WI 53233

SEMI-ANNUAL PROGRESS REPORT AND GROUNDWATER MONITORING PROGRAM MODIFICATION REQUEST FORMER ONE-HR VALET DRY CLEANERS (TAXMAN) 1214 WEST WELLS STREET, MILWAUKEE, WISCONSIN BRRTS NO. 02-41-152248

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August 3, 2023

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Ref. 1690005819

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Yours sincerely,

**Susan Petrofske** 

Senior Managing Consultant

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E&H Americas Country Market Director

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#### **Attachments**

Semi-Annual Progress Report Form 4400-237 Check No. 30915

cc: Joel Smullen, Marquette University

Prepared for:

Marquette University 517 North 14<sup>th</sup> Street Milwaukee, Wisconsin

Date:

August 2023

Project Number: **1690005819** 

# FORMER ONE-HOUR VALET DRYCLEANER (TAXMAN) SITE

1214-1222 WEST WELLS STREET MILWAUKEE, WISCONSIN

BRRTS NO. 02-41-152248 FID NO. 241086120

SEMI-ANNUAL
PROGRESS REPORT
JANUARY 1 TO JUNE 30, 2023



#### **CERTIFICATIONS**

I, James L. Hutchens, 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 NR 726, Wis. Adm. Code.

James L. Hutchens, PE License No. 26366

I, Mark M. Mejac, hereby certify that I am a hydrogeologist as that term is defined in 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 NR 726, Wis. Adm. Code.

Mark M. Mejac, PG

August 3, 2023
Date

License No. 283-13

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#### 1. INTRODUCTION

Ramboll US Consulting, Inc. (Ramboll), on behalf of Marquette University (Marquette), has prepared this *Semi-Annual Progress Report: January 1 to June 30, 2023* (the "report") for the former Taxman/One-Hour Valet Drycleaner Site (the "site") located in Milwaukee, Wisconsin. The Wisconsin Department of Natural Resources (WDNR) Bureau of Remediation and Redevelopment Tracking System (BRRTS) has assigned case number 02-41-152248 to the site. This report has been prepared in accordance with Wisconsin Administrative Code (WAC) Chapter NR 724 and documents the methodology and results of post-remedial action monitoring activities conducted at the site. Parties currently involved with the project include the following:

1

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#### 1.1 Site Location and Description

The site is located at 1214-1222 West Wells Street in the southwest  $\frac{1}{4}$  of the northwest  $\frac{1}{4}$  of Section 29, Township 7 North, Range 22 East, City of Milwaukee, Milwaukee County, Wisconsin (Figure 1). The geographic position of the site in Wisconsin Transverse Mercator (WTM) 91 (x,y) coordinates obtained from the WDNR Remediation and Redevelopment (RR) interaction site map (http://dnrmaps.wi.gov) is 688795, 287401. The site includes two tax parcels in the City of Milwaukee, identified as 3910218000 and 3910219100.

The site is bounded on the west by a Marquette parking structure, on the north by a hospital parking structure, on the east by North 12<sup>th</sup> Street, and on the south by West Wells Street, as shown on Figure 2. The site is currently owned by Marquette and is enrolled in the WDNR-administered Drycleaner Environmental Response Fund (DERF) Program. The former site buildings were demolished in 2018 in advance of the remedial action implementation activities and all associated utilities were disconnected. The balance of the paved surfaces was also removed in 2018 following implementation of the remedial actions. Following completion of the remedial activities, Marquette developed the site as an asphalt paved surface parking lot.

The site slopes from the northwest to the east and south, resulting in storm water drainage toward North 12<sup>th</sup> Street and West Wells Street. The nearest surface water body is the Menomonee River,

which is located approximately one-half mile to the south of the site. Potable water for the area is provided by the City of Milwaukee municipal water supply, the source of which is Lake Michigan.

#### 1.2 Previous Remediation Activities

The site has been subjected to several subsurface investigations since 1999. Following source area soil and groundwater investigation activities, a *Remedial Design Report* including evaluation of remedial action options (Ramboll, 2018) was prepared to document the technical basis, design, and implementation approach for the selected remedial option (*in-situ* enhanced reductive dechlorination [ERD]). The *Remedial Design Report* was approved by the WDNR in a correspondence dated March 28, 2018, and soil and groundwater remediation activities were conducted in July 2018. Approximately 1,940 cubic yards of chlorinated volatile organic compound (CVOC) impacted soil and groundwater were treated using *in-situ* ERD soil blending by incorporating zerovalent iron (ZVI) and an organic carbon amendment (commercially known as Anaerobic BioChem [ABC®]). The soil blending was primarily focused on treating saturated soil and groundwater at depth below the former dry cleaner's basement floor. Following completion of the soil blending activities, the former basement was backfilled with crushed concrete from the former site buildings. A *Remedial Action Documentation Report* (Ramboll, 2019) was submitted to the WDNR which documented the remediation activities and described the planned post-remediation monitoring including routine groundwater sampling and soil confirmation sampling.

A Post-Remedial Action Documentation Report (Ramboll, 2020) was submitted to the WDNR which documented the post-remedial action activities, including site redevelopment and post remedial action activities (e.g., soil confirmation sampling, soil vapor sampling, and groundwater monitoring). Based on the residual CVOC concentrations reported in a subset of the post-remedial action soil and groundwater samples collected, supplemental remedial actions were proposed in the Post-Remedial Action Documentation Report to further enhance reductive dechlorination of CVOCimpacted groundwater at the site. The first supplemental in-situ ERD injection activities were completed in August/September 2020 and documented in the Supplemental Remediation Documentation and Progress Report along with results of the October 2020 semi-annual groundwater monitoring event (Ramboll, 2021a). Based on the results of the April 2021 semiannual groundwater monitoring (Ramboll, 2021b), a second supplemental in-situ ERD injection was completed in July 2021 to further support the existing reducing conditions and continued microbial activity within the target groundwater treatment zone. The supplemental in-situ ERD activities and subsequent October 2021 semi-annual groundwater monitoring event were documented in the March 2022 Semi-Annual Progress Report (Ramboll, 2022a). The third supplemental in-situ ERD activities and subsequent October 2022 semi-annual groundwater monitoring event were documented in the January 2023 Semi-Annual Progress Report (Ramboll, 2023).

#### 1.3 Purpose of Report

The purpose of this report is to document site activities completed from January 1 to June 30, 2023. Specific objectives include the following:

- Summarize the results of the April 2023 semi-annual groundwater monitoring event.
- Provide recommendations for supplemental remedial actions, if warranted.
- Request WDNR approval for a modification to the groundwater monitoring frequency.

#### 2. APRIL 2023 GROUNDWATER MONITORING ACTIVITIES

The groundwater sampling activities were conducted utilizing the procedures and methodologies specified in the *Remedial Design Report* (Ramboll, 2018), *Remedial Action Documentation Report* (Ramboll, 2019), and *Post-Remedial Action Documentation Report* (Ramboll, 2020). The following sections document the semi-annual post remedial action groundwater monitoring completed in April 2023.

#### 2.1 Groundwater Monitoring

Six monitoring wells (MW-4, MW-5, MW-6, PZ-1R, PZ-2R, and PZ-4) were sampled on April 12, 2023, as part of the ongoing post-remediation low-flow groundwater monitoring program. Monitoring well PZ-1R is a source area well and is located within the boundaries of the *in-situ* ERD soil blending and supplemental *in-situ* ERD injection activities. Monitoring well MW-4 is an upgradient monitoring well. The remaining monitoring wells are located downgradient of the source area. The groundwater monitoring well locations are included on Figure 2.

Groundwater samples collected from the six monitoring wells were submitted to a Wisconsin-certified laboratory for analysis of volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method 8260. Monitoring well PZ-1R was also sampled for the following monitored natural attenuation (MNA) parameters: ethane/ethene/methane (USEPA Method 8015B Modified), ferrous iron (USEPA Method 3500 and 6020B), total organic carbon (Standard Method 5310C), and sulfate (USEPA Method 300.0).

One quality assurance/quality control (QA/QC) duplicate groundwater sample and QA/QC laboratory trip blank sample were submitted for laboratory analysis as part of the groundwater sampling event. Field parameter measurements including dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, specific conductivity, and temperature were also measured and recorded at each well during the sampling event.

#### 2.2 Groundwater Elevation Measurements

To evaluate groundwater flow directions and hydraulic gradients, groundwater elevations were measured during the April 2023 groundwater sampling event from all existing monitoring wells and piezometers. A summary of historical groundwater elevations is presented in Table 1.

April 2023 groundwater elevations were generally slightly higher when compared to the previous site-wide groundwater measurement event completed in October 2022, likely due to seasonal effects. A groundwater potentiometric surface map is provided as Figure 3. The inferred direction of groundwater flow is generally toward the east across the site, with the highest groundwater elevation observed in well MW-2 (near the northwest corner of the property) and the lowest groundwater elevation observed in MW-5 (northeastern portion of the property). This interpretation of local groundwater flow direction is generally consistent with previous observations.

Horizontal and vertical gradients were evaluated as part of each groundwater sampling event beginning in November 2017, with the exception of May 2019. The measured horizontal hydraulic gradient between monitoring wells MW-2 and MW-5 has ranged from 0.036 foot per foot (ft/ft) (April 2022) to 0.059 ft/ft (August 2019). The measured April 2023 horizontal hydraulic gradient between MW-2 and MW-5 was 0.045 ft/ft.

Vertical hydraulic gradients were evaluated between monitoring wells MW-5 and PZ-4. Measured historical vertical gradients have all been downward and ranged from 0.51 ft/ft (October 2021) to 0.59 ft/ft (April 2022). The April 2023 vertical horizontal gradient between MW-5 and PZ-4 was downward at a measured value of 0.55 ft/ft. The vertical hydraulic gradients have not been noticeably affected by the site redevelopment or performance of the July 2018 remedial action and supplemental injection activities. The horizontal and vertical hydraulic gradients will continue to be monitored over the duration of the groundwater monitoring program. The calculated horizontal and vertical gradients are shown in Table 2.

#### 2.3 Field Parameter Results

Field parameters consisting of specific conductivity, DO, ORP, pH, and temperature were collected from the monitoring wells sampled during the April 2023 groundwater sampling event. The measured specific conductivity values varied from 3,696 micro-Siemens per centimeter ( $\mu$ S/cm) in MW-5 to 16,839  $\mu$ S/cm in MW-6.

Measured April 2023 DO levels within and downgradient of the July 2022 area of carbon amendment injection ranged from 0.12 milligrams per liter (mg/L) at well PZ-1Rto 0.82 mg/L at wells MW-5 and PZ-4, which is indicative of anaerobic conditions.

The April 2023 ORP measurements were generally consistent with historical ranges of values. Negative ORP values (indicative of reducing conditions) were measured in all monitoring wells ranging from –68.1 millivolts (mV) (MW-4) to -243.9 mV (PZ-1R).

The pH values measured as part of the April 2023 sampling event ranged from 6.16 (PZ-1R) to 7.44 (MW-4) standard units. This measured range in pH values is generally within the optimal pH range of 6.0 to 8.0 that is favorable for anaerobic dechlorination to occur. The field parameter measurement results are shown in Table 3.

#### 2.4 Groundwater Laboratory Analytical Results

The April 2023 groundwater samples were collected from six monitoring wells and submitted for laboratory analysis in accordance with the approved sampling plans identified above. A copy of the April 2023 laboratory analytical report is provided in Appendix A. Estimated concentrations above the detection limit but below the quantification limit were qualified with a "J" in the laboratory report.

#### 2.4.1 Geochemical Analytical Results

Monitoring well PZ-1R was sampled for MNA parameters in April 2023. Table 4 provides a summary of the geochemical analytical results.

Total organic carbon (TOC) concentrations in groundwater are an indicator of distribution of the organic carbon amendment introduced to the subsurface via the 2018 soil blending event and subsequent supplemental amendment injection events completed in August/September 2020, July 2021, and July 2022. The detected TOC concentration in the April 2023 groundwater sample from source area well PZ-1R was 177 mg/L. This TOC concentration exceeds the minimum TOC concentration of 20 mg/L which is desirable within an anaerobic treatment zone (AFCEE, 2004).

Ferrous iron is produced by the reduction of ferric iron and is also produced via corrosion of ZVI which was introduced during the 2018 soil blending event and the August/September 2020 *in-situ* 

ERD injection event. The detected concentration of ferrous iron in the April 2023 groundwater sample from well PZ-1R was 10.1 mg/L. This continued high ferrous iron concentration value compared with the pre-soil blending value of 0.060 mg/L in the November 2017 groundwater sample from nearby previous monitoring well PZ-1 is indicative of iron-reducing conditions necessary for anaerobic dechlorination to occur.

Sulfate is an alternative electron acceptor for microbial respiration in the absence of oxygen. Sulfate concentrations less than 20 mg/L are desirable but not required for anaerobic dechlorination to occur. At monitoring well PZ-1R within the treatment zone, the April 2023 groundwater sample did not contain detectable sulfate (at a detection limit of 0.44 mg/L), which is indicative of sulfate-reducing conditions that are favorable for continued reductive dechlorination of CVOCs.

Elevated methane concentrations indicate that fermentation is occurring in a highly anaerobic environment and reducing conditions are appropriate for anaerobic dechlorination of CVOCs to occur. At treatment zone monitoring well PZ-1R, the detected methane concentration remained high at 13,300 micrograms per liter (µg/L) in the April 2023 groundwater sample (compared to non-detect in the pre-treatment November 2017 groundwater sample from nearby previous monitoring well PZ-1), indicating favorable reducing conditions for continued anaerobic dechlorination of CVOCs.

Concentrations of ethene and ethane can be used to infer that complete anaerobic dechlorination of CVOCs is occurring. The pre-treatment November 2017 groundwater sample from nearby previous monitoring well PZ-1 did not contain detectable ethene or ethane, whereas the April 2023 groundwater sample contained 4,270  $\mu$ g/L of ethene and 135  $\mu$ g/L of ethane. The continued detected concentrations of ethene and ethane remain indicative of complete reductive dechlorination of tetrachloroethene (PCE).

#### 2.4.2 VOC Analytical Results

Concentrations of VOCs were detected above laboratory detection limits in all six monitoring wells (MW-4, MW-5, MW-6, PZ-1R, PZ-2R, and PZ-4) sampled in April 2023. Three of the six monitoring wells (MW-4, MW-5, and PZ-1R) had detections of PCE above the WAC NR 140 Enforcement Standard (ES) of 5  $\mu$ g/L at concentrations of 44.5  $\mu$ g/L, 10.5  $\mu$ g/L, and 1,890  $\mu$ g/L, respectively.

Trichloroethene (TCE) was detected above the WAC NR 140 ES of 5.0  $\mu$ g/L at PZ-1R with a concentration of 240 J  $\mu$ g/L, and above the WAC NR 140 Preventive Action Limit (PAL) (0.5  $\mu$ g/L) at MW-5 with a concentration of 1.5  $\mu$ g/L. Groundwater samples from PZ-1R and PZ-2R had detections of cis-1,2-dichloroethene (cis-1,2-DCE) above the WAC NR 140 ES of 70  $\mu$ g/L, at concentrations of 72,100  $\mu$ g/L and 89.9  $\mu$ g/L, respectively. The groundwater sample from MW-6 had a detection of cis-1,2-DCE above the WAC NR 140 PAL of 7  $\mu$ g/L at a concentration of 9.1  $\mu$ g/L.

Four of the six monitoring wells sampled (all except for MW-4 and MW-5) in April 2023 had detections of vinyl chloride above the WAC NR 140 ES of 0.2  $\mu$ g/L at concentrations ranging from 1.8  $\mu$ g/L (MW-6) to 17,200  $\mu$ g/L (PZ-1R). No other VOCs were detected above WAC NR 140 criteria.

A summary of VOC analytical results is provided in Table 5. The CVOC analytical results from the April 2023 groundwater sampling event are shown on Figure 4.

#### 2.4.3 Waste Disposal

Purge water and decontamination fluids from the April 2023 groundwater sampling activities were containerized in a 5-gallon closed head polyethylene container and transported to Marquette's centralized waste storage area by Veolia North America (Veolia) on April 12, 2023. Veolia transported the containers off-site for disposal on June 28, 2023. Disposal documentation is provided in Appendix B.

#### 3. CONCLUSIONS

Scheduled groundwater monitoring continues to show reducing conditions through fermentation of the applied organic carbon substrate. These reducing conditions are evident based on the following observations related to the April 2023 groundwater sample results from treatment zone monitoring well PZ-1R:

- Low ORP reading of -243.9 mV and low DO reading of 0.12 mg/L.
- Continued elevated TOC concentration at PZ-1R (177 mg/L), which is greater than the desired minimum value of 20 mg/L for reductive dechlorination to be enhanced.
- The detected methane concentration of 13,300 μg/L in the April 2023 groundwater sample from monitoring well PZ-1R, which is consistent with continued reducing conditions.
- Detected ethene concentrations at least an order-of-magnitude above background levels are indicative of complete dechlorination (AFCEE, 2004); the April 2023 ethene value of 4,270  $\mu$ g/L at PZ-1R is four orders-of-magnitude above background ethene concentrations when compared with the <0.52  $\mu$ g/L to 0.48  $\mu$ g/L range of ethene concentrations in groundwater samples from nearby previous well PZ-1 that were obtained prior to the 2018 soil blending event and subsequent supplemental injections or organic carbon substrate.

As indicated in Table 5, PCE was detected in the April 2023 groundwater sample from monitoring well PZ-1R at a concentration of 1,890  $\mu$ g/L. This PCE concentration represents a significant reduction when compared to historic values, which ranged from 8,500  $\mu$ g/L (PZ-1, May 2003) to 83,700  $\mu$ g/L (PZ-1R, August 2019).

Evaluation of molar fractions (molar concentrations of PCE, TCE, cis-1,2-dichloroethene [cDCE], vinyl chloride [VC], and ethene divided by the molar concentration of total ethenes) over time is a method used to determine if biodegradation has been stimulated. As shown on Figure 5, pre-remediation molar fractions of PCE generally exceeded 90%, while pre-remediation total TCE, cDCE, and VC molar fractions generally did not exceed 10%. A substantial and rapid re-distribution of molar fractions has been observed based on the post-remediation groundwater monitoring data. Based on the most recent April 2023 groundwater monitoring data, the detected molar fractions at well PZ-1R are as follows: less than 2% PCE, less than 1% TCE, 62% cDCE, 23% VC, and 12% ethene. The April 2023 PCE molar fraction is the lowest observed to date for groundwater samples obtained from well PZ-1R. Without sequential dechlorination, the ratios of the targeted compounds would all remain relatively constant, even if all of the concentrations would decline (due to dilution, for example).

The continued presence of PCE degradation products (including end-product ethene) confirm that substantial reductive dechlorination has taken place and is expected to continue based on the April

2023 geochemical data. Further downgradient, the following observations of CVOC concentration trends are consistent with CVOC source remediation:

- PCE and TCE have not been detected in groundwater samples from well PZ-2R since August 2019.
- Exceedances of WAC NR 140 ES values for TCE or cis-1,2-DCE have not occurred in groundwater samples from well MW-6 since October 2020.
- Exceedances of the WAC NR 140 ES for PCE have not occurred in groundwater samples from well P-4 since October 2020.

The April 2023 TOC results do not indicate that an additional organic carbon substrate injection event is required at this time. Ramboll will continue to evaluate the results of future groundwater monitoring events to determine if such injection events may be warranted.

#### 4. RECOMMENDATIONS

Based on the data collected to date, including nine semi-annual groundwater sampling events completed since the 2018 soil mixing event, substantial reductive dechlorination is occurring; however, additional time is likely needed for CVOC concentrations to be reduced to levels where regulatory case closure is considered viable. Given the stable and reducing groundwater concentrations within the former source area, Ramboll requests WDNR's approval to reduce the sampling frequency from the current semi-annual schedule to annual. This reduced sampling frequency would allow for continued monitoring of site remediation progress while cost effectively utilizing the limited remaining DERF funds and Marquette resources.

The following annual groundwater monitoring plan is proposed:

- Measure depth to groundwater in all site monitoring wells and piezometers.
- Collect groundwater samples from six monitoring wells (MW-4, MW-5, MW-6, PZ-1R, PZ-2R, and PZ-4) using low flow groundwater sampling techniques.
- Submit groundwater samples to a Wisconsin-certified laboratory for analysis of VOCs using USEP) Method 8260. Monitoring well PZ-1R will also be sampled for the following MNA parameters: ethane/ethene/methane (USEPA Method 8015B Modified), dissolved iron (USEPA Method 6010 ICP), total organic carbon (Standard Method 5310C), and sulfate (USEPA Method 300.0).
- Document the sampling activities in annual monitoring reports for submittal to the WDNR.

Ramboll proposes to perform the annual sampling events during April of each year. Such a sampling schedule would allow for the monitoring wells to be inspected following the winter/plowing season. The data collected during the annual groundwater monitoring events will be utilized to determine if additional supplemental injections are needed to further enhance remediation effectiveness.

#### 5. REFERENCES

- Air Force Center for Environmental Excellence (AFCEE). 2004. "Principles and Practices of Enhanced Anaerobic Bioremediation of Chlorinated Solvents." Environmental Security Technology Certification Program, Arlington, Virginia.
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- Ramboll. 2023. Semi-Annual Progress Report. Former One-Hour Valet Dry Cleaners, Milwaukee, Wisconsin. January 10.
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- WDNR. 2022. Extension of Infiltration Temporary Exemption Request. June 9.

# TABLE 1 Groundwater Elevations Summary

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	MV	V-1	MV	V-2	MV	V-3	MV	V-4	MV	V-5	
Top of Casing Elevation (TOC ft msl) <sup>(A)</sup>		647.95		655.74		649.54		652.32		653.26	
Ground Surface Elevation (ft) <sup>(A,B)</sup>	648.30		656.00		649.70		652.70		650.40		
Top of Well Screen Elevation (ft msl)(A)	640	0.10	645	5.50	639.50		644.40		641.80		
Bottom of Well Screen Elevation (ft msl) <sup>(A)</sup>	630	.10	635	635.50		629.50		634.40		631.80	
October 2019 Top of Casing Elevation (ft amsl)	647	'.75	654	1.70	649	0.28	651	.98	649	0.23	
October 2019 Ground Surface (ft amsl)	648	3.16	655.47		649.65		652.33		649.75		
Sample Date	Depth to Water (ft)	GW Elevation (ft msl)									
5/8/2002	10.50	637.45	7.20	648.54	11.38	638.16	NI	NI	NI	NI	
7/11/2003	11.14	636.81	9.87	645.87	11.20	638.34	NI	NI	NI	NI	
8/7/2003	11.92	636.03	10.43	645.31	12.31	637.23	13.81	638.51	16.88	636.38	
10/7/2004	12.35	635.60	11.15	644.59	12.39	637.15	13.56	638.76	17.13	636.13	
8/25/2009	10.80	637.15	10.85	644.89	9.62	639.92	12.02	640.30	15.72	637.54	
11/2/2011	10.68	637.27	13.13	642.61	11.17	638.37	12.68	639.64	16.04	637.22	
11/1/2017 & 11/9/2017*	10.52	637.43	10.74	645.00	10.22	639.32	12.81	639.51	16.11	637.15	
5/2/2019	NM	NM	NM	NM	NM	NM	9.32	643.00	11.75	641.51	
8/14/2019 <sup>(3)</sup>	9.85	637.90	6.90	647.80	8.87	640.41	10.63	641.35	12.34	636.89	
10/23/2019 <sup>(3)</sup>	8.83	638.92	7.35	647.35	8.75	640.53	9.70	642.28	11.41	637.82	
3/10/2020 <sup>(3)</sup>	9.10	638.65	7.34	647.36	9.04	640.24	9.82	642.16	11.57	637.66	
8/31/2020 <sup>(3)</sup>	8.70	639.05	8.56	646.14	8.30	640.98	9.11	642.87	11.45	637.78	
9/3/2020 <sup>(3)</sup>	8.70	639.05	7.12	647.58	8.26	641.02	9.04	642.94	11.46	637.77	
10/28/2020 <sup>(3)</sup>	9.21	638.54	8.41	646.29	9.25	640.03	11.27	640.71	11.82	637.41	
4/20/2021 <sup>(3)</sup>	9.15	638.60	8.96	645.74	9.40	639.88	11.21	640.77	11.80	637.43	
7/14/2021 <sup>(3)</sup> AM	9.46	638.29	9.24	645.46	9.29	639.99	11.38	640.60	12.64	636.59	
7/14/2021 <sup>(3)</sup> PM	9.51	638.24	9.11	645.59	9.35	639.93	11.42	640.56	12.63	636.60	
10/27/2021 <sup>(3)</sup>	10.90	636.85	9.73	644.97	10.43	638.85	13.30	638.68	13.96	635.27	
4/12/2022 <sup>(3)</sup>	9.15	638.60	10.92	643.78	10.60	638.68	12.18	639.80	12.01	637.22	
7/7/2022 <sup>(3)</sup> AM	9.46	638.29	10.59	644.11	10.04	639.24	10.86	641.12	12.26	636.97	
7/7/2022 <sup>(3)</sup> PM	9.48	638.27	10.11	644.59	10.03	639.25	10.89	641.09	12.24	636.99	
10/11/2022 <sup>(3)</sup>	8.56	639.19	10.21	644.49	9.31	639.97	8.89	643.09	11.64	637.59	
4/11/2023 <sup>(3)</sup>	8.40	639.35	8.69	646.01	9.26	640.02	8.26	643.72	11.42	637.81	

#### Notes

Data collected prior to 2017 presented in a Site Investigation Report prepared by GZA GeoEnvironmental, Inc. dated February 24, 2012.

