Prepared for:

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

Date:

March 2022

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



# **CERTIFICATIONS**

I, James 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 M. Hutchens License No. 26366



I, Jeanne Tarvin, 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.

Jeanne M. Tarvin, PG, CPG

Date

March 16, 2022

License No. G-307-13

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# 1. INTRODUCTION

Ramboll US Consulting, Inc. (Ramboll), on behalf of Marquette University (Marquette), has prepared this 2021 Progress Report (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 the 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 post-remedial action monitoring activities at the site. Parties currently involved with the project include the following:

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Responsible Party/Site Owner: Marquette University

Mr. Joel Smullen, AIA 517 North 14th Street Milwaukee, WI 53233 (414) 288-4620

Regulatory Agency/Project Manager: WDNR

Mr. Greg Moll

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# 1.1 Site Location and Description

The site is located at 1214-1222 West Wells Street in the southwest ¼ of the northwest ¼ 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 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 subject 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, 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 a carbon amendment (commercially known as Anaerobic BioChem [ABC®]). The soil blending was primarily focused on treating saturated soil and groundwater at depths 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 at the site. The supplemental in-situ ERD injection activities were completed in August/September 2020 and documented in the Supplemental Remediation Documentation and Progress Report (Ramboll, 2021). That report also documented the results of the October 2020 semi-annual groundwater monitoring event.

#### 1.3 Purpose of Report

The purpose of this report is to document activities completed from July 1 to December 31, 2021. Specific objectives include the following:

- Summarize, document, and present the supplemental *in-situ* ERD activities complete in July 2021.
- Summarize the results of the October 2021 semi-annual groundwater monitoring event.
- Present the work plan for the collection of limited per- and polyfluoroalkyl substances (PFAS) groundwater samples as requested by the WDNR.

# 2. SUPPLEMENTAL *IN-SITU* ERD ACTIVITIES

The following section documents the field activities that were completed as part of the supplemental *in-situ* ERD activities completed on July 14, 2021. The supplemental in-situ ERD activities were completed under an approved Infiltration/Injection Temporary Exemption issued by the WDNR on July 24, 2020 that expired on July 24, 2021. An extension of the exemption approval was requested through an electronic mail (e-mail) on June 10, 2021, and a formal e-mail request on July 29, 2021. Based on direction provided by WDNR, the extension request would be held until

the evaluation of the July 2021 injection and subsequent October 2021 groundwater results have been completed. As such, this report provides this evaluation.

# 2.1 Subcontractor Identification

The following remediation contractor conducted the supplemental carbon amendment injection activities under Ramboll oversight:

Redox Tech, LLC (Redox Tech) 2800 Centre Circle Drive Downers Grove, IL 60515

# 2.2 Supplemental Injection Activities

A supplemental carbon amendment injection event took place on July 14, 2021. The objective of the additional injection event was to further support the existing reducing conditions and continued microbial activity. The work was performed in accordance with Temporary Injection Exemption approval received by the WDNR on July 24, 2020. Notification of the planned injection event was provided to the WDNR on June 10, 2021, via e-mail.

# 2.2.1 Potable Water Source and Use

During chemical amendment preparation approximately 250 gallons of potable water was used to create the aqueous ABC® solution. Water was obtained from the City of Milwaukee public supply via a faucet located in the adjacent Marquette parking structure immediately west of the injection area.

# 2.2.2 Injection Monitoring Activities

Surface materials (e.g., asphalt and vegetation) were visually monitored during the injection activities, and no daylighting of the injected amendments was observed. Groundwater elevations were collected immediately before and after completion of the injection activities on July 14, 2021 and are presented in Table 1.

Approximately 296 gallons of carbon amendment solution at a ratio of approximately 16% by volume ABC® product was introduced into the previously constructed injection wells (IW-1 through IW-8). The carbon amendment solution was injected at a rate of approximately 3 gallons per minute at each of the injection wells.

An evaluation of groundwater quality in response to the supplemental amendment injection event was conducted based on the results the October 2021 semi-annual groundwater monitoring event.