ASML = Above Mean Sea Level

MSL = Mean Sea Level

NI = Not installed at the time of the water level measurement

NM = Not Measured

TOC = Top of Casing

<sup>(</sup>A) Top of casing elevations, ground surface elevations, and screen intervals presented in GZA GeoEnvironmental, Inc.'s February 24, 2012 Site Investigation Report.

<sup>(</sup>B) Relative to mean sea level:

<sup>(1)</sup> PZ-1 and PZ-3 abandoned on 1/11/2018

<sup>(2)</sup> PZ-2 abandoned and replaced on 7/19/2019

<sup>(3)</sup> Groundwater elevation calculated using October 2019 Survey data.

<sup>\*</sup> Groundwater elevation measurements for MW-6, MW-7, MW-8, and MW-

<sup>9</sup> collected on November 9, 2017.

# TABLE 1 Groundwater Elevations Summary

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	MV	V-6	MV	V-7	MV	V-8	MV	V-9	18.20 634.9 19.59 633.5 20.10 633.0 20.82 632.2 21.52 631.5 NM NM	<b>1</b> <sup>(1)</sup>
Top of Casing Elevation (TOC ft msl) <sup>(A)</sup>	648	3.11	649	9.74	649	9.80	650	).27	653	3.10
Ground Surface Elevation (ft) <sup>(A,B)</sup>	648	3.50	649	9.90	650	0.00	650	0.40	653	3.70
Top of Well Screen Elevation (ft msl)(A)	640	0.30	648	3.20	648	3.40	643	3.50	623	3.80
Bottom of Well Screen Elevation (ft msl)(A)	630	0.30	638	3.20	638	3.40	633	3.50	618	3.80
October 2019 Top of Casing Elevation (ft amsl)	648	3.26	649	9.56	649	9.63	650	).73	N	M
October 2019 Ground Surface (ft amsl)	648	3.51	649	9.75	649	9.77	651	.39	N	M
Sample Date	Depth to Water (ft)	GW Elevation (ft msl)		GW Elevation (ft msl)						
5/8/2002	NI	NI	NI	NI	NI	NI	NI	NI	18.20	634.90
7/11/2003	NI	NI	NI	NI	NI	NI	NI	NI	19.59	633.51
8/7/2003	NI	NI	NI	NI	NI	NI	NI	NI	20.10	633.00
10/7/2004	NI	NI	NI	NI	NI	NI	NI	NI	20.82	632.28
8/25/2009	10.85	637.26	7.16	642.58	7.18	642.62	13.05	637.22	21.52	631.58
11/2/2011	10.79	637.32	9.01	640.73	9.09	640.71	13.19	637.08	NM	NM
11/1/2017 & 11/9/2017*	10.30	637.81	8.98	640.76	9.39	640.41	13.30	636.97	22.97	630.13
5/2/2019	8.76	639.35	NM	NM	NM	NM	NM	NM		
8/14/2019 <sup>(3)</sup>	9.34	638.92	7.60	641.96	7.89	641.74	13.90	636.83		
10/23/2019 <sup>(3)</sup>	8.19	640.07	7.85	641.71	7.72	641.91	12.95	637.78		
3/10/2020 <sup>(3)</sup>	8.30	639.96	8.00	641.56	6.78	642.85	13.95	636.78		
8/31/2020 <sup>(3)</sup>	7.04	641.22	7.43	642.13	7.37	642.26	13.25	637.48		
9/3/2020 <sup>(3)</sup>	7.10	641.16	7.43	642.13	7.21	642.42	13.17	637.56		
10/28/2020 <sup>(3)</sup>	8.67	639.59	8.23	641.33	8.35	641.28	14.10	636.63		
4/20/2021 <sup>(3)</sup>	9.63	638.63	8.21	641.35	8.23	641.40	14.15	636.58		
7/14/2021 <sup>(3)</sup> AM	10.45	637.81	8.43	641.13	8.19	641.44	14.67	636.06		
7/14/2021 <sup>(3)</sup> PM	10.46	637.80	8.45	641.11	8.26	641.37	14.69	636.04		
10/27/2021 <sup>(3)</sup>	10.90	637.36	9.53	640.03	8.70	640.93	16.92	633.81		
4/12/2022 <sup>(3)</sup>	9.73	638.53	9.55	640.01	9.36	640.27	16.93	633.80		
7/7/2022 <sup>(3)</sup> AM	10.21	638.05	8.37	641.19	7.68	641.95	14.87	635.86		
7/7/2022 <sup>(3)</sup> PM	9.88	638.38	8.24	641.32	7.76	641.87	14.87	635.86		
10/11/2022 <sup>(3)</sup>	9.76	638.50	8.45	641.11	8.70	640.93	13.70	637.03		
4/11/2023 <sup>(3)</sup>	10.35	637.91	7.22	642.34	7.02	642.61	12.84	637.89		

#### Notes

Data collected prior to 2017 presented in a Site Investigation Report prepared by GZA GeoEnvironmental, Inc. dated February 24, 2012.

ASML = Above Mean Sea Level

MSL = Mean Sea Level

NI = Not installed at the time of the water level measurement

NM = Not Measured

TOC = Top of Casing

<sup>&</sup>lt;sup>(A)</sup> Top of casing elevations, ground surface elevations, and screen intervals presented in GZA GeoEnvironmental, Inc.'s February 24, 2012 Site Investigation Report.

<sup>(</sup>B) Relative to mean sea level

<sup>(1)</sup> PZ-1 and PZ-3 abandoned on 1/11/2018

<sup>(2)</sup> PZ-2 abandoned and replaced on 7/19/2019

<sup>(3)</sup> Groundwater elevation calculated using October 2019 Survey data.

<sup>\*</sup> Groundwater elevation measurements for MW-6, MW-7, MW-8, and MW-

<sup>9</sup> collected on November 9, 2017.

# TABLE 1 Groundwater Elevations Summary

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	PZ	-1R	PZ-	·2 <sup>(2)</sup>	PZ-	-2R	PZ-	3 <sup>(1)</sup>	PZ	<b>Z-4</b>
Top of Casing Elevation (TOC ft msl) <sup>(A)</sup>	-	-	648	3.74	-	-	653	3.41	649	9.78
Ground Surface Elevation (ft) <sup>(A,B)</sup>	-	-	649	9.10	-	_	653	3.70	650	0.30
Top of Well Screen Elevation (ft msl)(A)	622	2.18	624	1.00	623	3.04	608	3.00	609	9.80
Bottom of Well Screen Elevation (ft msl)(A)	617	7.18	619	9.00	618	3.04	603	3.00	604	1.80
October 2019 Top of Casing Elevation (ft amsl)	652	2.18	N	М	649	.539	N	M	649	9.56
October 2019 Ground Surface (ft amsl)	652	2.69	N	M	650	.002	N	M	650	0.20
Sample Date	Depth to Water (ft)	GW Elevation (ft msl)								
5/8/2002	NI	NI								
7/11/2003	NI	NI								
8/7/2003	NI	NI	25.54	623.20	NI	NI	NI	NI	NI	NI
10/7/2004	NI	NI	24.93	623.81	NI	NI	33.14	620.27	NI	NI
8/25/2009	NI	NI	23.42	625.32	NI	NI	31.15	622.26	NM	NM
11/2/2011	NI	NI	23.74	625.00	NI	NI	31.45	621.96	28.40	621.38
11/1/2017 & 11/9/2017*	NI	NI	23.22	625.52	NI	NI	31.10	622.31	27.83	621.95
5/2/2019	27.41				NI	NI			27.48	622.30
8/14/2019 <sup>(3)</sup>	29.80	622.38			25.29	624.25			27.15	622.41
10/23/2019 <sup>(3)</sup>	29.01	623.17			25.00	624.54			26.90	622.66
3/10/2020 <sup>(3)</sup>	29.40	622.78			25.40	624.14			27.10	622.46
8/31/2020 <sup>(3)</sup>	28.96	623.22			24.90	624.64			26.74	622.82
9/3/2020 <sup>(3)</sup>	28.80	623.38			24.72	624.82			26.73	622.83
10/28/2020 <sup>(3)</sup>	27.55	624.63			24.94	624.60			26.85	622.71
4/20/2021 <sup>(3)</sup>	29.37	622.81			25.43	624.11			27.25	622.31
7/14/2021 <sup>(3)</sup> AM	28.60	623.58			25.76	623.78			27.60	621.96
7/14/2021 <sup>(3)</sup> PM	28.81	623.37			25.71	623.83			27.59	621.97
10/27/2021 <sup>(3)</sup>	30.00	622.18			25.98	623.56			27.55	622.01
4/12/2022 <sup>(3)</sup>	29.51	622.67			26.50	623.04			28.27	621.29
7/7/2022 <sup>(3)</sup> AM	28.83	623.35			25.81	623.73			27.65	621.91
7/7/2022 <sup>(3)</sup> PM	28.42	623.76			25.77	623.77			27.65	621.91
10/11/2022 <sup>(3)</sup>	28.54	623.64			25.17	624.37			27.21	622.35
4/11/2023 <sup>(3)</sup>	29.19	622.99			24.93	624.61			26.82	622.74

#### Notes

Data collected prior to 2017 presented in a Site Investigation Report prepared by GZA GeoEnvironmental, Inc. dated February 24, 2012.

ASML = Above Mean Sea Level

MSL = Mean Sea Level

NI = Not installed at the time of the water level measurement

NM = Not Measured

TOC = Top of Casing

<sup>&</sup>lt;sup>(A)</sup> Top of casing elevations, ground surface elevations, and screen intervals presented in GZA GeoEnvironmental, Inc.'s February 24, 2012 Site Investigation Report.

<sup>(</sup>B) Relative to mean sea level

<sup>(1)</sup> PZ-1 and PZ-3 abandoned on 1/11/2018

<sup>(2)</sup> PZ-2 abandoned and replaced on 7/19/2019

<sup>(3)</sup> Groundwater elevation calculated using October 2019 Survey data.

<sup>\*</sup> Groundwater elevation measurements for MW-6, MW-7, MW-8, and MW-

<sup>9</sup> collected on November 9, 2017.

#### **Table 2: Vertical and Horizontal Gradients**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	Measurement Date	Top of Casing Elevation (ft-amsl)	Water Level Measurement (ft btoc)	Ground- water Elevation (ft- amsl)	Screen Length (ft)	Top of Well Screen Elevation (ft-amsl)	Bottom of Well Screen Elevation (ft-amsl)	Mid-Point of Well Screen Elevation (ft-amsl)	Vertical Gradient Calculation Value (ft-amsl)	Head Difference (ft)		ical Gradient ft)/Direction
MW-5	11/1/2017	653.26	16.11	637.15	10.00	641.80	631.80	636.80	634.5	-15.20	-0.56	Downward
PZ-4	11/1/2017	649.78	27.83	621.95	5.00	609.80	604.80	607.30	607.3	-13.20	-0.50	Downward
MW-5	8/14/2019	649.23	12.34	636.89	10.00	641.80	631.80	636.80	634.3	-14.48	-0.54	Downward
PZ-4	8/14/2019	649.56	27.15	622.41	5.00	609.80	604.80	607.30	607.3	-14.40	-0.54	Downward
MW-5	10/23/2019	649.23	11.41	637.82	10.00	641.80	631.80	636.80	634.8	-15.16	-0.55	Downward
PZ-4	10/23/2019	649.56	26.90	622.66	5.00	609.80	604.80	607.30	607.3	-13.10	-0.55	Downward
MW-5	3/10/2020	649.23	11.57	637.66	10.00	641.80	631.80	636.80	634.7	-15.20	-0.55	Downward
PZ-4	3/10/2020	649.56	27.10	622.46	5.00	609.80	604.80	607.30	607.3	-15.20	-0.55	Downward
MW-5	10/28/2020	649.23	11.82	637.41	10.00	641.80	631.80	636.80	634.6	-14.70	-0.54	Downward
PZ-4	10/28/2020	649.56	26.85	622.71	5.00	609.80	604.80	607.30	607.3	-14.70	-0.54	Downward
MW-5	4/21/2021	649.23	11.80	637.43	10.00	641.80	631.80	636.80	634.6	-15.12	-0.55	Downward
PZ-4	4/21/2021	649.56	27.25	622.31	5.00	609.80	604.80	607.30	607.3	-15.12	-0.55	Downward
MW-5	10/27/2021	649.23	13.96	635.27	10.00	641.80	631.80	636.80	633.5	-13.26	-0.51	Downward
PZ-4	10/27/2021	649.56	27.55	622.01	5.00	609.80	604.80	607.30	607.3	-13.20	-0.51	Downwaru
MW-5	4/12/2022	649.23	12.01	637.22	10.00	641.80	631.80	636.80	634.5	-15.93	-0.59	Downward
PZ-4	4/12/2022	649.56	28.27	621.29	5.00	609.80	604.80	607.30	607.3	-15.93	-0.59	Downward
MW-5	10/12/2022	649.23	11.64	637.59	10.00	641.80	631.80	636.80	634.7	-15.24	-0.56	Downward
PZ-4	10/12/2022	649.56	27.21	622.35	5.00	609.80	604.80	607.30	607.3	-13.24	-0.56	Downwaru
MW-5	4/11/2023	649.23	11.42	637.81	10.00	641.80	631.80	636.80	634.8	-15.07	-0.55	Downward
PZ-4	4/11/2023	649.56	26.82	622.74	5.00	609.80	604.80	607.30	607.3	-13.07	-0.55	Downward

Well ID	Measurement Date	Top of Casing Elevation (ft-amsl)	Water Level Measurement (ft btoc)	Ground- water Elevation (ft- amsl)	Distance Between Monitoring Wells (ft)	Groundwater Elevation Difference (ft)	Horizontal Gradient (ft/ft)
MW-2	11/1/2017	655.74	10.74	645.00	184	7.9	0.043
MW-5	11/1/2017	653.26	16.11	637.15	104	7.7	0.043
MW-2	8/14/2019	654.70	6.90	647.80	184	10.9	0.059
MW-5	8/14/2019	649.23	12.34	636.89	101	10.7	0.007
MW-2	10/23/2019	654.70	7.35	647.35	184	9.5	0.052
MW-5	10/23/2019	649.23	11.41	637.82	104	7.5	0.032
MW-2	3/10/2020	654.70	7.34	647.36	184	9.7	0.053
MW-5	3/10/2020	649.23	11.57	637.66	101	7.7	0.000
MW-2	10/28/2020	654.70	8.41	646.29	184	8.9	0.048
MW-5	10/28/2020	649.23	11.82	637.41	104	0.7	0.040
MW-2	4/21/2021	654.70	8.96	645.74	184	8.3	0.045
MW-5	4/21/2021	649.23	11.80	637.43	104	0.3	0.045
MW-2	10/27/2021	654.70	9.73	644.97	184	9.4	0.051
MW-5	10/27/2021	649.23	13.69	635.54	104	7.4	0.031
MW-2	4/12/2022	654.70	10.92	643.78	184	6.6	0.036
MW-5	4/12/2022	649.23	12.01	637.22	104	0.0	0.030
MW-2	4/11/2023	654.70	8.69	646.01	184	8.2	0.045
MW-5	4/11/2023	649.23	11.42	637.81	104	0.2	0.045

#### Notes:

ft - feet

amsl - above mean sea level btoc - below top of casing

#### **Table 3: Groundwater Field Parameter Results**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

	Parameter	рН	Dissolved oxygen	Oxidation Reduction Potential	Turbidity	Specific Conductivity	Temperature
	Units	S.U.	mg/L	mV	NTU	uS/cm	°C
Monitoring Well ID	Sample Date		•	•		*	•
	1/14/2002	NR	10.39	-37	NR	NR	NR
	5/8/2002	NR	3.57	287.1	NR	NR	NR
MW-1	8/7/2003	NR	0.22	161.3	NR	NR	NR
IVIVV-1	10/7/2003	NR	1.05	396.8	NR	NR	NR
	8/25/2009	NR	0.69	95	NR	NR	NR
	11/1/2017	7.31	1.69	57.7	2.03	16.08	17.53
	1/14/2002	NR	6.42	168	NR	NR	NR
	5/8/2002	NR	1.07	257	NR	NR	NR
	8/7/2003	NR	0.10	2.30	NR	NR	NR
MW-2	10/7/2003	NR	4.43	364	NR	NR	NR
	8/27/2009	NR	0.98	86.0	NR	NR	NR
	11/1/2017	7.70	1.71	-74.3	2.53	6,370	14.21
	8/7/2003	NR	0.15	68.0	NR	NR	NR
	10/7/2003	NR	5.74	327.8	NR	NR	NR
MW-3	8/27/2009	NR	1.01	16.0	NR	NR	NR
	11/1/2017	7.56	0.73	-125.6	2.00	16,100	14.53
	8/7/2003	NR	5.83	139	NR	NR	NR
	10/7/2003	NR	3.44	383.4	NR	NR	NR
	8/25/2009	NR	2.55	77.0	NR	NR	NR
	11/2/2017	7.80	0.88	-19.8	1.40	11,680	14.86
	5/2/2019	7.34	8.40	140.7	3.04	5,184	9.64
MW-4	8/14/2019	7.11	1.82	79.4	0.82	7,485	15.06
IVI VV -4	3/10/2020 10/28/2020	7.15 6.65	8.53 1.45	81.6 116	2.26 3.62	4,717 11,460	8.60 14.50
	4/21/2021	7.88	5.40	53.9	0.00	6,396	9.19
	10/27/2021	6.82	2.13	64.6	0.00	8,298	15.43
	4/13/2022	7.14	0.85	72.6	9.23	6,484	12.64
	10/12/2022	7.30	0.96	74.4	0.00	5,012	17.62
	4/11/2023	7.44	3.61	-68.1	0.00	4,538	13.31
	8/7/2003	NR	0.86	190.5	NR	NR	NR
	10/7/2003	NR	1.05	396.8	NR	NR	NR
	8/27/2009	NR	0.99	98.0	NR	NR	NR
	11/2/2017	8.10	2.04	18.6	2.16	6,544	15.49
	5/2/2019	7.49	2.01	159.1	4.99	3,070	9.92
	8/14/2019	7.53	0.18	63.4	4.23	4,120	17.45
MW-5	3/10/2020	7.80	0.00	21.1	8.24	7,140	11.00
	10/28/2020	7.31	0.29	47.2	2.86	4,895	15.50
	4/21/2021	7.85	0.19	-18.0	0.00	6,948	11.40
	10/27/2021	7.40	0.52	15.4	0.00	3,886	18.70
	4/13/2022	7.22	5.55	63.1	5.20	4,693	13.32
	10/12/2022	7.54	0.70	-27.2	0.00	2,387	18.81
	4/11/2023	7.25	0.82	-88.2	0.00	3,696	16.84
	8/25/2009	NR 7.00	NR 0.00	-50.0	NR	NR C 707	NR 44.04
	11/9/2017	7.39	0.62	-112.7	NR	6,787	14.81
	5/2/2019	9.31	11.4	94.8	5.91	501	7.66
	8/14/2019	6.82	0.83	3.10	15.5	7,265	17.13
MW-6	3/10/2020	7.62	0.01	-154.3	25.4	16,558	11.50
III I I	10/28/2020	7.08	0.26 0.41	-137.5 -98.1	0.78 0.00	10,037 14,419	12.60
	4/21/2021 10/27/2021	7.36 6.97	0.41	-98.1 -50.4	3.74	14,419	9.67 15.31
	4/13/2022	6.89	0.44	-65.1	9.24	17,023	15.97
	10/12/2022	5.71	0.59	-52.3	0.16	17,566	16.47
	4/11/2023	6.82	0.24	-193.4	12.23	16,839	14.23
MW-7	11/9/2017	7.72	7.49	-50.7	58.9	5,026	10.72
MW-8	11/9/2017	7.28	4.03	-28.7	NR	5,666	11.71

#### **Table 3: Groundwater Field Parameter Results**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

	Parameter	рН	Dissolved oxygen	Oxidation Reduction Potential	Turbidity	Specific Conductivity	Temperature
	Units	S.U.	mg/L	mV	NTU	uS/cm	°C
Monitoring Well ID	Sample Date		•			*	•
MW-9	11/9/2017	7.75	6.40	-42.6	2.00	3,573	11.78
	1/15/2002	NR	0.66	-65.3	NR	NR	NR
	5/8/2003	NR	1.31	-18.3	NR	NR	NR
	8/8/2003	NR	0.12	-93.7	NR	NR	NR
PZ-1	10/7/2003	NR	0.09	-97.1	NR	NR	NR
	8/25/2009	NR	0.83	-73.0	NR	NR	NR
	11/25/2017	8.14	0.64	38.5	20.3	15,260	13.09
	- (- (			andoned on 1/11/2018. PZ-1			
	5/2/2019	7.05	1.01	-102.6	3.02	3,351	12.25
	8/14/2019	6.97	0.21	-138.4	11.2	4,930	14.36
	3/10/2020	7.58	0.00	-270.1	5.21	3,818	11.10
PZ-1R	10/28/2020 4/21/2021	6.47 7.35	0.21 0.19	-126.9 -487.7	3.48 4.01	11,394 6,890	13.80 10.28
PZ-1K	10/27/2021	6.43	0.19	-487.7 -58.6	4.01	7,106	15.49
	4/13/2022	6.62	0.16	-244.8	9.83	8,583	14.71
	10/12/2022	6.47	0.30	-312.7	9.47	4.987	16.81
	4/11/2023	6.16	0.40	-243.9	71.62	4,076	16.45
	8/8/2003	NR.	0.19	-41.3	NR	NR	NR
P7.0	10/6/2003	NR	0.15	-35.1	NR	NR	NR
PZ-2	8/27/2009	NR	0.78	-16.0	NR	NR	NR
	11/1/2017	7.64	2.67	-100.3	51.2	5,405	13.52
			PZ-2 ab	andoned on 7/19/2019. PZ-2	2R installed on 7/19/20	019.	
	8/14/2019	7.15	0.13	-36.8	4.72	7,977	13.85
	3/10/2020	7.29	0.10	-68.3	8.35	7,762	10.20
	10/28/2020	6.99	0.35	-80.6	3.48	9,724	12.90
	4/21/2021	7.65	0.47	-81.7	0.00	5,292	11.08
PZ-2R	10/27/2021	7.19	0.38	-45.8	3.33	6,184	15.34
						-	
	4/13/2022	7.11	0.57	-40.0	0.00	6,562	14.12
	10/12/2022	6.90	0.81	-65.8	0.00	7,252	16.46
	4/11/2023	7.00	0.37	-162.9	0.00	6,388	14.45
	8/25/2009	NR	0.72	-53.0	NR	NR	NR
PZ-3	11/2/2017	7.98	1.34	-103.8	17.8	6,042	12.18
			1	PZ-3 abandoned on			
	8/25/2009	NR 7.70	0.72	-55.0	NR 0.75	NR 40.500	NR 40.04
	11/2/2017	7.76	1.47	-111.8	8.75	10,580	12.94
	5/2/2019	7.02	2.99	48.2	5.56	2,193	11.39
	8/14/2019	6.95	0.24	-40.0	6.87	6,714	16.55
D7.4	3/10/2020	6.98	0.24	-61.7	9.25	5,098	11.60
PZ-4	10/28/2020	8.77	7.72	12.4	4.46	366	13.40
	4/21/2021	7.44	0.54	-88.1	0.00	7,498	12.68
	10/27/2021	7.09	0.31	-36.9	1.21	7,280	15.57
	4/13/2022	6.89	0.56	-35.5	8.36	7,873	15.68
	10/12/2022	6.92 6.97	0.98 0.82	-110.9	2.45 0.00	7,667	17.95
	4/11/2023	b.9 <i>1</i>	0.82	-175.1	0.00	7,809	16.99

#### Notes:

S.U. = Standard Units mg/L = milligrams per Liter mV = millivolts umhos/cm = micromhos per centimeter °C = Celsius

NR - Not Recorded

## TABLE 4 MNA Parameter Groundwater Sampling Results

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	Sample Date	Dissolved Oxygen	Ethane	Ethene	рН	Iron, Dissolved	Iron, Ferric	Iron, Ferrous	Methane	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	ORP	Sulfate	Total Organic Carbon
	Date	(mg/L)	(µg/L)	(µg/L)		(mg/L)	(mg/L)	(mg/L)	(µg/L)	(mg/L)	(mV)	(mg/L)	(mg/L)
	1/14/2002	10.39	NA	NA	NR	NA	NA	NA	NA	NA	-37.0	NA	NA
	5/8/2002	3.57	NA	NA	NR	NA	NA	NA	NA	NA	287.1	NA	NA
MW-1	8/7/2003	0.22	NA	NA	NR	NA	NA	NA	NA	NA	161.3	NA	NA
	10/7/2003	1.05	0.028	0.049	NR	NA	NA	NA	14	NA	396.8	NA	NA
	8/25/2009	0.69	<10	<10	NR	NA	NA	NA	<10	NA	95.0	NA	1.26
	11/1/2017	1.69	< 0.58	< 0.52	7.31	0.0126 J	0.00 J	< 0.017	< 1.4	< 0.095	57.7	<100	< 0.25
	1/14/2002	6.42	NA	NA	NR	NA	NA	NA	NA	NA	168.4	NA	NA
	5/8/2002	1.07	NA	NA	NR	NA	NA	NA	NA	NA	256.9	NA	NA
MW-2	8/7/2003	0.10	NA	NA	NR	NA	NA	NA	NA	NA	2.3	NA	NA
	10/7/2003	4.43	0.018	0.021	NR	NA	NA	NA	22	NA	364.0	NA	NA
	8/27/2009	0.98	NA	NA	NR	NA	NA	NA	NA	NA	86.0	NA	NA
	11/1/2017	1.71	<0.58	< 0.52	7.70	1.77	0.54	1.2 H3	<1.4	< 0.095	-74.3	93.5	< 0.25
	8/7/2003	0.15	NA	NA	NR	NA	NA	NA	NA	NA	68.0	NA	NA
MW-3	10/7/2003	5.74	0.16	0.056	NR	NA	NA	NA	45	NA	327.8	NA	NA
-	8/27/2009	1.01	NA	NA	NR	NA	NA	NA	NA	NA	16.0	NA	NA
	11/1/2017	0.73	NA	NA	7.56	NA	NA	NA	NA	NA	-125.6	NA	NA
-	8/7/2003	5.83	NA	NA	NR	NA	NA	NA	NA	NA	139.0	NA	NA
-	10/7/2003	3.44	0.021	0.033	NR	NA	NA	NA	22	NA	383.4	NA	NA
-	8/25/2009	2.55	NA	NA	NR	NA	NA	NA	NA	NA	77.0	NA	NA
-	11/2/2017	0.88	NA	NA	7.80	NA	NA	NA	NA	NA	-19.8	NA	NA
-	5/2/2019	8.40	NA	NA	7.34	NA	NA	NA	NA	NA	140.7	NA	NA
	8/14/2019	1.82	NA	NA	7.11	NA	NA	NA	NA	NA	79.4	NA	NA
MW-4	3/10/2020	8.53	NA	NA	7.15	NA	NA	NA	NA	NA	81.6	NA	NA
	10/28/2020	1.45	NA	NA	6.65	NA	NA	NA	NA NA	NA	116.0	NA NA	NA
ŀ	4/21/2021	5.40	NA	NA	7.88	NA	NA	NA		NA	53.9		NA
ŀ	10/27/2021	2.13	NA NA	NA	6.82	NA	NA NA	NA	NA NA	NA NA	64.6	NA NA	NA NA
	4/13/2022	0.85	NA NA	NA NA	7.14	NA NA	NA NA	NA NA	NA NA	NA NA	72.6	NA NA	NA NA
ŀ	10/12/2022 4/12/2023	0.96	NA NA	NA NA	7.44	NA NA	NA NA	NA NA	NA NA	NA NA	74.4 -68.1	NA NA	NA NA
		3.61		NA NA	7.44 NR		NA NA	NA NA	NA NA		190.5	NA NA	NA NA
ŀ	8/7/2003 10/7/2003	0.86 1.05	NA 0.041	0.0097	NR	NA NA	NA	NA	0.99	NA NA	396.8	NA	NA NA
ŀ	8/27/2009	0.99	<10	<10	NR	NA	NA	NA	136	NA	98.0	NA	1.82
ŀ	11/2/2017	2.04	NA NA	NA NA	8.10	NA	NA	NA	NA NA	NA	18.6	NA	NA
ŀ	5/2/2019	2.01	NA	NA	7.49	NA	NA	NA	NA	NA	159.1	NA	NA
ŀ	8/14/2019	0.18	NA	NA	7.53	NA	NA	NA	NA	NA	63.4	NA	NA
MW-5	3/10/2020	0.00	NA	NA	7.80	NA	NA	NA	NA	NA	21.1	NA	NA
10100-5	10/28/2020	0.29	NA	NA	7.31	NA	NA	NA	NA	NA	47.2	NA	NA
ŀ	4/21/2021	0.19	NA	NA	7.85	NA	NA	NA	NA	NA	-18.0	NA	NA
ŀ	10/27/2021	0.52	NA	NA	7.40	NA	NA	NA	NA	NA	15.4	NA	NA
ŀ	4/13/2022	5.55	NA	NA	7.22	NA	NA	NA	NA	NA	63.1	NA	NA
F	10/12/2022	0.70	NA	NA	7.54	NA	NA	NA	NA	NA	-27.2	NA	NA
F	4/12/2023	0.82	NA	NA	7.25	NA	NA	NA	NA	NA	-88.2	NA	NA
	8/25/2009	1.0	NA	NA	NR	NA	NA	NA	NA	NA	-50.0	NA	NA
	11/9/2017 <sup>1</sup>	0.62	< 0.58	< 0.52	7.39	13.6	8.3	5.2 H3	<1.4	< 0.095	-112.7	82.4	<0.25
	5/2/2019	11.38	< 0.58	< 0.52	9.31	103	1,030	<0.20	<1.4	0.25 J	94.8	41.8	6.0
	8/14/2019	0.83	<0.58	< 0.52	6.82	1.7	<0.20	2.1 H3	<1.4	<0.0	3.1	95.6	0.57 J
	3/10/2020	0.01	<1.2	<1.2	7.62	6.68	<0.20	7.4 H3	75.2	< 0.059	-154.3	87 J	1.8
MW-6	10/28/2020	0.26	NA	NA	7.08	NA NA	NA	NA NA	NA	NA	-137.5	NA S	NA.
	4/21/2021	0.41	NA	NA	7.36	NA	NA	NA	NA	NA	-98.1	NA	NA
ļ	10/27/2021	0.44	NA	NA	6.97	NA	NA	NA	NA	NA	-50.4	NA	NA
ļ	4/13/2022	0.41	NA	NA	6.89	NA	NA	NA	NA	NA	-65.1	NA	NA
ļ	10/12/2022	0.59	NA	NA	5.71	NA	NA	NA	NA	NA	-52.3	NA	NA
ļ	4/12/2023	0.24	NA	NA	6.82	NA	NA	NA	NA	NA	-193.4	NA	NA
	8/26/2009	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	11/9/2017 <sup>2</sup>	7.49	NA	NA	7.72	NA	NA	NA	NA	NA	-50.7	NA	NA
	8/26/2009	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA NA	NA	NA
MW-8	11/9/2017 <sup>3</sup>	4.03	NA	NA	7.28	NA	NA	NA	NA	NA	-28.7	NA	NA
	8/27/2009	NA	<10	<10	NR	NA	NA	NA	<10	NA	NA NA	NA	1.27
MW-9													

#### **MNA Parameter Groundwater Sampling Results**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	Sample Date	Dissolved Oxygen	Ethane	Ethene	pН	Iron, Dissolved	Iron, Ferric	Iron, F	errous	Methane	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	ORP	Sulfate	Total Organic Carbon
	Date	(mg/L)	(µg/L)	(µg/L)		(mg/L)	(mg/L)	(mg	/L)	(µg/L)	(mg/L)	(mV)	(mg/L)	(mg/L)
	1/15/2002	0.66	NA	NA	NR	NA	NA	NA		NA	NA	-65.3	NA	NA
	5/8/2003	1.31	NA	NA	NR	NA	NA	NA		NA	NA	-18.3	NA	NA
PZ-1	8/8/2003	0.12	NA	NA	NR	NA	NA	NA		NA	NA	-93.7	NA	NA
PZ-1	10/7/2003	0.09	1.7	0.48	NR	NA	NA	NA		7	NA	-97.1	NA	NA
	8/25/2009	0.83	<10	<10	NR	NA	NA	NA		<10	NA	-73.0	NA	2.04
	11/2/2017	0.64	< 0.58	< 0.52	8.14	2.29	2.2	0.060	H3	< 1.4	0.33	38.5	155	0.50 J
	5/2/2019	1.01	337	32.4	7.05	5.88	< 0.20	5.8	H3	23.1	< 0.095	-102.6	101	124 J
	8/14/2019	0.21	3,060	87.2	6.97	5.70	< 0.20	6.5	H3	129	< 0.095	-138.4	93.1	184
	3/10/2020	0.00	2,130	974	7.58	4.60	< 0.20	5.1	H3	162	< 0.059	-270.1	85.9	115
	10/28/2020	0.21	1,560	1,320	6.47	NA	NA	168	C4, H3	1510	NA	-126.9	4.9 J, D3	2,440
PZ-1R	4/21/2021	0.19	1,540	1,090	7.35	NA	NA	19.7	H3	2,680	NA	-487.7	<2.2	499
	10/27/2021	0.18	2.7 J	21.9	6.43	17.1	<0.0281 H3	19.0	H3	1,820	NA	-58.6	<2.2 D3	959
	4/13/2022	0.36	683	3,570	6.62	3.74	<0.058	3.9	H3	5,650	NA	-244.8	66.2	240
	10/12/2022	0.48	1,040 J	7,090	6.47	5.80	< 0.50	7.2	H3	13,900	NA	-312.7	<2.2 D3	241
	4/12/2023	0.12	135	4,270	6.16	10.100	< 0.13	12	H3	13,300	NA	-243.9	< 0.44 MO	177
	8/8/2003	0.19	NA	NA	NR	NA	NA	NA		NA	NA	-41.3	NA	NA
PZ-2	10/6/2003	0.15	1.3	0.79	NR	NA	NA	NA		60	NA	-35.1	NA	NA
FZ-2	8/27/2009	0.78	NA	NA	NR	NA	NA	NA		NA	NA	-16.0	NA	NA
	11/1/2017 <sup>1</sup>	2.67	< 0.58	< 0.52	7.64	8.82	5.7	3.1		23.1	< 0.095	-100.3	178	< 0.25
	8/14/2019	0.13	0.82 J	< 0.52	7.15	3.20	< 0.20	3.6	H3	22	< 0.095	-36.8	164	0.40 J
	3/10/2020	0.10	<1.2	<1.2	7.29	2.80	< 0.20	2.9	H3, M1	10.3	< 0.059	-68.3	140	0.36 MO
	10/28/2020	0.35	NA	NA	6.99	NA	NA	NA		NA	NA	-80.6	NA	NA
PZ-2R	4/21/2021	0.47	NA	NA	7.65	NA	NA	NA		NA	NA	-81.7	NA	NA
FZ-ZK	10/27/2021	0.38	NA	NA	7.19	NA	NA	NA		NA	NA	-45.8	NA	NA
	4/13/2022	0.57	NA	NA	7.11	NA	NA	NA		NA	NA	-40.0	NA	NA
	10/12/2022	0.81	NA	NA	6.9	NA	NA	NA		NA	NA	-65.8	NA	NA
	4/12/2023	0.37	NA	NA	7.00	NA	NA	NA		NA	NA	-162.9	NA	NA
PZ-3	8/25/2009	0.72	NA	NA	NR	NA	NA	NA		NA	NA	-53.0	NA	NA
123	11/2/2017	1.34	NA	NA	7.98	NA	NA	NA		NA	NA	-103.8	NA	NA
	8/25/2009	0.72	NA	NA	NR	NA	NA	NA		NA	NA	-55.0	NA	NA
	11/2/2017	1.47	NA	NA	7.76	NA	NA	NA		NA	NA	-111.8	NA	NA
	5/2/2019	2.99	NA	NA	7.02	NA	NA	NA		NA	NA	48.2	NA	NA
	8/14/2019	0.24	NA	NA	6.95	NA	NA	NA		NA	NA	-40.0	NA	NA
	3/10/2020	0.24	NA	NA	6.98	NA	NA	NA		NA	NA	-61.7	NA	NA
PZ-4	10/28/2020	7.72	NA	NA	8.77	NA	NA	NA		NA	NA	12.4	NA	NA
	4/21/2021	0.54	NA	NA	7.44	NA	NA	NA		NA	NA	-88.1	NA	NA
	10/27/2021	0.31	NA	NA	7.09	NA	NA	NA		NA	NA	-36.9	NA	NA
	4/13/2022	0.56	NA	NA	6.89	NA	NA	NA		NA	NA	-35.5	NA	NA
	10/12/2022	0.98	NA	NA	6.92	NA	NA	NA		NA	NA	-110.9	NA	NA
	4/12/2023	0.82	NA	NA	6.97	NA	NA	NA		NA	NA	-175.1	NA	NA

#### Notes:

J = Estimated concentration at or above the level of detection and below the level of quantification.

mg/L = milligrams per liter

mV = millivolts

NA = Data was not collected or not able to be collected

NS = Not sampled.

ORP = Oxidation-reduction potential; measured in the field.

ug/L = micrograms per liter

All sampling resluts prior to 2017 obtained from a Site Investigation Report prepared by GZA GeoEnvironmental, Inc. dated February 24, 2012.

(1) Well cap either missing or not plugged at time of inspection; potential for water and other constituents to have entered the well.

- D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- H3 = Sample was received or analysis requested beyond the recognized method holding time.
- M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

<sup>(2)</sup> Monitoring well purged dry after first stabilization parameter reading. Well sampled later in day without collecting new stabilization parameters.

<sup>(3)</sup> Monitoring well purged dry before water passed completely through flow-through cell. Stabilization parameters collected from flow-through cell approximately 4/5 of the way full

<sup>(4)</sup> Monitoring well was damaged during site redevelopment activities and was not sampled.

C4 = Sample container did not meet EPA or method requirements

#### **Groundwater Analytical Results - Summary of Detected Constituents**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

	Analyte <sup>1,2</sup>	Benzene	Chloroform	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Methylene chloride	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene³	Vinyl chloride	Xylenes, total⁴
CA	S	71-43-2	67-66-3	75-35-4	156-59-2	156-60-5	100-41-4	75-09-2	127-18-4	108-88-3	79-01-6	95-63-6	75-01-4	1330-20-7
Uni	ts	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NR 140	0 ES	5	6	7	70	100	700	5	5	800	5	480	0.2	2000
NR 140	PAL	0.5	0.6	0.7	7	20	140	0.5	0.5	160	0.5	96	0.02	400
	1/14/2002	ND	< 0.23	< 0.27	< 0.21	< 0.25	< 0.22	< 0.24	< 0.22	< 0.41	0.46 J	< 0.15	44	#N/A
	5/8/2002	ND	< 0.1	< 0.11	< 0.11	< 0.11	<0.08	< 0.24	< 0.15	<0.08	< 0.13	< 0.11	< 0.16	#N/A
MW-1	8/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	0.9	0.3 J	< 0.25	< 0.25	< 0.5
	10/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.5
	8/25/2009	<0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.5
	11/1/2017	<0.50 ND	< 2.5	<0.41	<0.26	<0.26 <0.25	<0.50 <0.22	<0.23	<0.50 <0.22	<0.50	<0.33	<0.50 <0.26	<0.18	<1.5 #N/A
	1/14/2002 5/8/2002	ND	<0.23	<0.21	<0.21	<0.25	<0.22	<0.24	<0.22	< 0.41	< 0.24	<0.26	<0.25	#N/A #N/A
	8/7/2003	ND	<0.25	< 0.5	<0.5	<0.5	< 0.5	<1	< 0.15	0.32 J	<0.15	<0.11	<0.16	**N/A
MW-2	10/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.25	< 0.25	<0.25	< 0.25	< 0.5
	8/27/2009	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.5	< 0.2	<0.2	< 0.2	< 0.5
	11/1/2017	< 0.50	< 2.5	< 0.41	< 0.26	< 0.26	< 0.50	< 0.23	< 0.50	< 0.50	< 0.33	< 0.50	< 0.18	< 1.5
	1/15/2002	ND	< 0.23	< 0.27	< 0.21	< 0.25	< 0.22	< 0.22	< 0.22	< 0.41	< 0.24	< 0.26	< 0.25	#N/A
	5/8/2002	ND	< 0.1	< 0.11	< 0.11	< 0.11	< 0.08	< 0.24	< 0.15	0.32	0.34 J	< 0.11	< 0.16	#N/A
MW-3	8/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	0.88	0.42 J	< 0.25	< 0.25	< 0.5
10100-3	10/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.5
	8/27/2009	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.5
	11/1/2017	< 0.50	< 2.5	< 0.41	<0.26	< 0.26	< 0.50	< 0.23	< 0.50	< 0.50	< 0.33	< 0.50	< 0.18	< 1.5
	8/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	<u>0.88</u> <u>J</u>	0.9	<u>0.71</u> <u>J</u>	0.34 J	< 0.25	< 0.5
	10/7/2003	ND <0.2	<0.25 <0.2	<0.5 <0.5	< 0.5 < 0.5	<0.5 <0.5	<0.5 <0.5	<1 <1	0.57 <u>J</u>	<0.25 <0.5	<0.25 <0.2	<0.25	<0.25 <0.2	<0.5 <0.5
	8/25/2009 11/2/2017	<0.2	<0.2	<0.5		<0.5		< 0.23	7.8		<0.2	<0.2		
	5/2/2019	< 0.49	<2.5	<0.41	<0.26 23.0	<0.26	<0.50 <0.44	< 1.2	850	<0.50 <0.34	5.0	< 1.7	<0.18	<1.5 <3.0
	8/14/2019	< 0.45	<1.3	< 0.24	0.43 J	<1.1	<0.44	< 0.58	79.1	< 0.17	0.99 J	< 0.84	< 0.17	<1.5
MW-4	3/10/2020	< 0.25	<1.3	< 0.24	<0.27	<1.1	< 0.32	< 0.58	57	< 0.27	0.47 J	< 0.84	< 0.17	<1.5
	10/28/2020	< 0.25	<1.3	< 0.24	<0.27	< 0.46	< 0.32	< 0.58	24.0	< 0.27	0.26 J	< 0.84	< 0.17	<1.5
	4/21/2021	< 0.30	<1.2	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	31.8	< 0.29	< 0.32	< 0.45	< 0.17	<1.0
ĺ	10/27/2021	< 0.30	<1.2	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	26.8	< 0.29	< 0.32	< 0.45	< 0.17	< 1.0
	4/13/2022	< 0.30	<1.2	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	13.7	< 0.29	< 0.32	< 0.45	< 0.17	<1.0
	10/12/2022	< 0.30	<1.2	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	26.8	< 0.29	< 0.32	< 0.45	< 0.17	<1.0
	4/12/2023	< 0.30	< 0.50	<0.58	< 0.47	< 0.53	< 0.33	< 0.32	44.5	< 0.29	0.4 J	< 0.45	< 0.17	<1.0
	8/7/2003	ND	< 0.25	< 0.5	<u>11</u>	< 0.5	< 0.5	<1	80	0.9	7.9	0.34 J	< 0.25	< 0.5
	10/7/2003	ND	< 0.25	< 0.5	150	1.2	< 0.5	<1	93	< 0.25	6.4	< 0.25	< 0.25	< 0.5
	8/27/2009 11/2/2017	<0.2	<0.2 <2.5	< 0.5	110 73.6	1.2 1.5	<0.5 <0.50	<1 <0.23	140 30.3	<0.5 <0.50	<0.2 3.2	32 <0.50	22 0.45 J	<0.5 <1.5
	5/2/2019	< 0.50	< 1.3	<0.41	11.3	<1.1	<0.50	<0.23	20.5	< 0.50	3.2 3.8	< 0.50	2.1	<1.5
	8/14/2019	< 0.25	<1.3	<0.24	31.2	<1.1	<0.22	< 0.58	29.1	< 0.17	5.9	< 0.84	0.73 J	<1.5
MW-5	3/10/2020	< 0.25	<1.3	< 0.24	14.1	<1.1	< 0.32	< 0.58	23.8	< 0.27	5.0	< 0.84	2.2	<1.5
1	10/28/2020	< 0.25	<1.3	< 0.24	11.3	0.72 J	< 0.32	< 0.58	21.7	< 0.27	5.2	< 0.84	1.5	<1.5
	4/21/2021	< 0.30	<1.2	< 0.58	7.6	0.59 J		< 0.32	20.9	< 0.29	4.2	< 0.45	1.5	<1.0
	10/27/2021	< 0.30	<1.2	<0.58	12.3	1.7	< 0.33	< 0.32	24.0	< 0.29	5.6	< 0.45	1.1	<1.0
	4/13/2022	< 0.30	<1.2	< 0.58	47.8	0.93 J	< 0.33	< 0.32	18.0	< 0.29	<u>3.7</u>	< 0.45	< 0.17	<1.0
	10/12/2022	< 0.30	< 1.2	< 0.58	10.6	< 0.53	< 0.33	< 0.32	18.6	< 0.29	3.6	< 0.45	0.26 J	< 1.0
	4/12/2023	< 0.30	< 0.50	< 0.58	4.4	< 0.53	< 0.33	< 0.32	10.5	< 0.29	1.5	< 0.45	< 0.17	<1.0