# 3. OCTOBER 2021 GROUNDWATER MONITORING ACTIVITES

The groundwater sampling activities were conducted utilizing the procedures and methodology 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 third semi-annual post-supplemental amendment injection groundwater sampling event completed in October 2021.

# 3.1 Groundwater Monitoring

Six monitoring wells (MW-4, MW-5, MW-6, PZ-1R, PZ-2R, and PZ-4) were sampled on October 27, 2021, 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. 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 8260B. 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 6020), total organic carbon (USEPA 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.

#### 3.2 Groundwater Elevation Measurements

To evaluate groundwater flow directions and hydraulic gradients, groundwater elevations were measured during the October 2021 groundwater sampling event. A summary of historical groundwater elevations is presented in Table 1.

October 2021 groundwater elevations were lower when compared to the previous site-wide groundwater measurement event completed in April 2021. 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-9 (northeastern portion of the property). This interpretation of local groundwater flow direction is generally consistent with previous observations.

Horizontal and vertical gradients were evaluated between November 2017 and the post-remedial action groundwater sampling events beginning in August 2019. The measured horizontal hydraulic gradient between monitoring wells MW-2 and MW-5 range between 0.043 foot per foot (ft/ft) (November 2017) to 0.059 ft/ft (August 2019). The April and October 2021 horizontal hydraulic gradients were 0.045 ft/ft and 0.051 ft/ft, respectively. The July 2021 supplemental injection activities did not appreciably affect the horizontal gradient observed at the site.

Vertical hydraulic gradients were evaluated between monitoring wells MW-5 and PZ-4. Historical vertical gradients have all been downward and ranged from 0.51 ft/ft (October 2021) to 0.56 ft/ft (November 2017). The vertical hydraulic gradients have not been appreciably affected by the removal of the impervious surfaces 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.

# 3.3 Field Parameter Results

Field parameters consisting of specific conductivity, DO, ORP, pH, and temperature were collected from the monitoring wells sampled during the October 2021 groundwater sampling event. The measured specific conductivity values varied from 3,886 micro-Siemens per centimeter ( $\mu$ S/cm) in MW-5 to 13,947  $\mu$ S/cm in MW-6.

Measured October 2021 DO levels outside of the July 2021 area of carbon amendment injection ranged from 0.31 milligram per liter (mg/L) at well PZ-4 to 2.67 milligrams per liter (mg/L) at well PZ-2, which is indicative of anaerobic to moderately aerobic conditions. The October 2021 measured DO level at treatment zone well PZ-1R was 0.18 mg/L, which is indicative of continued anaerobic conditions at this location in response to the July 2021 carbon amendment injection event.

Generally, ORP observations increased in all sampled monitoring wells during the October 2021 sampling event. With the exception of monitoring well MW-5, negative ORP values (indicative of reducing conditions) were measured in monitoring wells within and hydraulically downgradient of the *in-situ* soil blending area (PZ-1R, PZ-2R, PZ-4 and MW-6) ranging from -58.6 millivolts (mV) (PZ-1R) to -36.9 mV (PZ-4).

The pH values measured as part of the October 2021 sampling event ranged from 6.43 (PZ-1R) to 7.40 (MW-5) standard units. This measured range in pH values is 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.

# 3.4 Groundwater Laboratory Analytical Results

The October 2021 groundwater samples were collected from six monitoring wells and submitted for laboratory analysis in accordance with the approved sampling plan. A copy of the October 2021 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.

# 3.4.1 Geochemical Analytical Results

Monitoring well PZ-1R was sampled for MNA parameters in October 2021. 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 that were completed in August/September 2020 and July 2021. In response to the July 2021 carbon amendment injection event, concentrations of TOC in source area well PZ-1R increased from 499 mg/L in April 2021 to 959 mg/L in October 2021. This TOC concentration substantially exceeds the minimum TOC concentration of 20 mg/L which is desirable within an anaerobic treatment zone.