#### **Groundwater Analytical Results - Summary of Detected Constituents**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

	Analyte <sup>1,2</sup>	Benzene	Chloroform	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Methylene chloride	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene <sup>3</sup>	Vinyl chloride	Xylenes, total⁴
CA	s	71-43-2	67-66-3	75-35-4	156-59-2	156-60-5	100-41-4	75-09-2	127-18-4	108-88-3	79-01-6	95-63-6	75-01-4	1330-20-7
Uni	ts	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NR 14	0 ES	5	6	7	70	100	700	5	5	800	5	480	0.2	2000
NR 140	) PAL	0.5	0.6	0.7	7	20	140	0.5	0.5	160	0.5	96	0.02	400
	8/25/2009	< 0.2	<2	<5	980	<5	<5	<10	<5	<5	18	<2	57	<5
	11/9/2017	< 0.50	<2.5	< 0.41	4.5	< 0.26	< 0.50	< 0.23	< 0.50	< 0.50	< 0.33	< 0.50	1.0	<1.5
	5/2/2019	< 0.25	<1.3	< 0.24	< 0.27	<1.1	<0.22	< 0.58	< 0.33	< 0.17	< 0.26	< 0.84	< 0.17	<1.5
	8/14/2019	< 0.25	<1.3	< 0.24	<u>14.7 M1</u>	<1.1	< 0.22	< 0.58	<u>1.3</u>	< 0.17	0.37 J	< 0.84	1.6	<1.5
MW-6	3/10/2020 10/28/2020	<0.25 <0.25	<1.3 <1.3	<0.24 <0.24	239 172	6.8 5.4	<0.32 <0.32	<0.58 <0.58	< 0.33	<0.27 <0.27	13.5 15.6	< 0.84	11.5 8.4	<1.5 <1.5
10100-0	4/21/2021	< 0.30	<1.2	< 0.58	1.9	< 0.53	< 0.32	< 0.32	< 0.41	<0.29	<0.32	< 0.45	0.32 J	<1.0
	10/27/2021	< 0.30	<1.2	< 0.58	1.3	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	0.19 J	<1.0
	4/13/2022	< 0.30	<1.2	< 0.58	1.5	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	0.36 J	<1.0
	10/12/2022	< 0.30	<1.2	< 0.58	1.3	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	0.42 J	<1.0
	4/12/2023	< 0.30	< 0.50	<0.58	9.1	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	1.8	<1.0
MW-7	8/26/2009	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.5
	11/9/2017 8/26/2009	<0.50 <0.2	<2.5 <0.2	< 0.41	<0.26 <0.5	<0.26 <0.5	<0.50 <0.5	<0.23 <1	<0.50	<0.50 <0.5	<0.33	<0.50	<0.18	<1.5 <0.5
MW-8	11/9/2017 <sup>5</sup>	NS NS	NS NS	NS NS	NS	NS NS	NS	NS	NS NS	NS NS	NS NS	NS NS	NS	NS
1404 O	8/27/2009	0.28	<0.2	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	0.64	< 0.2	< 0.2	< 0.2	< 0.5
MW-9	11/9/2017	< 0.50	< 2.5	< 0.41	< 0.26	< 0.26	< 0.50	< 0.23	< 0.50	0.59 J	< 0.33	< 0.50	< 0.18	<1.5
	1/15/2002	ND	< 1.2	< 1.4	400	4 J	<1.1	<1.1	<1.1	<2.1	<1.2	< 0.75	<1.3	#N/A
	5/8/2003	ND	<5	< 5.5	3,000	<u>22</u>	< 4	23 J	8,500	< 4	2,800	< 5.5	22 J	#N/A
D7.4	8/8/2003	ND	0.3 J	8.4	2,600	18.0	1.8	<1	27,000	4.8	2,500	< 0.25	11	1.2
PZ-1	10/7/2003 8/25/2009	ND <32	<120 <32	<250 <80	2,600 2,000	<250 <80	<250 <80	<500 <160	36,000 61,000	<120 <80	2,600 1,600	<120 <32	<120 <32	<250 <80
	11/2/2017	<125	<625	<103	414	<64.1	<125	< 58.1	16,200	<125	435	<125	<43.9	<375
	11/2/2017	V 123	X 0 2 3	100	717				was installed or		400	1120	140.7	3770
	5/2/2019	<123	<637	< 122	30,000	< 545	<109	< 290	60,300	< 86.1	3,310	< 420	<87.3	< 750
	8/14/2019	<123	<637	140 J		< 545	<109	< 290	83,700	< 86.1	5,450	< 420	1,110	< 750
	3/10/2020	<123	<637	< 122	36,400	< 545	<159	< 290	23,200	< 135	9,060	< 420	2,630	< 750
PZ-1R	10/28/2020	<123 <148	<637 <591	<122	6,500	<232	<159	<290	28,800	<135	2,280	< 420	822	< 750
FZ-IN	4/21/2021 10/27/2021	<148	<591 <591	<291 <291	98,200 69,500	<264 <264	<163 <163	<160 <160	64,500 21,800	<144 <144	26,000 10,800	<224 <224	10,800 14,200	<524 <524
	4/13/2022	<148	<591	<291	47,800	<264	<163	<160	64,600	<144	11,800	<224	12,300	<524
	10/12/2022	<148	<591	<291	92,600	<264	<163	<160	20,200	<144	3,350	<224	21,900	<524
	4/12/2023	< 148	<252	< 291	72,100	<264	<163	< 160	1,890	< 144	240 J	<224	17,200	< 524
	8/8/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	0.43 J	<0.25	< 0.25	5.8	< 0.5
D7.0	10/6/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.25	< 0.25	< 0.25	8.9	< 0.5
PZ-2	8/27/2009 11/1/2017	<0.2 <0.50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.5	< 0.2	< 0.2	14	< 0.5
	5/2/2019 <sup>6</sup>	<0.50 NS	<2.5 NS	<0.41 NS	4.1 NS	<0.26 NS	<0.50 NS	<0.23 NS	<0.50 NS	<0.50 NS	<0.33 NS	<0.50 NS	11.0 NS	<1.5 NS
	3/2/2017	INO	INO	INO	INO				was installed or		INO	INO	INO	INO
	8/14/2019	< 0.25	<1.3	< 0.24	26.9	<1.1	<0.22	<0.58	12.7	< 0.17	0.39 J	< 0.84	15.5	<1.5
	3/10/2020	< 0.25	<1.3	< 0.24	<u>33.9</u>	<1.1	< 0.32	< 0.58	< 0.33	< 0.27	< 0.26	< 0.84	11.3	<1.5
	10/28/2020	< 0.25	<1.3	< 0.24	90.2	1.1 J	< 0.32	< 0.58	< 0.33	< 0.27	<0.26	< 0.84	10.8	<1.5
PZ-2R	4/21/2021	< 0.30	<1.2	<0.58	109	1.5	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	14.1	<1.0
	10/27/2021	< 0.30	<1.2	< 0.58	104	1.3	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	12.6	< 1.0
			.1 ^	.0 50	01.5	1.4	.0.22	.0.22	.0.11	. 0 20	.0 20	.0 45	44.4	. 1 ^
	4/13/2022 10/12/2022	<0.30 <0.30	<1.2 <1.2	<0.58	91.5 121	1.4 1.7	<0.33	<0.32	<0.41	<0.29	<0.32	<0.45 <0.45	11.1 11.1	<1.0 <1.0

#### **Groundwater Analytical Results - Summary of Detected Constituents**

Former One-Hour Valet Dry Cleaners 1214 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

	Analyte <sup>1,2</sup>	Benzene	Chloroform	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Methylene chloride	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene³	Vinyl chloride	Xylenes, total⁴
CAS		71-43-2	67-66-3	75-35-4	156-59-2	156-60-5	100-41-4	75-09-2	127-18-4	108-88-3	79-01-6	95-63-6	75-01-4	1330-20-7
Units	6	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NR 140	ES	5	6	7	70	100	700	5	5	800	5	480	0.2	2000
NR 140	PAL	0.5	0.6	0.7	7	20	140	0.5	0.5	160	0.5	96	0.02	400
	8/26/2004	ND	<2	<5	440	< 5	<5	<10	56	< 2	<2	< 2	<2	< 5
PZ-3	10/7/2004	ND	<1	< 2.5	300	< 2.5	< 2.5	< 5	73	< 1	<1	<1	<1	< 2.5
FZ-3	8/25/2009	<2	<2	<5	1,100	11.0	<5	<10	5.6	< 5	7.1	<2	3.9	< 5
	11/2/2017	< 25.0	<125	< 20.5	2,060	22.4 J	<25.0	<11.6	< 25.0	< 25.0	144	< 25.0	< 8.8	< 75.0
							PZ-3 aba	ndoned on 1/	11/2018.					
	8/25/2009	< 0.20	< 0.2	< 0.5	4.4	< 0.5	< 0.5	< 1	<u>0.84</u>	< 0.5	<u>0.56</u>	< 0.2	< 0.2	< 0.5
	11/2/2017	< 0.50	<2.5	< 0.41	< 0.26	< 0.26	< 0.50	< 0.23	< 0.50	< 0.50	< 0.33	< 0.50	1.3	<1.5
	5/2/2019	< 0.49	< 2.5	< 0.49	<u>20.8</u>	<2.2	< 0.44	<1.2	351	< 0.34	<u>3</u>	<1.7	1 J	< 3.0
	8/14/2019	< 0.25	<1.3	< 0.24	< 0.27	<1.1	< 0.22	< 0.58	15.8	< 0.17	< 0.26	< 0.84	1.8	<1.5
	3/10/2020	< 0.25	<1.3	< 0.24	1.4	<1.1	< 0.32	< 0.58	16	< 0.27	< 0.26	< 0.84	1.7	<1.5
PZ-4	10/28/2020	< 0.25	<1.3	< 0.24	0.42 J	< 0.46	< 0.32	< 0.58	23.5	< 0.27	0.37 J	< 0.84	< 0.17	<1.5
	4/21/2021	< 0.30	<1.2	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	<u>0.94</u> <u>J</u>	< 0.29	< 0.32	< 0.45	3.1	<1.0
	10/27/2021	< 0.30	<1.2	<0.58	< 0.47	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	3.2	< 1.0
	4/13/2022	< 0.30	<1.2	<0.58	< 0.47	< 0.53	< 0.33	< 0.32	0.45 J	< 0.29	< 0.32	< 0.45	3.3	<1.0
	10/12/2022	< 0.30	<1.2	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	1.4	<1.0
	4/12/2023	< 0.30	< 0.50	< 0.58	< 0.47	< 0.53	< 0.33	< 0.32	< 0.41	< 0.29	< 0.32	< 0.45	3.7	<1.0

#### Notes:

All results reported in micrograms per Liter (ug/L)

ES = Enforcement Standard

PAL = Preventive Action Limit

Bold value = NR 140 ES Exceedance

Italic Value = NR 140 PAL Exceedance

#N/A = Not analyzed NS = Not sampled

J = Estimated concentration. Laboratory results reported between the limit of detection and limit of quantification.

<sup>1</sup> Analytical results are displayed for detected parameters only.

Antagrical results are displayed to detected parallelers of inity.

All sampling results prior to 2017 obtained from a Site Investigation Report prepared by GZA GeoEnvironmental, Inc. on February 24, 2012.

All sampling results prior to 2017 obtained from a Site Inv
 Standards are for 1,2,4- and 1,3,5-Trimethylbenzene

<sup>4</sup> Standards are for Total Xylenes (-m, -p, and -o).

<sup>5</sup> MW-8 not sampled during the November 2017 groundwater sampling event because well did not recharge sufficiently.

<sup>6</sup> PZ-2 was not sampled during the May 2019 groundwater sampling event because well was damaged during site redevelopment activities.

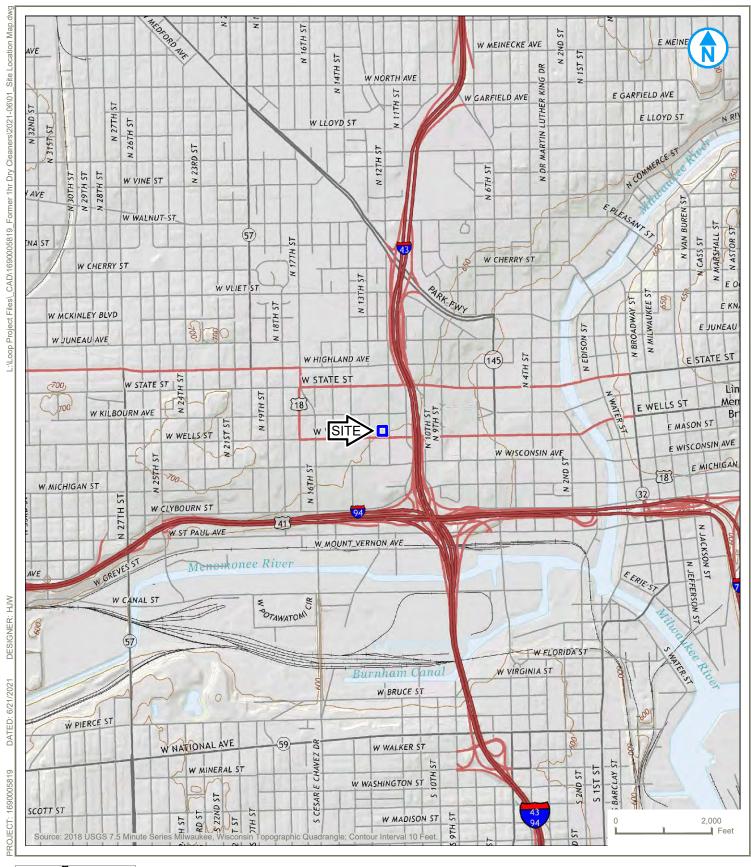
ND = Not detected at or above limit of detection.

M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

C4 = Sample container did not meet EPA or method requirements.

D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

#### **FIGURES**





#### FORMER ONE-HOUR VALET DRY CLEANERS

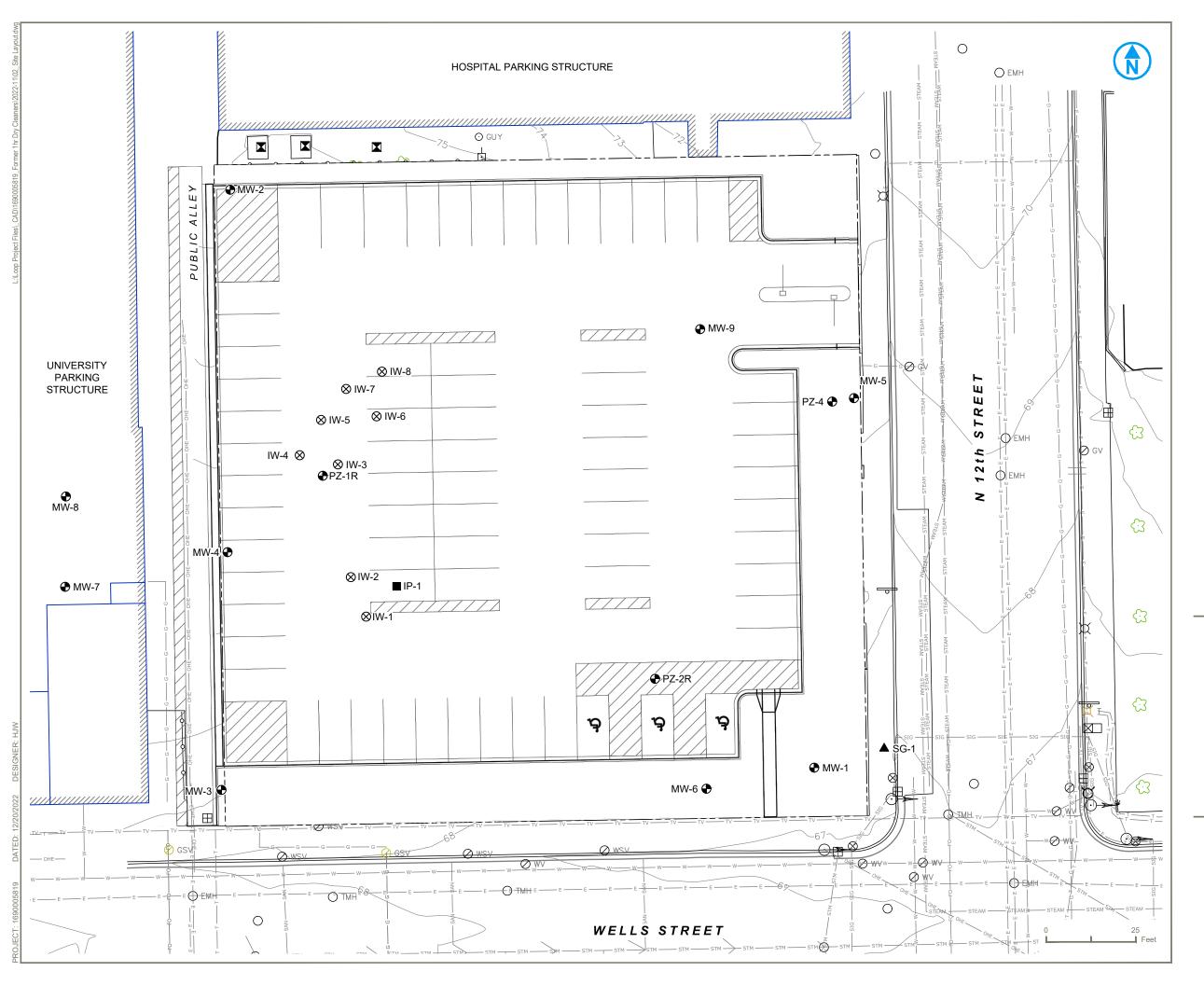
1214 WEST WELLS STREET MILWAUKEE, WISCONSIN

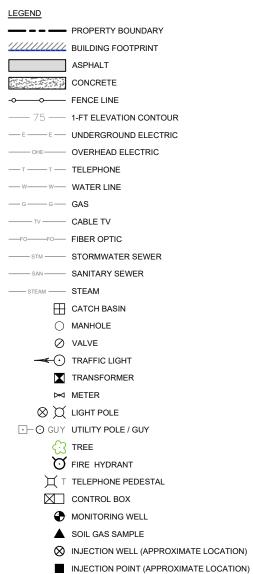
SITE LOCATION MAP

#### FIGURE 1

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY







#### **SITE LAYOUT**

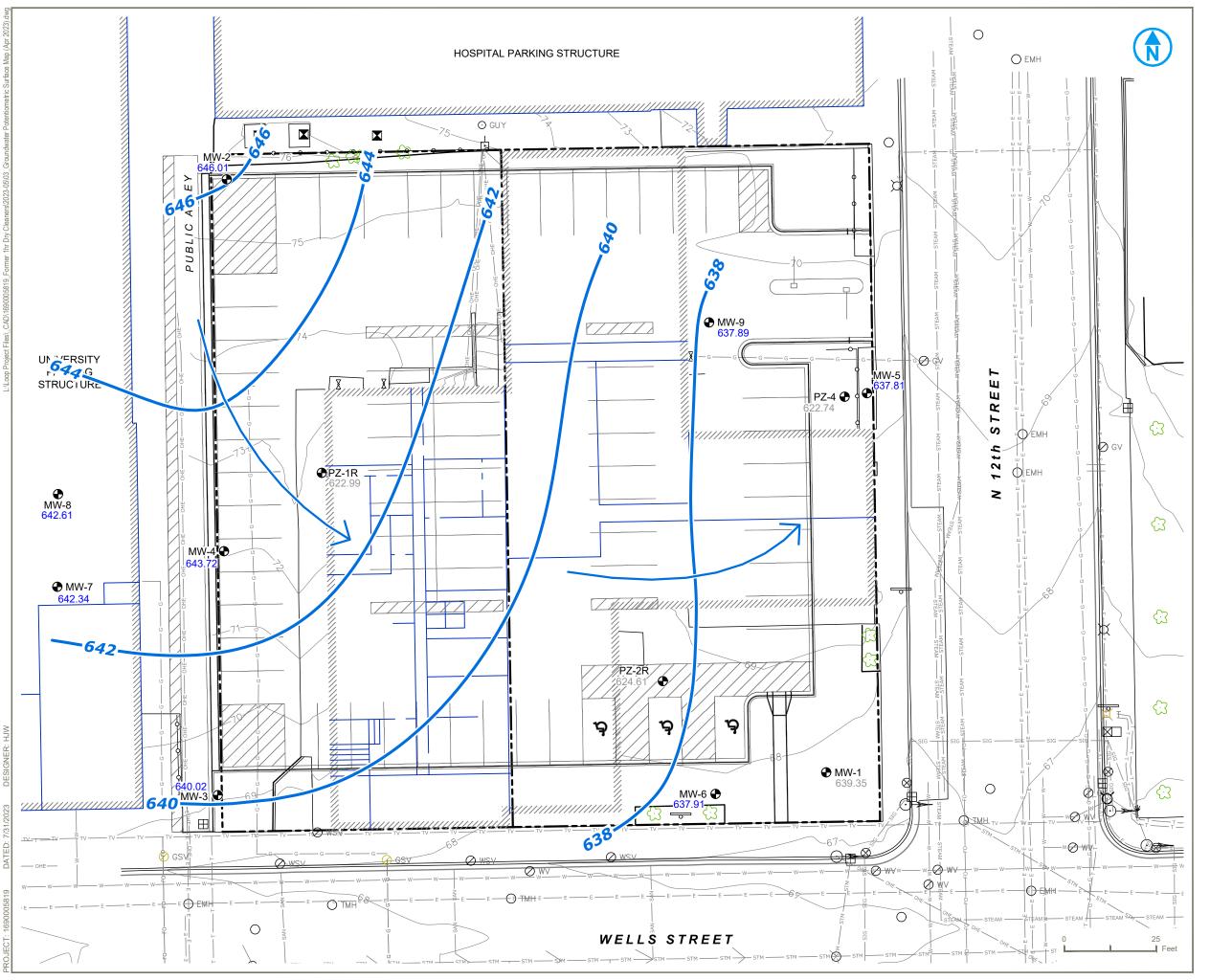
### FORMER ONE-HOUR VALET DRY CLEANERS

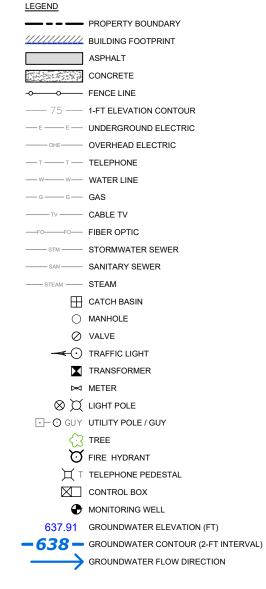
1214 WEST WELLS STREET MILWAUKEE, WISCONSIN

#### FIGURE 2

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY







NOTE: GROUNDWATER MEASUREMENTS TAKEN AT MW-1, PZ-1R, PZ-2R, AND PZ-4 WERE NOT INCLUDED IN CONTOURING CALCULATIONS.

## GROUNDWATER POTENTIOMETRIC SURFACE MAP (APRIL 2023)

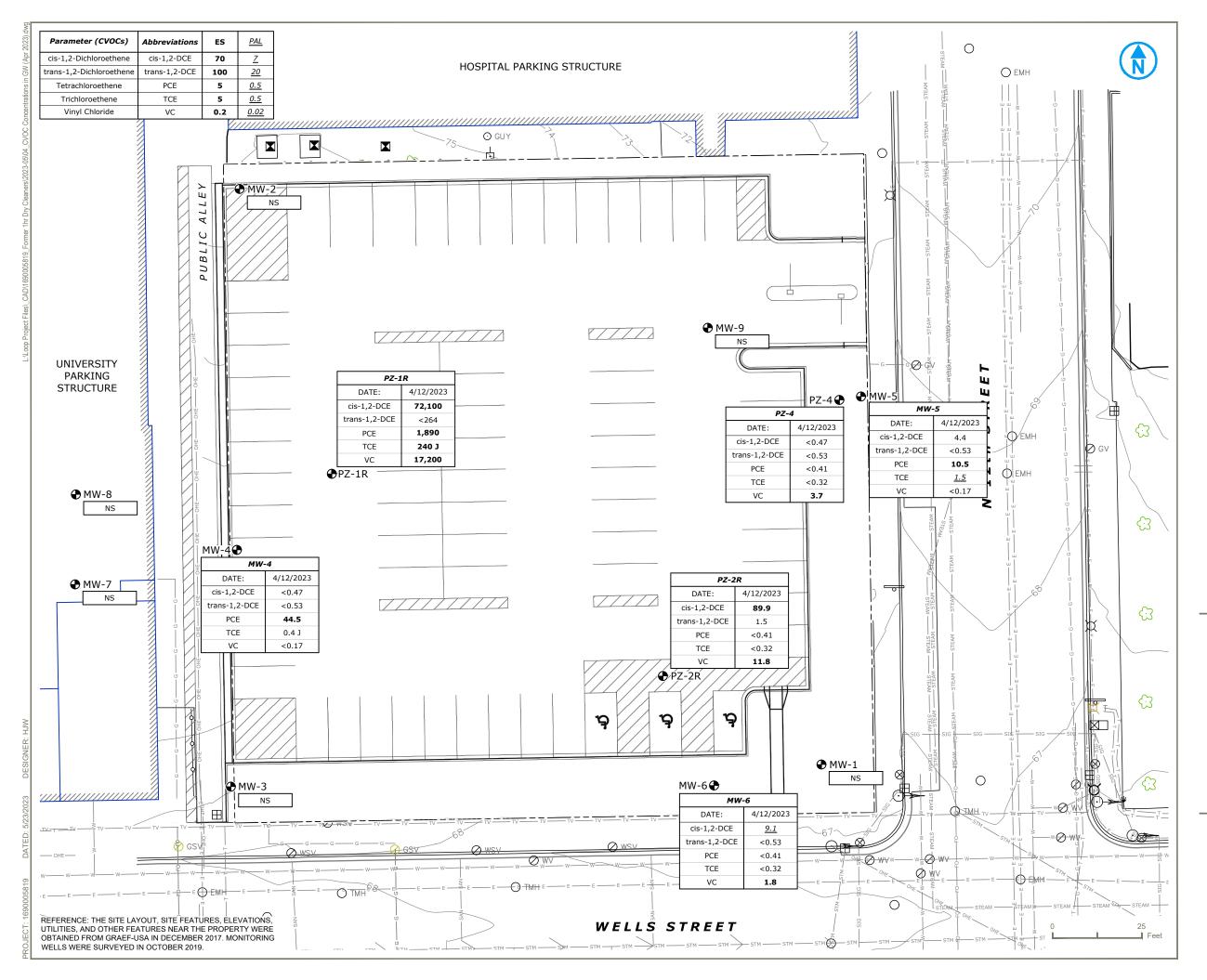
### FORMER ONE-HOUR VALET DRY CLEANERS

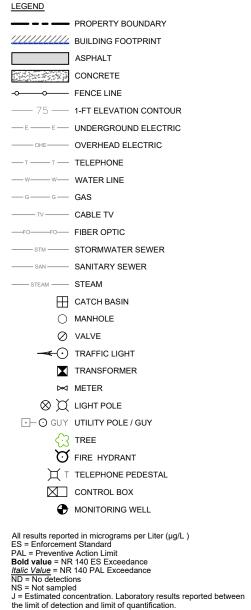
1214 WEST WELLS STREET MILWAUKEE, WISCONSIN

#### FIGURE 3

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY







# **CVOC CONCENTRATIONS IN GROUNDWATER (APRIL 2023)**

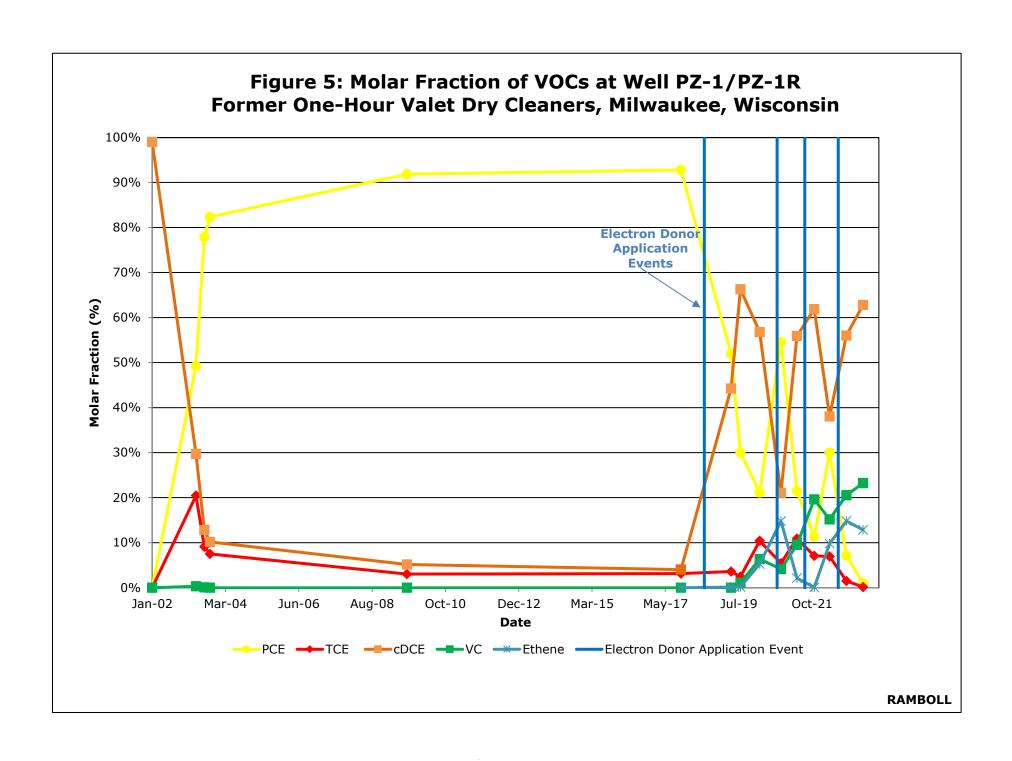
### FORMER ONE-HOUR VALET DRY CLEANERS

1214 WEST WELLS STREET MILWAUKEE, WISCONSIN

#### FIGURE 4

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY





# APPENDIX A LABORATORY ANALYTICAL REPORTS

Ramboll Environment & Health





April 24, 2023

Susan Petrofske Ramboll US Consulting, Inc. 234 W. Florida Street Fifth Floor Milwaukee, WI 53204

RE: Project: 1690005819

Pace Project No.: 40260613

#### Dear Susan Petrofske:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2023. 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

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

Sincerely,

Steven Mleczko@pacelah

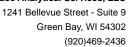
steve.mleczko@pacelabs.com (920)469-2436

Project Manager

Enclosures

cc: Kyle Heimstead, Ramboll US Consulting, Inc. Michelle Peters, Ramboll







#### **CERTIFICATIONS**

Project: 1690005819 Pace Project No.: 40260613

#### 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

South Carolina Certification #: 83006001 Texas Certification #: T104704529-21-8 Virginia VELAP Certification ID: 11873 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-21-00008 Federal Fish & Wildlife Permit #: 51774A

(920)469-2436



#### **SAMPLE SUMMARY**

Project: 1690005819 Pace Project No.: 40260613

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40260613001	PZ-2R	Water	04/12/23 07:39	04/13/23 09:10
40260613002	MW-6	Water	04/12/23 08:15	04/13/23 09:10
40260613003	MW-6 DUP	Water	04/12/23 08:17	04/13/23 09:10
40260613004	PZ-4	Water	04/12/23 09:08	04/13/23 09:10
40260613005	MW-5	Water	04/12/23 09:45	04/13/23 09:10
40260613006	MW-4	Water	04/12/23 10:35	04/13/23 09:10
40260613007	PZ-1R	Water	04/12/23 11:23	04/13/23 09:10
40260613008	TRIP BLANK	Water		04/13/23 09:10



#### **SAMPLE ANALYTE COUNT**

Project: 1690005819 Pace Project No.: 40260613

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40260613001	PZ-2R	EPA 8260	EIB	65
40260613002	MW-6	EPA 8260	EIB	65
40260613003	MW-6 DUP	EPA 8260	EIB	65
40260613004	PZ-4	EPA 8260	EIB	65
40260613005	MW-5	EPA 8260	EIB	65
40260613006	MW-4	EPA 8260	EIB	65
40260613007	PZ-1R	EPA 8015B Modified	KHB	3
		EPA 6020B	KXS	1
		EPA 8260	EIB	65
		HACH 8146	BAF	1
		EPA 300.0	HMB	1
		SM 5310C	TJJ	1
40260613008	TRIP BLANK	EPA 8260	EIB	65

PASI-G = Pace Analytical Services - Green Bay



#### **SUMMARY OF DETECTION**

Project: 1690005819 Pace Project No.: 40260613

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10260613001	PZ-2R					
EPA 8260	cis-1,2-Dichloroethene	89.9	ug/L	1.0	04/17/23 20:51	
EPA 8260	trans-1,2-Dichloroethene	1.5	ug/L	1.0	04/17/23 20:51	
EPA 8260	Vinyl chloride	11.8	ug/L	1.0	04/17/23 20:51	
0260613002	MW-6					
PA 8260	cis-1,2-Dichloroethene	9.1	ug/L	1.0	04/17/23 21:11	
PA 8260	Vinyl chloride	1.8	ug/L	1.0	04/17/23 21:11	
0260613003	MW-6 DUP					
EPA 8260	cis-1,2-Dichloroethene	8.4	ug/L	1.0	04/17/23 21:30	
PA 8260	Vinyl chloride	1.7	ug/L	1.0	04/17/23 21:30	
0260613004	PZ-4					
PA 8260	Vinyl chloride	3.7	ug/L	1.0	04/17/23 21:50	
0260613005	MW-5					
PA 8260	cis-1,2-Dichloroethene	4.4	ug/L	1.0	04/17/23 22:09	
EPA 8260	Tetrachloroethene	10.5	ug/L	1.0	04/17/23 22:09	
PA 8260	Trichloroethene	1.5	ug/L	1.0	04/17/23 22:09	
0260613006	MW-4					
PA 8260	Tetrachloroethene	44.5	ug/L	1.0	04/17/23 22:29	
PA 8260	Trichloroethene	0.40J	ug/L	1.0	04/17/23 22:29	
0260613007	PZ-1R					
PA 8015B Modified	Ethane	135	ug/L	5.6	04/13/23 11:38	
EPA 8015B Modified	Ethene	4270	ug/L	500	04/13/23 12:42	
EPA 8015B Modified	Methane	13300	ug/L	280	04/13/23 12:42	
PA 6020B	Iron	10100	ug/L	250	04/20/23 00:02	
PA 8260	cis-1,2-Dichloroethene	72100	ug/L	500		
PA 8260	Tetrachloroethene	1890	ug/L	500		
PA 8260	Trichloroethene	240J	ug/L	500		
PA 8260	Vinyl chloride	17200	ug/L	500	04/18/23 01:03	
SM 5310C	Total Organic Carbon	177	mg/L	150	04/18/23 09:22	



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: PZ-2R Lab ID: 40260613001 Collected: 04/12/23 07:39 Received: 04/13/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
8260 MSV	Analytical	Method: EPA	A 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		04/17/23 20:51	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 20:51		
Bromochloromethane	<0.36	ug/L	1.0	0.36	1		04/17/23 20:51		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 20:51		
Bromoform	<0.43	ug/L	1.0	0.43	1		04/17/23 20:51		
Bromomethane	<1.2	ug/L	5.0	1.2	1		04/17/23 20:51		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 20:51		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		04/17/23 20:51		
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		04/17/23 20:51		
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		04/17/23 20:51		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 20:51		
Chloroethane	<0.66 <1.4	ug/L ug/L	5.0	1.4	1		04/17/23 20:51		
Chloroform	<0.50	ug/L ug/L	5.0 5.0	0.50	1		04/17/23 20:51		
	<0.50 <1.6	ug/L ug/L	5.0 5.0	1.6	1		04/17/23 20:51		
Chloromethane					1		04/17/23 20:51		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89					
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 20:51		
I,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		04/17/23 20:51		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		04/17/23 20:51		
I,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		04/17/23 20:51		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		04/17/23 20:51		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 20:51		
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 20:51		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		04/17/23 20:51		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		04/17/23 20:51		
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 20:51		
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		04/17/23 20:51		
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		04/17/23 20:51	75-35-4	
cis-1,2-Dichloroethene	89.9	ug/L	1.0	0.47	1		04/17/23 20:51	156-59-2	
rans-1,2-Dichloroethene	1.5	ug/L	1.0	0.53	1		04/17/23 20:51	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		04/17/23 20:51	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		04/17/23 20:51	142-28-9	
2,2-Dichloropropane	<0.42	ug/L	1.0	0.42	1		04/17/23 20:51	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		04/17/23 20:51	563-58-6	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		04/17/23 20:51	10061-01-5	
rans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		04/17/23 20:51	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 20:51	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 20:51		
lexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		04/17/23 20:51		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		04/17/23 20:51		
o-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		04/17/23 20:51		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		04/17/23 20:51		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 20:51		
Naphthalene	<1.9	ug/L	5.0	1.9	1		04/17/23 20:51		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 20:51		
Styrene	<0.36	ug/L ug/L	1.0	0.36	1		04/17/23 20:51		

04/17/23 20:51 2037-26-5



#### **ANALYTICAL RESULTS**

Project: 1690005819 Pace Project No.: 40260613

Toluene-d8 (S)

Date: 04/24/2023 03:53 PM

Sample: PZ-2R	Lab ID:	40260613001	Collected	d: 04/12/23	3 07:39	Received: 04	l/13/23 09:10 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Bay	y					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 20:51	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 20:51	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		04/17/23 20:51	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 20:51	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 20:51	87-61-6	
1,2,4-Trichlorobenzene	< 0.95	ug/L	5.0	0.95	1		04/17/23 20:51	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 20:51	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		04/17/23 20:51	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		04/17/23 20:51	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 20:51	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 20:51	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 20:51	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 20:51	108-67-8	
Vinyl chloride	11.8	ug/L	1.0	0.17	1		04/17/23 20:51	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 20:51	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 20:51	179601-23-1	
o-Xylene Surrogates	<0.35	ug/L	1.0	0.35	1		04/17/23 20:51	95-47-6	
4-Bromofluorobenzene (S)	108	%	70-130		1		04/17/23 20:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		1		04/17/23 20:51	2199-69-1	

70-130

102

%



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: MW-6 Lab ID: 40260613002 Collected: 04/12/23 08:15 Received: 04/13/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
8260 MSV	Analytical	Method: EPA	A 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		04/17/23 21:11	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:11		
Bromochloromethane	<0.36	ug/L	1.0	0.36	1		04/17/23 21:11		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:11		
Bromoform	<0.43	ug/L	1.0	0.43	1		04/17/23 21:11		
Bromomethane	<1.2	ug/L	5.0	1.2	1		04/17/23 21:11		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 21:11		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		04/17/23 21:11		
ert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		04/17/23 21:11		
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		04/17/23 21:11		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 21:11		
Chloroethane	<1.4	ug/L	5.0	1.4	1		04/17/23 21:11		
Chloroform	<0.50	ug/L ug/L	5.0	0.50	1		04/17/23 21:11		
Chloromethane	<0.50 <1.6	ug/L ug/L	5.0 5.0	1.6	1		04/17/23 21:11		
2-Chlorotoluene	<0.89	-	5.0 5.0	0.89	1		04/17/23 21:11		
		ug/L		0.89	1				
I-Chlorotoluene	<0.89	ug/L	5.0	2.4			04/17/23 21:11 04/17/23 21:11		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1				
Dibromochloromethane	<2.6	ug/L	5.0		1		04/17/23 21:11		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		04/17/23 21:11		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		04/17/23 21:11		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 21:11		
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:11		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		04/17/23 21:11		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		04/17/23 21:11		
,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:11		
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		04/17/23 21:11		
,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		04/17/23 21:11		
cis-1,2-Dichloroethene	9.1	ug/L	1.0	0.47	1		04/17/23 21:11		
rans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		04/17/23 21:11		
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		04/17/23 21:11	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:11	142-28-9	
2,2-Dichloropropane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:11		
,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		04/17/23 21:11	563-58-6	
sis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		04/17/23 21:11	10061-01-5	
rans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		04/17/23 21:11	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 21:11	108-20-3	
thylbenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 21:11	100-41-4	
lexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		04/17/23 21:11	87-68-3	
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		04/17/23 21:11	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		04/17/23 21:11	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		04/17/23 21:11	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 21:11		
Naphthalene	<1.9	ug/L	5.0	1.9	1		04/17/23 21:11		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:11		
Styrene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:11		

04/17/23 21:11 460-00-4

04/17/23 21:11 2199-69-1

04/17/23 21:11 2037-26-5



#### **ANALYTICAL RESULTS**

Project: 1690005819 Pace Project No.: 40260613

4-Bromofluorobenzene (S)

1,2-Dichlorobenzene-d4 (S)

Date: 04/24/2023 03:53 PM

Toluene-d8 (S)

Sample: MW-6	Lab ID:	40260613002	Collected	d: 04/12/23	8 08:15	Received: 04	I/13/23 09:10 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Ba	y					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 21:11	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 21:11	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		04/17/23 21:11	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 21:11	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 21:11	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		04/17/23 21:11	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:11	71-55-6	
1,1,2-Trichloroethane	< 0.34	ug/L	1.0	0.34	1		04/17/23 21:11	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		04/17/23 21:11	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:11	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 21:11	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 21:11	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:11	108-67-8	
Vinyl chloride	1.8	ug/L	1.0	0.17	1		04/17/23 21:11	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 21:11	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 21:11	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:11		
Surrogates		ŭ							

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Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: MW-6 DUP Lab ID: 40260613003 Collected: 04/12/23 08:17 Received: 04/13/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
8260 MSV	Analytical	Method: EPA	A 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		04/17/23 21:30	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:30	-	
Bromochloromethane	<0.36	ug/L	1.0	0.36	1		04/17/23 21:30		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:30		
Bromoform	<0.43	ug/L	1.0	0.42	1		04/17/23 21:30		
Bromomethane	<1.2	ug/L	5.0	1.2	1		04/17/23 21:30		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 21:30		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		04/17/23 21:30		
ert-Butylbenzene	<0.59	ug/L	1.0	0.42	1		04/17/23 21:30		
Carbon tetrachloride	<0.37	ug/L	1.0	0.33	1		04/17/23 21:30		
Chlorobenzene	<0.86	ug/L ug/L	1.0	0.37	1		04/17/23 21:30		
		_		1.4	1				
Chloroethane Chloroform	<1.4 <0.50	ug/L	5.0 5.0	0.50	1		04/17/23 21:30 04/17/23 21:30		
		ug/L			1		04/17/23 21:30		
Chloromethane	<1.6	ug/L	5.0	1.6					
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 21:30		
I-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 21:30		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		04/17/23 21:30		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		04/17/23 21:30		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		04/17/23 21:30		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		04/17/23 21:30		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 21:30		
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:30		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		04/17/23 21:30		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		04/17/23 21:30	75-71-8	
,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:30	75-34-3	
,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		04/17/23 21:30	107-06-2	
,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		04/17/23 21:30	75-35-4	
cis-1,2-Dichloroethene	8.4	ug/L	1.0	0.47	1		04/17/23 21:30	156-59-2	
rans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		04/17/23 21:30	156-60-5	
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		04/17/23 21:30	78-87-5	
,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:30	142-28-9	
2,2-Dichloropropane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:30	594-20-7	
,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		04/17/23 21:30	563-58-6	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		04/17/23 21:30	10061-01-5	
rans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		04/17/23 21:30	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 21:30	108-20-3	
Ethylbenzene	< 0.33	ug/L	1.0	0.33	1		04/17/23 21:30		
lexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		04/17/23 21:30		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		04/17/23 21:30		
-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		04/17/23 21:30		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		04/17/23 21:30		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 21:30		
Naphthalene	<1.9	ug/L	5.0	1.9	1		04/17/23 21:30		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:30		
Styrene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:30		



Project: 1690005819
Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: MW-6 DUP	Lab ID:	40260613003	Collected	d: 04/12/23	8 08:17	Received: 04	I/13/23 09:10 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Bay	У					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 21:30	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 21:30	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		04/17/23 21:30	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 21:30	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 21:30	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		04/17/23 21:30	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:30	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		04/17/23 21:30	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		04/17/23 21:30	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:30	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 21:30	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 21:30	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:30	108-67-8	
Vinyl chloride	1.7	ug/L	1.0	0.17	1		04/17/23 21:30	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 21:30	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 21:30	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		04/17/23 21:30		
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		04/17/23 21:30		
Toluene-d8 (S)	105	%	70-130		1		04/17/23 21:30	2037-26-5	



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: PZ-4 Lab ID: 40260613004 Collected: 04/12/23 09:08 Received: 04/13/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
3260 MSV	Analytical	Method: EPA	A 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		04/17/23 21:50	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:50		
Bromochloromethane	<0.36	ug/L	1.0	0.36	1		04/17/23 21:50		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:50		
Bromoform	<0.43	ug/L	1.0	0.43	1		04/17/23 21:50		
Bromomethane	<1.2	ug/L	5.0	1.2	1		04/17/23 21:50		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 21:50		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		04/17/23 21:50		
ert-Butylbenzene	< 0.59	ug/L	1.0	0.59	1		04/17/23 21:50		
Carbon tetrachloride	<0.37	ug/L	1.0	0.33	1		04/17/23 21:50		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 21:50		
		-		1.4	1				
Chloroethane	<1.4	ug/L	5.0		1		04/17/23 21:50 04/17/23 21:50		
Chloroform	<0.50	ug/L	5.0	0.50	1				
Chloromethane	<1.6	ug/L	5.0	1.6			04/17/23 21:50		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 21:50		
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 21:50		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		04/17/23 21:50		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		04/17/23 21:50		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		04/17/23 21:50		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		04/17/23 21:50		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 21:50	95-50-1	
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:50		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		04/17/23 21:50	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		04/17/23 21:50	75-71-8	
,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:50	75-34-3	
,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		04/17/23 21:50	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		04/17/23 21:50	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		04/17/23 21:50	156-59-2	
rans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		04/17/23 21:50	156-60-5	
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		04/17/23 21:50	78-87-5	
,3-Dichloropropane	< 0.30	ug/L	1.0	0.30	1		04/17/23 21:50	142-28-9	
2,2-Dichloropropane	< 0.42	ug/L	1.0	0.42	1		04/17/23 21:50	594-20-7	
I,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		04/17/23 21:50	563-58-6	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		04/17/23 21:50	10061-01-5	
rans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		04/17/23 21:50	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 21:50	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 21:50		
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		04/17/23 21:50		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		04/17/23 21:50		
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		04/17/23 21:50		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		04/17/23 21:50		
Methyl-tert-butyl ether	<0.32 <1.1	ug/L ug/L	5.0 5.0	1.1	1		04/17/23 21:50		
Naphthalene	<1.1 <1.9	-		1.1	1				
•		ug/L	5.0 1.0				04/17/23 21:50		
n-Propylbenzene Styrene	<0.35 <0.36	ug/L ug/L	1.0 1.0	0.35 0.36	1 1		04/17/23 21:50 04/17/23 21:50		