Ferrous iron is produced by the reduction of ferric iron and is also produced via corrosion of ZVI which was introduced during the initial remedial action in 2018 and the supplemental *in-situ* ERD injections in August/September 2020. The detected concentration of ferrous iron in the October 2021 groundwater sample from well PZ-1R was 19.0 mg/L (October 2021). 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, sulfate concentrations continued to be non-detect (<2.2. mg/L) in both the April 2021 and October 2021 groundwater samples, which is indicative of sulfate-reducing conditions.

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, methane concentrations remained at an elevated value of 1,820 micrograms per liter ( $\mu$ g/L) in the October 2021 groundwater sample, which is indicative of favorable reducing conditions for continued anaerobic dechlorination of CVOCs.

Concentrations of ethene and ethane can be used to infer that anaerobic dechlorination of CVOCs is occurring. The October 2021 groundwater sample from monitoring well PZ-1R within the treatment zone contained 21.9  $\mu$ g/L of ethene and 2.7 J  $\mu$ g/L of ethane, which is indicative of complete reductive dechlorination of PCE to its terminal products.

# 3.4.2 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 October 2021. Three of the six monitoring wells (MW-4, MW-5 and PZ-1R) had detections of tetrachloroethene (PCE) above the WAC NR 140 Enforcement Standard (ES) of 5  $\mu$ g/L at concentrations ranging from 24.0  $\mu$ g/L (MW-5) to 21,800  $\mu$ g/L (PZ-1R). Trichloroethene (TCE) was detected above the WAC NR 140 ES of 5.0  $\mu$ g/L at PZ-1R with a concentration of 10,800  $\mu$ g/L, and at MW-5 with a concentration of 5.6  $\mu$ 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 69,500  $\mu$ g/L and 104  $\mu$ g/L, respectively.

Cis-1,2-DCE was detected above the Preventative Action Limit (PAL) of 7.0  $\mu$ g/L but below the ES of 70  $\mu$ g/L in MW-5 at a concentration of 12.3  $\mu$ g/L. Four of the six monitoring wells sampled in October 2021 had detections of vinyl chloride above the WAC NR 140 ES of 0.2  $\mu$ g/L at concentrations ranging from 1.1  $\mu$ g/L (MW-5) to 14,200  $\mu$ g/L (PZ-1R). Vinyl chloride was detected above the WAC NR 140 PAL of 0.02  $\mu$ g/L but below the WAC NR 140 ES of 0.2  $\mu$ g/L in MW-6 at a laboratory estimated concentration of 0.19  $\mu$ g/L and qualified with a "J." No other VOCs were detected above WAC NR 140 criteria.

Concentrations of PCE in PZ-1R are consistent with continued back-diffusion of PCE from the fine-grained silty clay soils within the treatment zone in response to the groundwater remedial action. A summary of VOC analytical results is provided in Table 5. The detected CVOC analytical results from the groundwater sampling event are shown in Figure 4.

#### 3.4.3 Waste Disposal

Purge water and decontamination fluids from the April and October 2021 groundwater sampling activities were containerized in 5-gallon closed head polyethylene containers and transported to Marquette's centralized waste storage area by Veolia North America (Veolia) on April 21, 2021 and

October 27, 2021. Veolia transported the containers off-site for disposal on June 23, 2021 and December 8, 2021, respectively. Disposal documentation is provided in Appendix B.

# 4. PROPOSED PFAS GROUNDWATER ASSESSMENT

In a January 2020 letter (WDNR 2020), the WDNR requested submission of a site investigation work plan assessing PFAS impacts to "all environmental media" and "evaluation of potential [PFAS] compounds that were historically or are presently produced, used, handled, or stored at the site" based on previous drycleaner operations from 1961 to 2008. Marquette responded to the WDNR's request in a March 2020 letter (Marquette, 2020) indicating that they were not aware of the use or application of PFAS during the operation of the drycleaner business. In a February 2022 WDNR response letter (WDNR, 2022a), WDNR requested one PFAS groundwater sampling event from piezometer PZ-1R based on the absence of historical use information related to the former drycleaning operation conducted by others at the site. In an e-mail correspondence from Ramboll¹, on behalf of Marquette, to the WDNR, Marquette agreed to sample PZ-1R for PFAS and proposed collecting and holding a PFAS sample from hydraulically upgradient monitoring well MW-2 to document potential background or upgradient PFAS concentrations in groundwater. The WDNR approved the proposed PFAS groundwater assessment activities on March 10, 2022 (WDNR, 2022b).

The following section presents a description of the incorporation of additional PFAS groundwater sampling activities into the groundwater monitoring program.

# 4.1 Proposed PFAS Groundwater Sampling

PFAS groundwater samples will be collected from monitoring well MW-2 and piezometer PZ-1R during the routine semi-annual sampling event scheduled in April 2022 using special precautions for PFAS sampling. Important considerations concerning collection of PFAS groundwater samples include using new, disposal, PFAS-free high-density polyethylene (HDPE) tubing and powder-free nitrile gloves. PFAS-free, non-disposable groundwater sampling equipment (e.g., water level indicator, sampling pumps, etc.) will be thoroughly decontaminated prior to the sampling event and between each sampling location using an Alconox® solution and rinsed in laboratory provided PFAS-free deionized water. Field measurements of temperature, pH, specific conductivity, DO, and ORP will be collected at each sampling location.

# 4.2 PFAS Laboratory Analytical Parameters

Piezometer PZ-1R will be sampled and analyzed for PFAS using modified USEPA method 537.1 for (WI 33 Compound List). Monitoring well MW-2 will be sampled and submitted to the laboratory for potential PFAS analysis; however, the sample will be extracted and held until receipt of the initial PZ-1R PFAS data. If PFAS data from PZ-1R are elevated, MW-2 may be analyzed.

The groundwater samples will be placed into laboratory-supplied containers and placed on ice for delivery under chain-of-custody procedures to a Wisconsin certified laboratory, for analysis. Additional PFAS specific QA/QC samples will be collected and submitted with the PFAS groundwater samples. One duplicate PFAS groundwater sample will be collected from PZ-1R. One field blank

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<sup>&</sup>lt;sup>1</sup> E-mail correspondence between Ramboll and WDNR Project Manager J. Gregory Moll on Thursday, February 24, 2022 at 9:37 AM CST.

sample and one equipment blank sample will be collected using laboratory provided PFAS-free deionized water.

# 4.3 PFAS Data Reporting

Pursuant to WAC NR 716.14, Ramboll will provide the PFAS sampling results to the WDNR within 10-business days of receipt of the final laboratory analytical report. In addition, the PFAS groundwater sampling activities and results will be formally documented in the routine semi-annual progress report prepared for the broader April 2022 sampling activities. At this time, applicable and promulgated WAC NR 140 criteria are not established for PFAS.

# 5. CONCLUSIONS AND RECOMMENDATIONS

The supplemental injection of organic carbon substrate conducted in July 2021 appears to have reinforced reducing conditions through fermentation of the applied carbon substrate. These reducing conditions are evident based on the following observations related to the October 2021 groundwater sample results from treatment zone monitoring well PZ-1R:

- Low ORP reading of -58.6 mV and low DO reading of 0.18 mg/L.
- Increased TOC concentration at PZ-1R (from 499 mg/L in April 2021 to 959 mg/L in October 2021) is indicative of carbon substrate distribution near well PZ-1R in response to the July 2021 ABC<sup>®</sup> injection event.
- The continued low sulfate, high ferrous iron and high methane concentrations at PZ-1R are consistent with continued strongly reducing conditions.
- Ethene concentrations that are an order of magnitude above background levels are indicative of complete dechlorination (AFCEE, 2004), and the October 2021 ethene value of 21.9 ug/L at PZ-1R meets that threshold 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.