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: PZ-4	Lab ID:	40260613004	Collecte	d: 04/12/23	09:08	Received: 04	I/13/23 09:10 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Ba	у					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 21:50	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 21:50	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		04/17/23 21:50	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 21:50	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 21:50	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		04/17/23 21:50	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 21:50	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		04/17/23 21:50	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		04/17/23 21:50	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 21:50	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 21:50	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 21:50	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 21:50	108-67-8	
Vinyl chloride	3.7	ug/L	1.0	0.17	1		04/17/23 21:50	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 21:50	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 21:50	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/17/23 21:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		04/17/23 21:50	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		04/17/23 21:50	2199-69-1	
Toluene-d8 (S)	102	%	70-130		1		04/17/23 21:50	2037-26-5	



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: MW-5 Lab ID: 40260613005 Collected: 04/12/23 09:45 Received: 04/13/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA	\ 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		04/17/23 22:09	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 22:09		
Bromochloromethane	<0.36	ug/L	1.0	0.36	1		04/17/23 22:09		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 22:09		
Bromoform	<0.43	ug/L	1.0	0.43	1		04/17/23 22:09		
Bromomethane	<1.2	ug/L	5.0	1.2	1		04/17/23 22:09		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 22:09		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		04/17/23 22:09		
tert-Butylbenzene	< 0.59	ug/L	1.0	0.59	1		04/17/23 22:09		
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		04/17/23 22:09		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 22:09		
Chloroethane	<1.4	ug/L	5.0	1.4	1		04/17/23 22:09		
Chloroform	<0.50	ug/L	5.0	0.50	1		04/17/23 22:09		
Chloromethane	<1.6	ug/L	5.0	1.6	1		04/17/23 22:09		
2-Chlorotoluene	<0.89	ug/L ug/L	5.0	0.89	1		04/17/23 22:09		
4-Chlorotoluene	<0.89	-	5.0	0.89	1		04/17/23 22:09		
		ug/L		2.4	1				
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		04/17/23 22:09		
Dibromochloromethane	<2.6	ug/L	5.0				04/17/23 22:09		
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		04/17/23 22:09		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		04/17/23 22:09		
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 22:09		
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 22:09		
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		04/17/23 22:09		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		04/17/23 22:09		
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 22:09		
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		04/17/23 22:09		
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		04/17/23 22:09		
cis-1,2-Dichloroethene	4.4	ug/L	1.0	0.47	1		04/17/23 22:09		
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		04/17/23 22:09		
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		04/17/23 22:09	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		04/17/23 22:09		
2,2-Dichloropropane	<0.42	ug/L	1.0	0.42	1		04/17/23 22:09		
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		04/17/23 22:09	563-58-6	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		04/17/23 22:09	10061-01-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		04/17/23 22:09	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 22:09	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 22:09	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		04/17/23 22:09	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		04/17/23 22:09	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		04/17/23 22:09	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		04/17/23 22:09	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 22:09	1634-04-4	
Naphthalene	<1.9	ug/L	5.0	1.9	1		04/17/23 22:09	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 22:09	103-65-1	
Styrene	< 0.36	ug/L	1.0	0.36	1		04/17/23 22:09	100-42-5	

04/17/23 22:09 95-47-6

04/17/23 22:09 460-00-4

04/17/23 22:09 2199-69-1

04/17/23 22:09 2037-26-5



#### **ANALYTICAL RESULTS**

Project: 1690005819 Pace Project No.: 40260613

o-Xylene

Surrogates

Toluene-d8 (S)

4-Bromofluorobenzene (S)

1,2-Dichlorobenzene-d4 (S)

Date: 04/24/2023 03:53 PM

Sample: MW-5	Lab ID:	40260613005	Collected	d: 04/12/23	3 09:45	Received: 04	/13/23 09:10 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Bay	y					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 22:09	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 22:09	79-34-5	
Tetrachloroethene	10.5	ug/L	1.0	0.41	1		04/17/23 22:09	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 22:09	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 22:09	87-61-6	
1,2,4-Trichlorobenzene	< 0.95	ug/L	5.0	0.95	1		04/17/23 22:09	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 22:09	71-55-6	
1,1,2-Trichloroethane	< 0.34	ug/L	1.0	0.34	1		04/17/23 22:09	79-00-5	
Trichloroethene	1.5	ug/L	1.0	0.32	1		04/17/23 22:09	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 22:09	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 22:09	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 22:09	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 22:09	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		04/17/23 22:09	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 22:09	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 22:09	179601-23-1	

1.0

70-130

70-130

70-130

0.35

1

1

1

<0.35

104

103

103

ug/L

%

%

%



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: MW-4 Lab ID: 40260613006 Collected: 04/12/23 10:35 Received: 04/13/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
8260 MSV	Analytical	Method: EPA	A 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		04/17/23 22:29	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 22:29		
Bromochloromethane	<0.36	ug/L	1.0	0.36	1		04/17/23 22:29		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 22:29		
Bromoform	<0.43	ug/L	1.0	0.43	1		04/17/23 22:29		
Bromomethane	<1.2	ug/L	5.0	1.2	1		04/17/23 22:29		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		04/17/23 22:29		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		04/17/23 22:29		
ert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		04/17/23 22:29		
Carbon tetrachloride	<0.37	ug/L	1.0	0.33	1		04/17/23 22:29		
Chlorobenzene	<0.86	_	1.0	0.86	1		04/17/23 22:29		
		ug/L		1.4	1				
Chloroethane	<1.4	ug/L	5.0		1		04/17/23 22:29		
Chloroform	<0.50	ug/L	5.0	0.50	1		04/17/23 22:29		
Chloromethane	<1.6	ug/L	5.0	1.6			04/17/23 22:29		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 22:29		
I-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		04/17/23 22:29		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		04/17/23 22:29		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		04/17/23 22:29		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		04/17/23 22:29		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		04/17/23 22:29		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		04/17/23 22:29		
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		04/17/23 22:29		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		04/17/23 22:29		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		04/17/23 22:29	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 22:29	75-34-3	
,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		04/17/23 22:29	107-06-2	
,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		04/17/23 22:29	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		04/17/23 22:29	156-59-2	
rans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		04/17/23 22:29	156-60-5	
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		04/17/23 22:29	78-87-5	
,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		04/17/23 22:29	142-28-9	
2,2-Dichloropropane	<0.42	ug/L	1.0	0.42	1		04/17/23 22:29	594-20-7	
,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		04/17/23 22:29	563-58-6	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		04/17/23 22:29	10061-01-5	
rans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		04/17/23 22:29	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 22:29	108-20-3	
Ethylbenzene	< 0.33	ug/L	1.0	0.33	1		04/17/23 22:29		
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		04/17/23 22:29		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		04/17/23 22:29		
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		04/17/23 22:29		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		04/17/23 22:29		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		04/17/23 22:29		
Naphthalene	<1.9	ug/L ug/L	5.0	1.1	1		04/17/23 22:29		
•	<0.35	-			1		04/17/23 22:29		
n-Propylbenzene Styrene	<0.36	ug/L ug/L	1.0 1.0	0.35 0.36	1		04/17/23 22:29 04/17/23 22:29		

04/17/23 22:29 2199-69-1

04/17/23 22:29 2037-26-5



#### **ANALYTICAL RESULTS**

Project: 1690005819 Pace Project No.: 40260613

1,2-Dichlorobenzene-d4 (S)

Date: 04/24/2023 03:53 PM

Toluene-d8 (S)

102

103

%

%

Sample: MW-4	Lab ID:	40260613006	Collected	: 04/12/23	10:35	Received: 04	4/13/23 09:10 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Bay						
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 22:29	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 22:29	79-34-5	
Tetrachloroethene	44.5	ug/L	1.0	0.41	1		04/17/23 22:29	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 22:29	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 22:29	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		04/17/23 22:29	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 22:29	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		04/17/23 22:29	79-00-5	
Trichloroethene	0.40J	ug/L	1.0	0.32	1		04/17/23 22:29	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 22:29	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 22:29	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 22:29	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 22:29	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		04/17/23 22:29	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 22:29	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 22:29	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/17/23 22:29	95-47-6	
Surrogates		ŭ							
4-Bromofluorobenzene (S)	106	%	70-130		1		04/17/23 22:29	460-00-4	

70-130

70-130

1



Project: 1690005819
Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: PZ-1R	Lab ID:	40260613007	Collected	d: 04/12/2	3 11:23	Received: 04/	/13/23 09:10 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical	Method: EPA 8	015B Modifi	ied					
	Pace Anal	ytical Services	- Green Bay	/					
Ethane	135	ug/L	5.6	0.39	1		04/13/23 11:38	74-84-0	
Ethene	4270	ug/L	500	25.2	100		04/13/23 12:42	74-85-1	
Methane	13300	ug/L	280	57.6	100		04/13/23 12:42	74-82-8	
6020B MET ICPMS	Analytical	Method: EPA 6	020B Prena	aration Met	hod: FI	PA 3010A			
0020B MET TOT MIG		ytical Services			ou. Li	71001071			
Iron	10100	ug/L	250	, 58.0	1	04/18/23 06:17	04/20/23 00:02	7430-80-6	
		_		30.0	'	04/10/23 00.17	04/20/23 00:02	7439-09-0	
8260 MSV	•	Method: EPA 8							
	Pace Anal	ytical Services	- Green Bay	/					
Benzene	<148	ug/L	500	148	500		04/18/23 01:03	71-43-2	
Bromobenzene	<180	ug/L	500	180	500		04/18/23 01:03	108-86-1	
Bromochloromethane	<179	ug/L	500	179	500		04/18/23 01:03	74-97-5	
Bromodichloromethane	<208	ug/L	500	208	500		04/18/23 01:03	75-27-4	
Bromoform	<214	ug/L	500	214	500		04/18/23 01:03	75-25-2	
Bromomethane	<596	ug/L	2500	596	500		04/18/23 01:03	74-83-9	
n-Butylbenzene	<429	ug/L	500	429	500		04/18/23 01:03	104-51-8	
sec-Butylbenzene	<212	ug/L	500	212	500		04/18/23 01:03	135-98-8	
tert-Butylbenzene	<293	ug/L	500	293	500		04/18/23 01:03	98-06-6	
Carbon tetrachloride	<185	ug/L	500	185	500		04/18/23 01:03	56-23-5	
Chlorobenzene	<428	ug/L	500	428	500		04/18/23 01:03	108-90-7	
Chloroethane	<690	ug/L	2500	690	500		04/18/23 01:03	75-00-3	
Chloroform	<252	ug/L	2500	252	500		04/18/23 01:03	67-66-3	
Chloromethane	<818	ug/L	2500	818	500		04/18/23 01:03	74-87-3	
2-Chlorotoluene	<445	ug/L	2500	445	500		04/18/23 01:03	95-49-8	
4-Chlorotoluene	<447	ug/L	2500	447	500		04/18/23 01:03	106-43-4	
1,2-Dibromo-3-chloropropane	<1180	ug/L	2500	1180	500		04/18/23 01:03	96-12-8	
Dibromochloromethane	<1320	ug/L	2500	1320	500		04/18/23 01:03	124-48-1	
1,2-Dibromoethane (EDB)	<155	ug/L	500	155	500		04/18/23 01:03	106-93-4	
Dibromomethane	<495	ug/L	2500	495	500		04/18/23 01:03	74-95-3	
1,2-Dichlorobenzene	<163	ug/L	500	163	500		04/18/23 01:03	95-50-1	
1,3-Dichlorobenzene	<176	ug/L	500	176	500		04/18/23 01:03	541-73-1	
1,4-Dichlorobenzene	<446	ug/L	500	446	500		04/18/23 01:03	106-46-7	
Dichlorodifluoromethane	<228	ug/L	2500	228	500		04/18/23 01:03	75-71-8	
1,1-Dichloroethane	<148	ug/L	500	148	500		04/18/23 01:03	75-34-3	
1,2-Dichloroethane	<146	ug/L	500	146	500		04/18/23 01:03	107-06-2	
1,1-Dichloroethene	<291	ug/L	500	291	500		04/18/23 01:03	75-35-4	
cis-1,2-Dichloroethene	72100	ug/L	500	236	500		04/18/23 01:03	156-59-2	
trans-1,2-Dichloroethene	<264	ug/L	500	264	500		04/18/23 01:03		
1,2-Dichloropropane	<224	ug/L	500	224	500		04/18/23 01:03	78-87-5	
1,3-Dichloropropane	<152	ug/L	500	152	500		04/18/23 01:03		
2,2-Dichloropropane	<209	ug/L	500	209	500		04/18/23 01:03		
1,1-Dichloropropene	<205	ug/L	500	205	500		04/18/23 01:03		
cis-1,3-Dichloropropene	<119	ug/L	500	119	500		04/18/23 01:03		
trans-1,3-Dichloropropene	<133	ug/L	500	133	500		04/18/23 01:03		



Project: 1690005819 Pace Project No.: 40260613

**Total Organic Carbon** 

Date: 04/24/2023 03:53 PM

Sample: PZ-1R Lab ID: 40260613007 Collected: 04/12/23 11:23 Received: 04/13/23 09:10 Matrix: Water LOQ DF Results Units LOD Prepared CAS No. **Parameters** Analyzed Qual Analytical Method: EPA 8260 8260 MSV Pace Analytical Services - Green Bay Diisopropyl ether <550 ug/L 2500 550 500 04/18/23 01:03 108-20-3 Ethylbenzene <163 ug/L 500 163 500 04/18/23 01:03 100-41-4 Hexachloro-1,3-butadiene <1370 ug/L 2500 1370 500 04/18/23 01:03 87-68-3 Isopropylbenzene (Cumene) < 500 ug/L 2500 500 500 04/18/23 01:03 98-82-8 p-Isopropyltoluene <522 ug/L 2500 522 500 04/18/23 01:03 99-87-6 04/18/23 01:03 75-09-2 Methylene Chloride <160 ug/L 2500 160 500 Methyl-tert-butyl ether <565 ug/L 2500 565 500 04/18/23 01:03 1634-04-4 04/18/23 01:03 91-20-3 Naphthalene <959 ug/L 2500 959 500 04/18/23 01:03 103-65-1 n-Propylbenzene <173 ug/L 500 173 500 Styrene <178 ug/L 500 178 500 04/18/23 01:03 100-42-5 1,1,1,2-Tetrachloroethane <178 ug/L 500 178 500 04/18/23 01:03 630-20-6 500 1,1,2,2-Tetrachloroethane <189 ug/L 189 500 04/18/23 01:03 79-34-5 1890 500 204 Tetrachloroethene ug/L 500 04/18/23 01:03 127-18-4 Toluene <144 ug/L 500 144 500 04/18/23 01:03 108-88-3 1,2,3-Trichlorobenzene <509 ug/L 2500 509 500 04/18/23 01:03 87-61-6 2500 475 500 04/18/23 01:03 120-82-1 1,2,4-Trichlorobenzene <475 ug/L 04/18/23 01:03 71-55-6 500 1,1,1-Trichloroethane <151 ug/L 500 151 04/18/23 01:03 79-00-5 1,1,2-Trichloroethane <172 500 172 500 ug/L Trichloroethene 240J 500 160 500 04/18/23 01:03 79-01-6 ug/L Trichlorofluoromethane <209 ug/L 500 209 500 04/18/23 01:03 75-69-4 1,2,3-Trichloropropane <278 ug/L 500 278 500 04/18/23 01:03 96-18-4 1,2,4-Trimethylbenzene <224 500 224 500 04/18/23 01:03 95-63-6 ug/L 1,3,5-Trimethylbenzene <179 ug/L 500 179 500 04/18/23 01:03 108-67-8 17200 500 87.2 04/18/23 01:03 75-01-4 Vinyl chloride ug/L 500 Xylene (Total) <524 ug/L 1500 524 500 04/18/23 01:03 1330-20-7 m&p-Xylene <350 ug/L 1000 350 500 04/18/23 01:03 179601-23-1 ug/L o-Xylene <174 500 174 500 04/18/23 01:03 95-47-6 Surrogates 4-Bromofluorobenzene (S) 102 % 70-130 500 04/18/23 01:03 460-00-4 70-130 04/18/23 01:03 2199-69-1 1,2-Dichlorobenzene-d4 (S) 102 % 500 Toluene-d8 (S) 103 % 70-130 500 04/18/23 01:03 2037-26-5 Analytical Method: HACH 8146 Iron, Ferric Calculation Pace Analytical Services - Green Bay 0.50 04/24/23 12:13 20074-52-6 1q,2q Iron, Ferric < 0.13 mg/L 0.13 10 300.0 IC Anions Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay Sulfate < 0.44 mg/L 2.0 0.44 1 04/20/23 17:45 14808-79-8 M0 **5310C TOC** Analytical Method: SM 5310C Pace Analytical Services - Green Bay

#### REPORT OF LABORATORY ANALYSIS

41.5

300

150

177

mg/L

04/18/23 09:22 7440-44-0



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: TRIP BLANK Lab ID: 40260613008 Collected: Received: 04/13/23 09:10 Matrix: Water LOQ DF Results Units LOD Prepared CAS No. **Parameters** Analyzed Qual Analytical Method: EPA 8260 8260 MSV Pace Analytical Services - Green Bay Benzene <0.30 ug/L 1.0 0.30 04/17/23 19:33 71-43-2 1 Bromobenzene < 0.36 ug/L 1.0 0.36 1 04/17/23 19:33 108-86-1 Bromochloromethane < 0.36 ug/L 1.0 0.36 1 04/17/23 19:33 74-97-5 Bromodichloromethane <0.42 ug/L 1.0 0.42 1 04/17/23 19:33 75-27-4 Bromoform < 0.43 ug/L 1.0 0.43 1 04/17/23 19:33 75-25-2 Bromomethane <1.2 ug/L 5.0 1.2 1 04/17/23 19:33 74-83-9 n-Butylbenzene < 0.86 ug/L 1.0 0.86 1 04/17/23 19:33 104-51-8 04/17/23 19:33 135-98-8 sec-Butylbenzene < 0.42 ug/L 1.0 0.42 1 0.59 tert-Butylbenzene <0.59 ug/L 1.0 1 04/17/23 19:33 98-06-6 Carbon tetrachloride < 0.37 ug/L 1.0 0.37 1 04/17/23 19:33 56-23-5 Chlorobenzene <0.86 ug/L 1.0 0.86 04/17/23 19:33 108-90-7 1 Chloroethane <1.4 ug/L 5.0 1.4 1 04/17/23 19:33 75-00-3 0.50 Chloroform < 0.50 ug/L 5.0 1 04/17/23 19:33 67-66-3 Chloromethane <1.6 ug/L 5.0 1.6 1 04/17/23 19:33 74-87-3 2-Chlorotoluene <0.89 ug/L 5.0 0.89 1 04/17/23 19:33 95-49-8 0.89 4-Chlorotoluene < 0.89 ug/L 5.0 1 04/17/23 19:33 106-43-4 2.4 04/17/23 19:33 96-12-8 1,2-Dibromo-3-chloropropane <2.4 ug/L 5.0 1 2.6 Dibromochloromethane <2.6 5.0 1 04/17/23 19:33 124-48-1 ug/L 1,2-Dibromoethane (EDB) 0.31 04/17/23 19:33 106-93-4 < 0.31 ug/L 1.0 1 Dibromomethane <0.99 ug/L 5.0 0.99 1 04/17/23 19:33 74-95-3 1,2-Dichlorobenzene < 0.33 ug/L 1.0 0.33 1 04/17/23 19:33 95-50-1 1,3-Dichlorobenzene <0.35 0.35 04/17/23 19:33 541-73-1 ug/L 1.0 1 1,4-Dichlorobenzene <0.89 ug/L 1.0 0.89 1 04/17/23 19:33 106-46-7 Dichlorodifluoromethane < 0.46 ug/L 5.0 0.46 1 04/17/23 19:33 75-71-8 1,1-Dichloroethane <0.30 ug/L 1.0 0.30 1 04/17/23 19:33 75-34-3 1.2-Dichloroethane <0.29 ug/L 1.0 0.29 04/17/23 19:33 107-06-2 1 1,1-Dichloroethene <0.58 ug/L 1.0 0.58 04/17/23 19:33 75-35-4 1 cis-1,2-Dichloroethene < 0.47 1.0 0.47 04/17/23 19:33 156-59-2 ug/L 1 <0.53 0.53 trans-1,2-Dichloroethene ug/L 1.0 04/17/23 19:33 156-60-5 1 04/17/23 19:33 78-87-5 1,2-Dichloropropane <0.45 ug/L 1.0 0.45 1 1,3-Dichloropropane < 0.30 ug/L 1.0 0.30 1 04/17/23 19:33 142-28-9 2,2-Dichloropropane <0.42 ug/L 1.0 0.42 1 04/17/23 19:33 594-20-7 1,1-Dichloropropene < 0.41 ug/L 1.0 0.41 1 04/17/23 19:33 563-58-6 cis-1,3-Dichloropropene <0.24 ug/L 1.0 0.24 1 04/17/23 19:33 10061-01-5 trans-1,3-Dichloropropene <0.27 ug/L 1.0 0.27 1 04/17/23 19:33 10061-02-6 Diisopropyl ether <1.1 ug/L 5.0 1.1 1 04/17/23 19:33 108-20-3 04/17/23 19:33 100-41-4 0.33 Ethylbenzene < 0.33 ug/L 1.0 1 5.0 2.7 Hexachloro-1,3-butadiene <2.7 ug/L 1 04/17/23 19:33 87-68-3 Isopropylbenzene (Cumene) 5.0 1.0 04/17/23 19:33 98-82-8 <1.0 ug/L 1 p-Isopropyltoluene <1.0 5.0 1.0 04/17/23 19:33 99-87-6 ug/L 1 04/17/23 19:33 75-09-2 Methylene Chloride < 0.32 ug/L 5.0 0.32 1 Methyl-tert-butyl ether <1.1 ug/L 5.0 1.1 1 04/17/23 19:33 1634-04-4 Naphthalene <1.9 ug/L 5.0 1.9 1 04/17/23 19:33 91-20-3 n-Propylbenzene < 0.35 ug/L 1.0 0.35 1 04/17/23 19:33 103-65-1 <0.36 0.36 04/17/23 19:33 100-42-5 Styrene ug/L 1.0



Project: 1690005819
Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

Sample: TRIP BLANK	Lab ID:	40260613008	Collecte	d:		Received: 04	/13/23 09:10 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Anal	ytical Services	- Green Ba	у					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		04/17/23 19:33	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		04/17/23 19:33	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		04/17/23 19:33	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		04/17/23 19:33	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		04/17/23 19:33	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		04/17/23 19:33	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		04/17/23 19:33	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		04/17/23 19:33	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		04/17/23 19:33	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		04/17/23 19:33	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		04/17/23 19:33	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		04/17/23 19:33	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		04/17/23 19:33	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		04/17/23 19:33	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		04/17/23 19:33	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/17/23 19:33	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/17/23 19:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		04/17/23 19:33	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		04/17/23 19:33	2199-69-1	
Toluene-d8 (S)	103	%	70-130		1		04/17/23 19:33	2037-26-5	



Project: 1690005819 Pace Project No.:

QC Batch Method:

40260613

QC Batch:

442251

EPA 8015B Modified

Analysis Method:

EPA 8015B Modified

Analysis Description:

Methane, Ethane, Ethene GCV

Laboratory:

Pace Analytical Services - Green Bay

Associated Lab Samples: 40260613007

METHOD BLANK: 2539141

Date: 04/24/2023 03:53 PM

Matrix: Water

Associated Lab Samples: 40260613007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.39	5.6	04/13/23 08:46	
Ethene	ug/L	< 0.25	5.0	04/13/23 08:46	
Methane	ug/L	<0.58	2.8	04/13/23 08:46	

LABORATORY CONTROL SAMPLE &	LCSD: 2539142		25	39143						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Ethane	ug/L	53.6	48.2	52.1	90	97	80-120	8	20	_
Ethene	ug/L	50	45.0	48.5	90	97	80-120	8	20	
Methane	ug/L	28.6	25.4	27.7	89	97	80-120	9	20	

MATRIX SPIKE & MATRIX S	PIKE DUPLI	ICATE: 2539	144		2539145							
			MS	MSD								
		40260403004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Ethane	ug/L	< 0.39	53.6	53.6	46.9	50.1	88	93	77-120	7	20	
Ethene	ug/L	< 0.25	50	50	43.4	46.3	87	93	76-120	6	20	
Methane	ug/L	28.3	28.6	28.6	90.7	99.6	219	250	12-198	9	26	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819
Pace Project No.: 40260613

QC Batch: 442579 Analysis Method: EPA 6020B QC Batch Method: EPA 3010A Analysis Description: 6020B MET

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40260613007

METHOD BLANK: 2541081 Matrix: Water

Associated Lab Samples: 40260613007

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Iron ug/L <58.0 250 04/19/23 22:04

LABORATORY CONTROL SAMPLE: 2541082

Date: 04/24/2023 03:53 PM

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Iron ug/L 10000 10400 104 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2541083 2541084

MS MSD

40260566015 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits 12000 105 20 Iron ug/L 1550 10000 10000 11900 103 75-125

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

QC Batch: 442454 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40260613001, 40260613002, 40260613003, 40260613004, 40260613005, 40260613006, 40260613007,

40260613008

METHOD BLANK: 2540742 Matrix: Water

Associated Lab Samples: 40260613001, 40260613002, 40260613003, 40260613004, 40260613005, 40260613006, 40260613007,

40260613008

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.36	1.0	04/17/23 17:56	
1,1,1-Trichloroethane	ug/L	< 0.30	1.0	04/17/23 17:56	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	04/17/23 17:56	
1,1,2-Trichloroethane	ug/L	< 0.34	1.0	04/17/23 17:56	
1,1-Dichloroethane	ug/L	< 0.30	1.0	04/17/23 17:56	
1,1-Dichloroethene	ug/L	<0.58	1.0	04/17/23 17:56	
1,1-Dichloropropene	ug/L	<0.41	1.0	04/17/23 17:56	
1,2,3-Trichlorobenzene	ug/L	<1.0	5.0	04/17/23 17:56	
1,2,3-Trichloropropane	ug/L	< 0.56	1.0	04/17/23 17:56	
1,2,4-Trichlorobenzene	ug/L	< 0.95	5.0	04/17/23 17:56	
1,2,4-Trimethylbenzene	ug/L	< 0.45	1.0	04/17/23 17:56	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	04/17/23 17:56	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	04/17/23 17:56	
1,2-Dichlorobenzene	ug/L	< 0.33	1.0	04/17/23 17:56	
1,2-Dichloroethane	ug/L	< 0.29	1.0	04/17/23 17:56	
1,2-Dichloropropane	ug/L	< 0.45	1.0	04/17/23 17:56	
1,3,5-Trimethylbenzene	ug/L	< 0.36	1.0	04/17/23 17:56	
1,3-Dichlorobenzene	ug/L	< 0.35	1.0	04/17/23 17:56	
1,3-Dichloropropane	ug/L	< 0.30	1.0	04/17/23 17:56	
1,4-Dichlorobenzene	ug/L	< 0.89	1.0	04/17/23 17:56	
2,2-Dichloropropane	ug/L	< 0.42	1.0	04/17/23 17:56	
2-Chlorotoluene	ug/L	< 0.89	5.0	04/17/23 17:56	
4-Chlorotoluene	ug/L	<0.89	5.0	04/17/23 17:56	
Benzene	ug/L	< 0.30	1.0	04/17/23 17:56	
Bromobenzene	ug/L	< 0.36	1.0	04/17/23 17:56	
Bromochloromethane	ug/L	< 0.36	1.0	04/17/23 17:56	
Bromodichloromethane	ug/L	< 0.42	1.0	04/17/23 17:56	
Bromoform	ug/L	< 0.43	1.0	04/17/23 17:56	
Bromomethane	ug/L	<1.2	5.0	04/17/23 17:56	
Carbon tetrachloride	ug/L	< 0.37	1.0	04/17/23 17:56	
Chlorobenzene	ug/L	<0.86	1.0	04/17/23 17:56	
Chloroethane	ug/L	<1.4	5.0	04/17/23 17:56	
Chloroform	ug/L	<0.50	5.0	04/17/23 17:56	
Chloromethane	ug/L	<1.6	5.0	04/17/23 17:56	
cis-1,2-Dichloroethene	ug/L	< 0.47	1.0	04/17/23 17:56	
cis-1,3-Dichloropropene	ug/L	<0.24	1.0	04/17/23 17:56	
Dibromochloromethane	ug/L	<2.6	5.0	04/17/23 17:56	
Dibromomethane	ug/L	< 0.99	5.0	04/17/23 17:56	
Dichlorodifluoromethane	ug/L	<0.46	5.0	04/17/23 17:56	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

METHOD BLANK: 2540742 Matrix: Water

Associated Lab Samples: 40260613001, 40260613002, 40260613003, 40260613004, 40260613005, 40260613006, 40260613007,

40260613008

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	<1.1	5.0	04/17/23 17:56	
Ethylbenzene	ug/L	< 0.33	1.0	04/17/23 17:56	
Hexachloro-1,3-butadiene	ug/L	<2.7	5.0	04/17/23 17:56	
Isopropylbenzene (Cumene)	ug/L	<1.0	5.0	04/17/23 17:56	
m&p-Xylene	ug/L	< 0.70	2.0	04/17/23 17:56	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	04/17/23 17:56	
Methylene Chloride	ug/L	< 0.32	5.0	04/17/23 17:56	
n-Butylbenzene	ug/L	<0.86	1.0	04/17/23 17:56	
n-Propylbenzene	ug/L	< 0.35	1.0	04/17/23 17:56	
Naphthalene	ug/L	<1.9	5.0	04/17/23 17:56	
o-Xylene	ug/L	< 0.35	1.0	04/17/23 17:56	
p-Isopropyltoluene	ug/L	<1.0	5.0	04/17/23 17:56	
sec-Butylbenzene	ug/L	< 0.42	1.0	04/17/23 17:56	
Styrene	ug/L	< 0.36	1.0	04/17/23 17:56	
tert-Butylbenzene	ug/L	< 0.59	1.0	04/17/23 17:56	
Tetrachloroethene	ug/L	< 0.41	1.0	04/17/23 17:56	
Toluene	ug/L	<0.29	1.0	04/17/23 17:56	
trans-1,2-Dichloroethene	ug/L	< 0.53	1.0	04/17/23 17:56	
trans-1,3-Dichloropropene	ug/L	<0.27	1.0	04/17/23 17:56	
Trichloroethene	ug/L	< 0.32	1.0	04/17/23 17:56	
Trichlorofluoromethane	ug/L	< 0.42	1.0	04/17/23 17:56	
Vinyl chloride	ug/L	<0.17	1.0	04/17/23 17:56	
Xylene (Total)	ug/L	<1.0	3.0	04/17/23 17:56	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	04/17/23 17:56	
4-Bromofluorobenzene (S)	%	108	70-130	04/17/23 17:56	
Toluene-d8 (S)	%	102	70-130	04/17/23 17:56	

LABORATORY CONTROL SAMPLE:	2540743					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.1	106	70-134	_
1,1,2,2-Tetrachloroethane	ug/L	50	54.6	109	69-130	
1,1,2-Trichloroethane	ug/L	50	53.3	107	70-130	
1,1-Dichloroethane	ug/L	50	52.5	105	70-130	
1,1-Dichloroethene	ug/L	50	52.5	105	74-131	
1,2,4-Trichlorobenzene	ug/L	50	45.2	90	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	43.5	87	64-137	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	70-130	
1,2-Dichlorobenzene	ug/L	50	51.4	103	70-130	
1,2-Dichloroethane	ug/L	50	52.8	106	70-137	
1,2-Dichloropropane	ug/L	50	53.4	107	80-121	
1,3-Dichlorobenzene	ug/L	50	53.7	107	70-130	
1,4-Dichlorobenzene	ug/L	50	50.7	101	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819
Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

ABORATORY CONTROL SAMPLE:	2540743					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
enzene	ug/L	50	52.3	105	70-130	
modichloromethane	ug/L	50	52.8	106	70-130	
moform	ug/L	50	46.7	93	70-130	
nomethane	ug/L	50	39.3	79	21-147	
on tetrachloride	ug/L	50	57.6	115	80-146	
probenzene	ug/L	50	52.4	105	70-130	
roethane	ug/L	50	47.2	94	52-165	
roform	ug/L	50	53.2	106	80-123	
romethane	ug/L	50	37.6	75	51-122	
1,2-Dichloroethene	ug/L	50	49.3	99	70-130	
,3-Dichloropropene	ug/L	50	52.2	104	70-130	
omochloromethane	ug/L	50	51.2	102	70-130	
orodifluoromethane	ug/L	50	19.7	39	25-121	
Ibenzene	ug/L	50	54.9	110	80-120	
ropylbenzene (Cumene)	ug/L	50	51.3	103	70-130	
Xylene	ug/L	100	107	107	70-130	
yl-tert-butyl ether	ug/L	50	52.9	106	70-130	
ylene Chloride	ug/L	50	54.1	108	70-130	
ene	ug/L	50	53.3	107	70-130	
ne	ug/L	50	61.3	123	70-130	
chloroethene	ug/L	50	51.5	103	70-130	
ene	ug/L	50	52.4	105	80-120	
s-1,2-Dichloroethene	ug/L	50	53.6	107	70-130	
s-1,3-Dichloropropene	ug/L	50	51.4	103	70-130	
loroethene	ug/L	50	51.8	104	70-130	
lorofluoromethane	ug/L	50	49.6	99	65-160	
chloride	ug/L	50	43.5	87	63-134	
ne (Total)	ug/L	150	160	107	70-130	
Dichlorobenzene-d4 (S)	%			104	70-130	
omofluorobenzene (S)	%			110	70-130	
ene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SI	PIKE DUPLIC	CATE: 2540	842		2540843							
Parameter	4 Units	-0260671002 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	<0.00030 mg/L	50	50	54.4	52.1	109	104	70-134	4	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.00038 mg/L	50	50	55.1	53.7	110	107	61-135	3	20	
1,1,2-Trichloroethane	ug/L	<0.00034 mg/L	50	50	52.3	50.8	105	102	70-130	3	20	
1,1-Dichloroethane	ug/L	<0.00030 mg/L	50	50	53.4	51.2	107	102	70-130	4	20	
1,1-Dichloroethene	ug/L	<0.00058 mg/L	50	50	54.2	52.2	108	104	71-130	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

MATRIX SPIKE & MATRIX SI	PIKE DUPLICATE: 25408											
		40260671002	MS Spike	MSD Spike	MS	MSD	140	MCD	% Rec		NA	
Parameter	Units	Result	Conc.	Conc.	Result	Result	MS % Rec	MSD % Rec	% Rec	RPD	Max RPD	Qua
1,2,4-Trichlorobenzene	ug/L	<0.00095	50	50	44.8	44.8	90	90	68-131	0	20	
1,2-Dibromo-3- chloropropane	ug/L	mg/L <0.0024 mg/L	50	50	45.9	44.9	92	90	51-141	2	20	
1,2-Dibromoethane (EDB)	ug/L	<0.00031 mg/L	50	50	48.9	48.0	98	96	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.00033 mg/L	50	50	51.6	50.1	103	100	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.00029 mg/L	50	50	51.4	49.9	103	100	70-137	3	20	
1,2-Dichloropropane	ug/L	<0.00045 mg/L	50	50	53.6	50.9	107	102	80-121	5	20	
1,3-Dichlorobenzene	ug/L	<0.00035 mg/L	50	50	53.4	51.0	107	102	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<0.00089 mg/L	50	50	51.4	48.8	103	98	70-130	5	20	
Benzene	ug/L	<0.00030 mg/L	50	50	51.7	49.9	103	100	70-130	4	20	
Bromodichloromethane	ug/L	<0.00042 mg/L	50	50	52.7	50.1	105	100	70-130	5	20	
Bromoform	ug/L	<0.00043 mg/L	50	50	47.9	46.4	96	93	70-133	3	20	
Bromomethane	ug/L	<0.0012 mg/L	50	50	41.2	40.5	82	81	21-149	2	22	
Carbon tetrachloride	ug/L	<0.00037 mg/L	50	50	59.0	57.5	118	115	80-146	3	20	
Chlorobenzene	ug/L	<0.00086 mg/L	50	50	51.4	50.5	103	101	70-130	2	20	
Chloroethane	ug/L	<0.0014 mg/L	50	50	48.0	46.8	96	94	52-165	2	20	
Chloroform	ug/L	<0.00050 mg/L	50	50	53.6	51.0	107	102	80-123	5	20	
Chloromethane	ug/L	<0.0016 mg/L	50	50	39.6	37.0	79	74	42-125	7	20	
cis-1,2-Dichloroethene	ug/L	<0.00047 mg/L	50	50	49.5	46.8	99	94	70-130	6	20	
cis-1,3-Dichloropropene	ug/L	<0.00024 mg/L	50	50	51.3	50.5	103	101	70-130	2	20	
Dibromochloromethane	ug/L	<0.0026 mg/L	50	50	51.1	48.3	102	97	70-130	6	20	
Dichlorodifluoromethane	ug/L	<0.00046 mg/L	50	50	20.1	19.0	40	38	25-121	5	20	
Ethylbenzene	ug/L	<0.00033 mg/L	50	50	54.1	52.4	108	105	80-121	3	20	
Isopropylbenzene (Cumene)	ug/L	< 0.0010	50	50	51.9	50.1	104	100	70-130	4	20	
m&p-Xylene	ug/L	mg/L <0.00070	100	100	104	101	104	101	70-130	3	20	
Methyl-tert-butyl ether	ug/L	mg/L <0.0011	50	50	53.0	51.3	106	103	70-130	3	20	
Methylene Chloride	ug/L	mg/L <0.00032	50	50	55.3	52.4	111	105	70-130	5	20	
o-Xylene	ug/L	mg/L <0.00035 mg/L	50	50	52.9	51.4	106	103	70-130	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819 Pace Project No.: 40260613

Date: 04/24/2023 03:53 PM

MATRIX SPIKE & MATRIX SPI			MS	MSD	2540843							
		40260671002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Styrene	ug/L	<0.00036 mg/L	50	50	61.0	59.1	122	118	70-132	3	20	
Tetrachloroethene	ug/L	<0.00041 mg/L	50	50	52.1	49.1	104	98	70-130	6	20	
Toluene	ug/L	<0.00029 mg/L	50	50	52.6	50.0	105	100	80-120	5	20	
trans-1,2-Dichloroethene	ug/L	<0.00053 mg/L	50	50	55.1	53.1	110	106	70-130	4	20	
trans-1,3-Dichloropropene	ug/L	<0.00027 mg/L	50	50	49.5	48.8	99	98	70-130	1	20	
Trichloroethene	ug/L	<0.00032 mg/L	50	50	51.9	50.8	104	102	70-130	2	20	
Trichlorofluoromethane	ug/L	<0.00042 mg/L	50	50	50.4	48.5	101	97	65-160	4	20	
Vinyl chloride	ug/L	<0.00017 mg/L	50	50	44.3	42.4	89	85	60-137	4	20	
Xylene (Total)	ug/L	<0.0010 mg/L	150	150	157	152	105	102	70-130	3	20	
1,2-Dichlorobenzene-d4 (S)	%	_					104	100	70-130			
4-Bromofluorobenzene (S)	%						107	104	70-130			
Toluene-d8 (S)	%						101	102	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 1690005819 Pace Project No.: 40260613

QC Batch: 442679 QC Batch Method: EPA 300.0 Analysis Method: Analysis Description: EPA 300.0

Laboratory:

300.0 IC Anions Pace Analytical Services - Green Bay

40260613007 Associated Lab Samples:

METHOD BLANK: 2541453

Parameter

Parameter

Date: 04/24/2023 03:53 PM

Sulfate

Sulfate

Matrix: Water

Associated Lab Samples: 40260613007

Parameter

Blank Result

Reporting Limit

Analyzed Qualifiers

Sulfate < 0.44 2.0 04/20/23 11:20 mg/L

Units

Units

mg/L

40260403006

40260613007

Result

< 0.44

Result

LABORATORY CONTROL SAMPLE: 2541454

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

Parameter

Spike Conc.

20

LCS Result

20.0

LCS % Rec

100

% Rec Limits

90-110

Qualifiers

2541455 MS

Spike

Conc.

MSD Spike

Conc.

MS MSD Result Result

2541458

22.0

MS

2541456

MS % Rec

MS

% Rec

110

MSD % Rec

% Rec Max **RPD** RPD Limits

Sulfate mg/L 49.9 200 200 257 240 103 95 90-110 15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2541457

Units

Units

mg/L

MS

Spike

Conc.

20

MSD

20

Spike Conc.

MSD Result Result

24.1

MSD % Rec

120

% Rec Limits

90-110

Max RPD RPD Qual 9

15 M0

Qual

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1690005819 Project: Pace Project No.: 40260613

QC Batch: 442570

QC Batch Method: SM 5310C Analysis Method:

SM 5310C

Analysis Description:

5310C Total Organic Carbon

Laboratory:

Pace Analytical Services - Green Bay

40260613007 Associated Lab Samples:

METHOD BLANK: 2541053 Matrix: Water

Associated Lab Samples: 40260613007

Units

Blank Reporting

Parameter Units Result Limit Analyzed

Qualifiers

**Total Organic Carbon** < 0.14 0.50 04/18/23 04:49 mg/L

LABORATORY CONTROL SAMPLE: 2541054

Parameter

**Total Organic Carbon** 

Date: 04/24/2023 03:53 PM

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

**Total Organic Carbon** 12.5 12.7 102 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

2541055 MS 2541056

MS

MS

6.0

10648512001 Parameter Units Result

MSD Spike Spike Conc. Conc.

6

MSD Result Result

6.0

MSD % Rec

92

MS

% Rec

92

% Rec Limits

80-120

Max **RPD** RPD

> 0 10

Qual

Qual

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2541057

mg/L

MS

Spike

0.48J

40260601001

MSD

Spike

6

2541058 MSD

MS MSD

% Rec

Max

**RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Total Organic Carbon 360 95 118 360 460 453 93 80-120 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### **QUALIFIERS**

Project: 1690005819 Pace Project No.: 40260613

#### **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**

Date: 04/24/2023 03:53 PM

- 1q Diution for calculation purposes only.
- 2q Result is -1.9mg/L, this is more negative than the reporting limit.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.



#### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 1690005819 Pace Project No.: 40260613

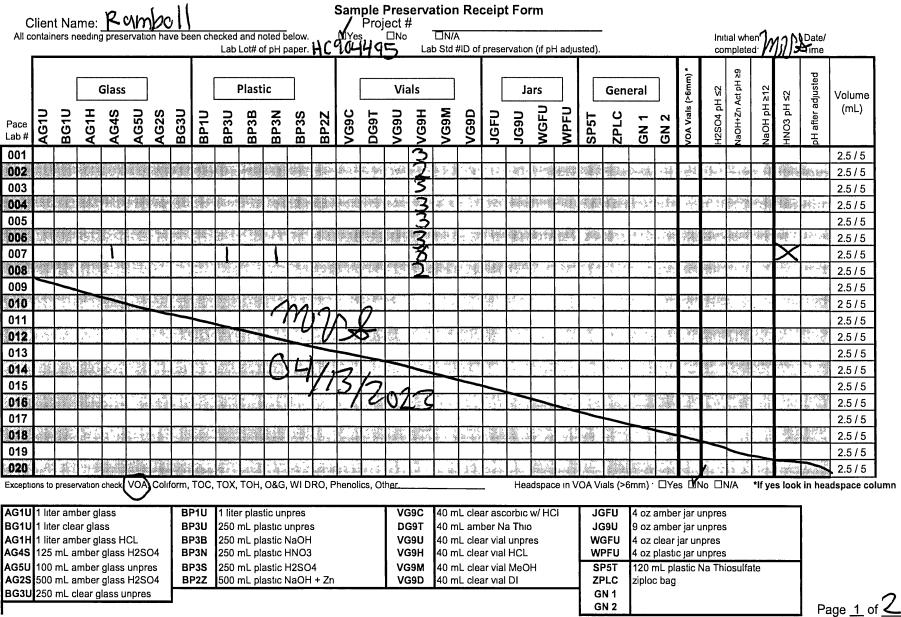
Date: 04/24/2023 03:53 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40260613007	PZ-1R	EPA 8015B Modified	442251		
40260613007	PZ-1R	EPA 3010A	442579	EPA 6020B	442670
40260613001	PZ-2R	EPA 8260	442454		
40260613002	MW-6	EPA 8260	442454		
40260613003	MW-6 DUP	EPA 8260	442454		
40260613004	PZ-4	EPA 8260	442454		
40260613005	MW-5	EPA 8260	442454		
40260613006	MW-4	EPA 8260	442454		
40260613007	PZ-1R	EPA 8260	442454		
40260613008	TRIP BLANK	EPA 8260	442454		
40260613007	PZ-1R	HACH 8146	443115		
40260613007	PZ-1R	EPA 300.0	442679		
40260613007	PZ-1R	SM 5310C	442570		

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DC#\_Title: ENV-FRM-GBAY-0035 v03\_Sample Preservation Receipt Form

Effective Date: 8/16/2022



DC# Title: ENV-FRM-GBAY-0014 v03\_SCUR

Effective Date: 8/17/2022

#### Sample Condition Upon Receipt Form (SCUR) Project #: Client Name: Rambo WO#:40260613 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 11 no Seals intact: ☐ yes ☐ no Packing Material: ☐ Bubble Wrap ▼ Bubble Bags ☐ None ☐ Other Type of Ice: (Wet) Blue Dry None Meltwater Only Thermometer Used Person examining contents: Cooler Temperature Biological Tissue is Frozen: ☐ yes ☐ no Temp Blank Present: Temp should be above freezing to 6°C Labeled By Initials: Biota Samples may be received at ≤ 0°C if shipped on Dry Ice □No □N/A 1 Chain of Custody Present: □N/A Chain of Custody Filled Out: es 🗆 No □N/A Chain of Custody Relinquished: Yes □No □N/A Sampler Name & Signature on COC: Samples Arrived within Hold Time: MYes □No 5. □Yes □No Date/Time. - DI VOA Samples frozen upon receipt □Yes **V**No Short Hold Time Analysis (<72hr): ☐Yes Mo Rush Turn Around Time Requested: 8. Sufficient Volume: MS/MSD: □Y€ For Analysis: NYes No 9. Correct Containers Used: Correct Type: Pace Green Bay Pace IR, Non-Pace Mary DNo 10. Containers Intact: 1**V**Yes □No □N/A Filtered volume received for Dissolved tests 12. No Times on BP3U and BP3N for sample Point 007"PZ-1R" MND 04/13/2023 □Yes No Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: □N/A Trip Blank Present: ¥es □No VDYes □No □N/A Trip Blank Custody Seals Present Pace Trip Blank Lot # (if purchased): If checked, see attached form for additional comments Client Notification/ Resolution: Date/Time: Person Contacted: Comments/ Resolution: PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logic



# **Report of Analysis**

Pace Analytical Services, LLC

1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Attention: Steven Mleckzo

Project Name: 1690005819 Project Number: 40260613

Lot Number: YD14004

Date Completed:04/17/2023

04/17/2023 4:17 PM Approved and released by:

Project Coordinator 1: Jenna S. Holliday





The electronic signature above is the equivalent of a handwritten signature.

This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

# Case Narrative Pace Analytical Services, LLC Lot Number: YD14004

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18.

If you have any questions regarding this report, please contact the Pace Project Manager listed on the cover page.

#### **Ferrous Iron Analysis**

Sample YD14004-001 was received and analyzed outside of holding time.

# Sample Summary Pace Analytical Services, LLC

Lot Number: YD14004 Project Name: 1690005819 Project Number: 40260613

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	PZ-1R	Aqueous	04/12/2023 1123	04/14/2023

(1 sample)

#### **Detection Summary**

#### Pace Analytical Services, LLC

Lot Number: YD14004 Project Name: 1690005819 Project Number: 40260613

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	PZ-1R	Aqueous	Ferrous Iron	SM 3500-Fe B-	12	Н	mg/L	5

(1 detection)

#### Inorganic non-metals

Client: Pace Analytical Services, LLC

Laboratory ID: YD14004-001

Description: PZ-1R

Matrix: Aqueous

Date Sampled: 04/12/2023 1123

Project Name: 1690005819

Date Received: 04/14/2023

Project Number: 40260613

Run Prep Method 1

**Analytical Method** (Ferrous Iron) SM 3500-Fe B-2011

Dilution

**Analysis Date Analyst** 04/14/2023 1129 TAD

**Prep Date** 

**Batch** 72673

CAS Number

Analytical

Units Run

**Parameter** Method Result Q LOQ SM 3500-Fe B-2 **Ferrous Iron** 0.50 mg/L 12 H 1

LOQ = Limit of Quantitation ND = Not detected at or above the LOQ

H = Out of holding time

B = Detected in the method blank N = Recovery is out of criteria W = Reported on wet weight basis E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

Q = Surrogate failure L = LCS/LCSD failure S = MS/MSD failure

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

**QC Summary** 

#### Inorganic non-metals - MB

Sample ID: YQ72673-001

Batch: 72673

Analytical Method: SM 3500-Fe B-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Ferrous Iron	ND		1	0.050	mg/L	04/14/2023 1121

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: YD14004

#### Inorganic non-metals - LCS

Sample ID: YQ72673-002

Batch: 72673

Analytical Method: SM 3500-Fe B-2011

Matrix: Aqueous

	Spike Amount	Result				%Rec	
Parameter	(mg/L)	(mg/L)	Q	Dil	% Rec	Limit	Analysis Date
Ferrous Iron	1.0	0.98		1	98	90-110	04/14/2023 1122

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

#### Inorganic non-metals - LCSD

Sample ID: YQ72673-003

Batch: 72673

Analytical Method: SM 3500-Fe B-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	%Rec Limit	% RPD Limit	Analysis Date
Ferrous Iron	1.0	0.99		1	99	1.4	90-110	20	04/14/2023 1122

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com QC Data for Lot Number: YD14004

#### **Inorganic non-metals - MS**

Sample ID: YD14004-001MS

Batch: 72673

Analytical Method: SM 3500-Fe B-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
Ferrous Iron	12	10	21		10	95	70-130	04/14/2023 1130

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com QC Data for Lot Number: YD14004

#### **Inorganic non-metals - MSD**

Sample ID: YD14004-001MD

Batch: 72673

Analytical Method: SM 3500-Fe B-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L) Q	ì	Dil % Rec	% RPD	%Rec Limit	% RPD Limit	Analysis Date
Ferrous Iron	12	10	21		10 96	0.61	70-130	20	04/14/2023 1131

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

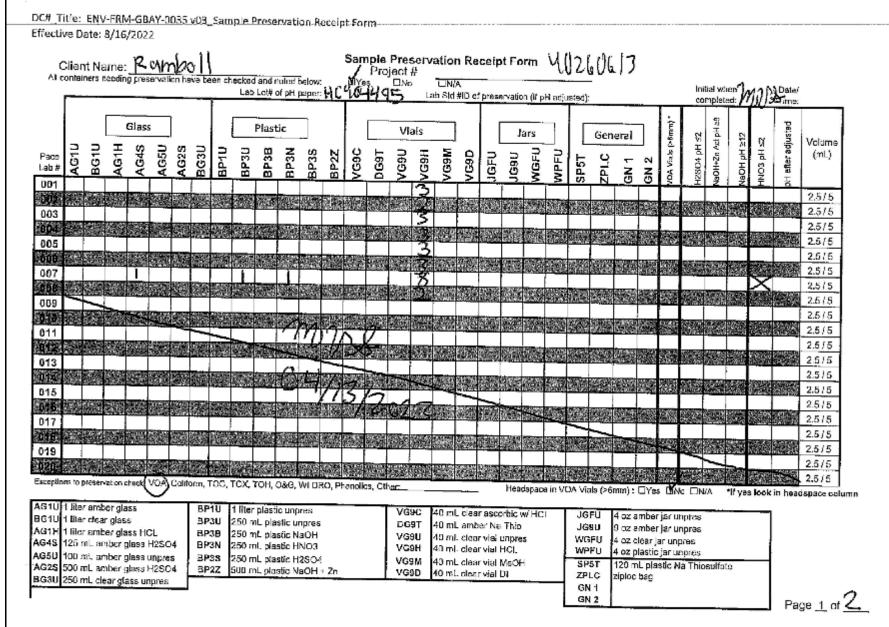
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Chain of Custody and Miscellaneous Documents

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D.G.CAS FORD Collected By (signature): ,	Quote #: Turneround 0	late Barmin	id.		ition Code: tely Packed	no less			7	ည်	0			Secret 1	of Botries V NA gient Volume V H NA es Pries ed on Icc
Unigo	- arranga g	570	G#1	[ ]Yes	[ ] No	an nee:				1,12	18			VOA - USDA	Bester Acceptable 7 8 m
Sample Disposal:  / [ ] Dispose as appropriate [ ] Return	Rush: [ 1.8a	ine Day	[ ] Next Day	Field Falt	ared (if appl			8	9 6	2	812			Same 1	de in Bolding Time . Co A was
] Archive: ] Hold:	[ ] 2 Day	[ ]3 Day	[ ]4 Day [ ]5 D		. 7.50 წეგ გეტ (37.5°)			S	806	3 3	7			Cl. 95 Sample	e an acceptable 7 x n xx
Matrix Codes (Insert in Metrix bo	x balowk Drink	Expedite Char king Water	(DW), Ground Water	r (/30/) 10/-	Louistan Odd	Arts	_	Schors	20	Ferras 1600	이탈			p∺∘s, Sulfi	de Present YN WA
Product (P), Solf/Solid (SL), OH (O	.), Wipe (WP),	Air (AB), Te	ssue (TS), Bloassay (	B), Vapor (V	, Other (QT	)		1.55	20	ୁଥା ,	ا الأ			100000000000000000000000000000000000000	
Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)	Comp	osite End	Res CI	# of Ctns	Voc	MES	3	5  漢			Lab 9	emple Domases
N= 2 0			Date Time		Time			1	See (			200			
12-22 Mw-6	aw	G	4.12 23 073		-		.3	X		44%	385	322	25023 25032	00	Van Leiter
MW-GDUP	-	<del>                                     </del>	08:1	7	<del> </del>		3	X.				15 (S)	233	Qo	
PZ-4		$\vdash$	09.09	3	-		3	Ž		200 000	0253	3556		00	7
MW-5			व्याप					×		Se. 22 530 -	30,550	256	1 G 8 X	70	<u> </u>
mus-4			0:30					×		333	223	22.5	722	700	6
PZ-IR TRIP BLANK	<i>b</i>	b_	b 11:23	5	ļ		11	×	X.	<i>y</i> >	X X	1232		00	1
Kill Dittin		-			-		٤	X		23		333	25.00 20.00	00	6
			<del>-</del>	-	1	-			- 8	937 33.3	3.00	1886 Set-2	\$3.75 3.55		
iustomer Romarks / Special Conditi	ons / Possible I	Hazandsa	Type of Ice Lised:	Wet	Piue Dr	y Non	10	7	SHOR	r Holos	PRESENT	72 hours(:	Y N N	16	Lab Sample Temperature Info:
thing against the	Smy2	2	Packing Meter   8	ED.					Lab	· ()·	$d_{\alpha}$	2000	561	703	Temp Blank Received: Y N N
Customer Remarks/Special, Condition 1994 K times addaed 1999 On Soumple labe OH/13/2	023	5	W.	an i ve en e		5	بالر		400	7	لتستكسر	ZVXK	19/	ひレノ	Therm (Dir. Coolor 1 Temp Upon Records:
			Radchelpsomple(s		0.000 61000	Carried a	22.75		ldures.	DEX	ved via: UPS C	ent coli	rier Pace	Courler	Cooler 1 Therm Corr actor:  Cooler 1 Corrected Temp:
Relipquished by/Company: (Signatur			/Time:	4 🗴 .	by/Company	_	re)		D	ate/Tigu	11:		ATJI LAB US		Comments
Relinquished by/Claringeny: (Signatur	EAM BO		2-23 1 <b>34</b> 5		OG15T	145						15 Table ii Acctrui	- N	4	1000
CS Logistic			i3l202304:10	Merely and	t Van	cton .	onk	0-		ate/Timi は/にる	102309	260,75.47	MILLS	~~	The Bank RoceWed: Y R NA HIGH McOH TSP Other
Relinquished by/Geropany: (Signatu	re)		Time:	Received :	y/Company	: (Signatur	( <i>CII</i> ) (e)	IC	UL D	7//2/ ste/Time	DICOL	223.35.46	**/	201	
		1		1					[ "			PM	C. 100 C. 100 C.	X-J	Non Conformance(s): Page:/_



Qualtrax ID: 41307

Pace\* Analytical Services, LLC

Sampl	e Condition	ո Մթ	on Receipt Fo		
Client Name: Ramboll			Project #	1	
Courier: N CS Logistics  Fed Ex  Spe	adaa Dura		Makes	MO#:	40260613
☐ Client ☐ Pace Other:	eces [] UPS	5 LJ:	Walteo	NIB B II B I BI	8119881 18 818
Tracking #:			,		
Custody Seal on Cooler/Box Present: V yes	Fine Sea	ls intac	- Myas - as	40260613	
Custody Seal on Samples Present:  yes	~ (:		t: □ yes □ no		
Packing Material: 🔲 Bubble Wrap 🔯 Bu		∐ No	ne ∏ Other		
Thermometer Used SR 17.8	Type of lee	: Wei	Blue Dry None	Meftwater	
Cooler Temperature Incom: (), 5 /Corn		_ ~			Person examining contents:
Temp Blank Present: Morey pes ☐ no	Biol	ogical	Tissuc is Frozen:	□ yes□ no	Date: OUBRU Initials: MIV
Temp should be above freezing to 6°C. Stota Samples may be received at ≤ 0°C if sidpped on	Dry Ice-				Labeled By Initials:
Chain of Custody Present:	Nyss □No	□ <sub>N/A</sub>	1.		
Chain of Custody Filled Out:	3 Tares Mino		do ton 9's our	ces adaga	Via samples patels -
Chain of Custody Relinquished:	Ì√yes ∐No		NO \$ :32	107/13/A	<i>U\$</i>
Sampler Name & Signature on COC;	MYes DNo		-		
Samples Arrived within Hold Time:	MYes ⊡No		5.		
- DI VOA Samples frozen upon receipt	☐Yes □Na		Date/Time;		
Short Hold Time Analysis (<72hr):	□Yes MNo		6.		
Rush Turn Around Time Requested:	ElYes (Ne		7.		
Sufficient Volume:	Elites Dive				
1	D; Dyes Mino	Char	8.		
Correct Containers Used:	Yes □No	LINA			
orred Type: Pace Green Bay Pace IR, Non-Pa			0.		
containers Intact:	_/				
illered volume received for Dissolved tests	E Kos □No	-	10.		
	12 Yee □No			an 0.2311 an	1 0020 1 00 6-10 0 1-1-
ample Labels match COC:	∐Yes ŒNo				d BASN for swaple point
-Includes date/time/IO/Analysis Matrix:				יאליטין,	04/13/2023
rip Blank Present:	Markes □No		13.		
ic Blank Custody Seals Present ace Trip Blank Lot # (if purchased):	<b>V</b> ≜Yes ⊡No	□N/A			
lient Notification/ Resolution:			16 -	besterd a 15 t	
Person Contacted:		Date/T	ime:	necked, see attach	ed form for additional comments
Comments/ Resolution;					
4 Perdunda da como de de de de de de de de de de de de de					
I Review is documented electronically in LIN	ls. By releasin	g the p	project, the PM acl	mowledges the	y have reviewed the sample logic
					Page Z of Z

DC#\_Title: ENV-FRM-WCOL-0286 v02\_Samples Receipt Checklist (SRC)

Effective Date: 8/2/2022

Sample Receipt Checklist	(SRC)	۱
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Client: Pace Means of receipt:	Cooler Inspected by/date: KNR / 04/14/2023 Lot #: YD14004  Page   Client   LPS   FedSy   Other
✓ Yes No	Pace Client UPS / FedEx Other:  1. Were custody seals present on the cooler?
✓ Yes No	NA 2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA	
	Chlorine Strip ID; NA Tested by: NA re upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID; NA
3.9 /3.9 °C N/	re upon receipt / Derived (Corrected) temperature upon receipt
~	rature Blank Against Bottles IR Gun ID: 8 IR Gun Correction Factor: 0 °C
Method of coolant:	Wet Ice Ice Packs Dry Ice None
	3 West all coolers cooling at a below 5 0000 TC
✓Yes No [	NA Project Manager notified?  PM was Notified by: phone / enail / face-to-face (circle one).
✓ Yes No	NA 4. Is the commercial courier's packing slip attached to this form?
√ Yes No	Were proper custody procedures (relinquished/received) followed?
√ Yes No	6. Were sample IDs listed on the COC and all sample containers?
√ Yes No	7. Was collection date & time listed on the COC and all sample containers?
✓ Yes No	8. Did all container Jabel information (ID, date, time) agree with the COC?
✓ Yes No	9. Were tests to be performed listed on the COC?
☑Yes □No	10. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
70-	
Yes No	11. Was adequate sample volume available?
Yes V No	12. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
✓ Yes No	13. Were all samples containers accounted for? (No missing/excess)
Yes No	NA 14. Were VOA. 8015C and RSK-175 samples free of bubbles > "pea-size" (14" or 6mm in
	diameter) in any of the VOA vials?
Yes No V	/ NA 15. Were all DRO/metals/nutrient samples received at a pH of < 2?
_ /_ /_	/ NA 16. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes No	NA 17. Were all applicable NH <sub>9</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of regidual chlorine?
Tv. [7by [	10 W. d. materials V. d. d.
Yes ✓ No	_NA
iample Preservatio	(Must be completed for any sample(s) incorrectly preserved or with headspace.)
ample(s) NA	were received incorrectly preserved and were adjusted according
n sample receiving v	with MAmZ of circle one: H2SO4, HNO3, HCl. NaOH using SR # NA
ime of preservation	NA If more than one preservative is needed, please note in the comments below.
ample(s) NA.	were received with bubbles >6 mm in diameter.
amples(s) NA	
	were received with TRC > 0.5 mg/L (If #19 is $no$ ) and were in sample receiving with sodium thiosolfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Unique ID: NA
	outube receiving with southful anosthiate (PatysyO3) with Unique ID; Total
omments:	

#### **APPENDIX B**

**INVESTIGATION DERIVED WASTE DISPOSAL DOCUMENTATION** 

Ramboll Environment & Health

# **Activity Report**

BT Acnt ID (Cust#) 1038 (427988)

BILL TO: MARQUETTE UNIVERSITY CORP 1250 W WISCONSIN AVE MILWAUKEE, WI 53201 (414) 288-8411

JOB TRK: WO-4107027000 JOB NO: 4107027000

BILL DOC NO: HH30828899

SL Acnt ID (Gen#): 56727 (640254)

JOB SITE: Marquette University 1214 West Walls Street Milwaukee, WI 53233 (414) 288-8411

WO NO: 4107027000

EPA ID: WID053684478

CONTACT: DENNIS DAYE

MANIFEST NUMBER(S):

002270508VE8

CONTACT: DENNIS DAYE

CUSTOMER P.O. NUMBER	PROJECT NUMBER			SHIP DATE	i		TERR.
				08/28/20	23		W38
DELGRETTON		# CONT.	CONT./CODE	CITY	1JCHI	POVLN	WASTE AREA
Menif# 002270508VE9 Tidd WIP 555475 / Approval CW TETRACHLOROETHYLENE	DDPK6-5G	1	051H1-DF	43	Р	1/1	

Total Hours: 0 # of Containers: 1

Total Pounds: 43

# **Activity Report**

BT Acnt ID (Cust#) 1038 (427988)

BILL TO: MARQUETTE LINIVERSITY CORP 1250 W WIBCONSIN AVE MILWAUKEE, WI 53201

(414) 288-8411

JOB TRK: WO-4107027000 JOB NO: 4107027000

BILL DOC NO: HH20626909

BL Acnt ID (Gent/): 56727 (649254)

WO NO: 4107027000 EPA ID: WID053684478

JOB SITE: Marquetta University 1214 West Wells Street Milwaukee, WI 53233

(414) 288-8411

CONTACT: DENNIS DAVE

MANIFEST NUMBER(S):

Non-Disposals

CONTACT: DENNIS DAYE

CUSTOMER P.O. NUMBER	PROJECT NUMBER			BHP DATE	i i		TERRL
				08/28/20	123		W38
DESCRIPTION		Ø GONT.	CONT./CODE	QTY	LICH	POVLN	WARTE AREA
06/28/2023 Fees EPA E	-Manifest Fee		FEE102	1	EACH	1	
		7	otel Hours:	0			

#### Commente:

Veoila appreciates your business? Your work today was led by Colin Barrington (Environmental Specialist) in conjunction with other Veolle team members. If you have any questions about today's service or would like to schedule your next plokup, please only he Veolle Menomones Fells, WI Facility at 800-255-6092 or email Zeoh Davis at zech devis@veolle.com/ Gyal Zero. Leading Safety Together. If you're interested in hearing the latest news about Veolla, sign up to receive dur newsletter at: http://www.veollanorthamerica.com/en/sign-our-newsletters.

Slonature:

Customer authorizes Contractor to make changes on Customer's behalf in regards to transporters used and to perform the Services, including adding or changing transporters listed on manifests. If Customer provides an approved transporter list in writing to Contractor at the time Customer executes this Agreement, Contractor shall select only those transporters on that list when providing transportation services to Customer. If Customer does not provide an approved transporter list in writing to Contractor at the time Customer executes this Agreement, Customer authorizes Contractor to select any permitted transporter to provide transportation services to Customer.



Please print or type. Form Approved, OMB No. 2050-0039 1. Generator ID Number 4. Manifest Tracking Number 3. Emergency Response Phone UNIFORM HAZARDOUS 002270508 **VES** WASTE MANIFEST WID053684478 (877) 818-0087 5. Generator's Name and Mailing Address Generator's Site Address (if different than mailing address) DENNIS DAYE MARQUETTE UNIVERSITY 1214 WEST WELLS STREET ACADEMIC SUPPORT FACILITY, 110 P.O. BOX 1881 MILWAUKEE, WI 53233 MILWAUKEE, WI 53201 6. Transporter 1 Company Name 288-8411 U.S. EPA ID Number N J D 0 8 0 6 3 1 VEOLIA ES TECHNICAL SOLUTIONS 3 6 9 7. Transporter 2 Company Name U.S. EPA ID Number 8. Designated Facility Name and Site Address U.S. EPA ID Number VEOLIA ES TECHNICAL SOLUTIONS, W124 N9451 BOUNDARY MENOMONEE FALLS, WI 53051 WID003967148 Facility's Phone: 262 255-6655 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 10. Containers 11. Total 12 Unit 9a - 13. Waste Codes and Packing Group (if any)) HM No. Type Quantity Wt./Vol. NA3082, HAZARDOUS WASTE, LIQUID, n.o.s., F002 GENERATOR (TETRACHLOROETHYLENE), 9, III, RQ (F002) 1 DF 43 P egency authority on initial transporter to add or substitute additional transporters on generator's behalf. + 1) OU 36190

I:W: 555475 A: CWD DPR656 Place of ER6 of ER6 by Marquette. Refuse 14. Special Handling Instructions and Additional Information 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 EPAAcknowledgment 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/Offeror's Printed/Typed Name Month Day Year 26 23 16. International Shipments Port of entry/exit: Export from U.S. Import to U.S. Transporter signature (for exports only): Date leaving U.S. 17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Signature Month Day Year TRANSPORT 26 23 Transporter 2 Printed/Typed Nar Day Signature 18. Discrepancy 18a. Discrepancy Indication Space Type Residue Partial Rejection Quantity Full Rejection Manifest Reference Number: U.S. EPA ID Number 18b. Alternate Facility (or Generator) FACILITY Facility's Phone: DESIGNATED 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) 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 Month Day

#### PACKING SUMMARY

SL Accnt Id (Gen Num): 56727 (649254)

Marguette University 1214 West Wells Street Milwaukee, WI 53233

**DENNIS DAYE** Alire: EPA ID: WID053684478 Manifest Number:

002270508VES

Field System ID:

HH

Work Order Number:

4107027000 08/28/2023

Date Shipped:

Container#: HH-4107027000-001 Weate Area: Manifest Pege/Line: 01 / 1

WIP: 555475 PHY State: L DisposalCode: CWDDPK8-5G

Date Accumulated: 08/28/2023 Gen Drum ID:

Shipping Name: NA3082, HAZARDOUS WASTE, LIQUID, n.o.e., (TETRACHLOROETHYLENE), 9, III, RQ (F002)

No. of Commona: 01 Outer Contelner: 051H1-DF Inner Conteiner:

Primary Wests Codes: F002 OOS Date: 11 PCB Seriel 宗

Total Cmna Wt: 43 SIC: 8221 Source: G19 Form: W219 Cubic Ft.: 0.68 System: H141

Individual Common Weights: 1@43 (POUNDS)

Units Container Size **EPA/State Codes** Net Weight Chemical Name

1 5 GAL F002

TETRACHLOROETHYLENE (D-61M)
TRICHLOROETHYLENE (TCE) (D-3.3M) WATER (99-100%)
RUST, DIRT, SIGALE (0-1%)

Menifest Number: 002270508VES Work Order Number: 4107027000 Page 1 of 1

# Land Disposal Restriction Notification Form

Generator Name	Marquette Universi	ty				
EPAID Number	WID053684478	Manifest	002270508VE8			
restricted from Is each container is permit status asso aubostegories, lis	ed disposal by the USE the designation of the v related with the treatme	PA under the land disposal restrict waite as a wastewater or non-waste mi/disposal facility, applicable was event constituents that are present i	ou that this shipment contains wast ion program. Identified below for water, the Clean Water Act (CWA) ite codes and any corresponding in the waste, and any underlying			
Container Number:	HH-4107027000-001	(1/ 1)				
WIP / Approval Code:		555475 / CWDDPK9-6Q				
	gnation/CWA Status:	Non-Wastewater / Non-CWA	1			
	es (Subestegories):	F002				
	ts (F001 - F005):		TRICHLOROETHYLENE (TCE)			
UHCa Pres	The state of the s	Not Applicable				
Additional	Requirements; Notices:	Restricted waste requires tre	setment to applicable standard			
I hearby certify the accurate to the be	nat all information in the	is and associated land disposal rest d information.	riction documents in complete and			
Title	NECTOY 1	-HES Date	6/00/003			