As indicated in Table 5, PCE was detected in PZ-1R at a concentration of 21,800 µg/L in October 2021. The elevated PCE concentrations detected at PZ-1R continues to demonstrate dissolution and back-diffusion of PCE from the fine-grained silty clay soils within the treatment zone in response to the groundwater remedial action. An encouraging observation is the continued presence of PCE degradation products (including end-product ethene) which confirms that reductive dechlorination is taking place and is expected to continue based on the October 2021 geochemical data. Further downgradient, PCE and TCE have not been detected in groundwater samples from well PZ-2R since August 2019, and concentrations of degradation product cis-dichloroethene (cDCE) have generally increased at that location.

Based on the high TOC concentration detected in the October 2021 groundwater sample from well PZ-1R in response to the July 2021 organic carbon amendment injection event (as well as other geochemical results), injection of additional carbon amendment is not recommended at this time. However, the need for additional injections will continue to be evaluated based on data obtained as part of the ongoing post remediation groundwater monitoring program.

The next semi-annual groundwater sampling event is scheduled to be conducted in April 2022. In response to WDNR's February 2022 request, a PFAS groundwater sample will be collected from

PZ-1R during the April 2022 event. Although not specifically requested by the WDNR, a sample will also be collected from upgradient monitoring well MW-2 for possible PFAS analysis. Initial PFAS laboratory analysis will be completed at PZ-1R and the sample at MW-2 will be held at the laboratory pending results from PZ-1R. The methodology and results of the April 2022 groundwater sampling event will be documented in the subsequent semi-annual groundwater monitoring report in summer 2022, and recommendations regarding further activities will be provided as appropriate.

# 6. 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.
- Lu, X., D. H. Kampbell, and J. T. Wilson. 2006. Evaluation of the Role of Dehalococcoides Organisms in the Natural Attenuation of Chlorinated Ethylenes in Groundwater. USEPA, Washington, DC. EPA/600/R-06/029.
- Marquette. 2020. PFAS Sampling Letter. March 4.
- Ramboll. 2018. *Remedial Design Report*. Former One-Hour Valet Dry Cleaners, Milwaukee, Wisconsin. February.
- Ramboll. 2019. *Remedial Action Documentation Report*. Former One-Hour Valet Dry Cleaners, Milwaukee, Wisconsin. March.
- Ramboll. 2020. *Post-Remedial Action Documentation Report*. Former One-Hour Valet Dry Cleaners, Milwaukee, Wisconsin. May.
- Ramboll. 2021. Supplemental Remediation Documentation and Progress Report. Former One-Hour Valet Dry Cleaners, Milwaukee, Wisconsin. February.
- WDNR. 2020. PFAS Sampling Requirements. January 7.
- WDNR. 2022a. PFAS Groundwater Sampling. February 11.
- WDNR. 2022b. PFAS Groundwater Sampling Plan. March 10.

# **TABLES**

# **Table 1: Groundwater Elevations Summary**

Former One-Hour Valet Dry Cleaners 1614 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	M	N-1	MV	V-2	M\	N-3	MV	N-4	M\	N-5
Top of Casing Elevation (TOC ft msl) <sup>(A)</sup>	64	7.95	655	5.74	649	9.54	652	2.32	653	3.26
Ground Surface Elevation (ft) <sup>(A,B)</sup>	64	3.30	656	6.00	649	9.70	652	2.70	650	0.40
Top of Well Screen Elevation (ft msl) <sup>(A)</sup>	64	0.10	645	5.50	639	9.50	644	4.40	64 <sup>-</sup>	1.80
Bottom of Well Screen Elevation (ft msl) <sup>(A)</sup>	63	0.10	635	5.50	629	9.50	634	1.40	63 <sup>-</sup>	1.80
October 2019 Top of Casing Elevation (ft amsl)	64	7.75	654	1.70	649	9.28	651	1.98	649	9.23
October 2019 Ground Surface (ft amsl)	64	3.16	655	5.47	649	9.65	652	2.33	649	9.75
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	10.90	636.85	9.73	644.97	10.43	638.85	13.30	638.68	13.96	635.27

#### Notes:

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<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

 $<sup>\</sup>overset{\cdot}{\text{(3)}}$  Groundwater elevation calculated using October 2019 Survey data.

<sup>\*</sup> Groundwater elevation measurements for MW-6, MW-7, MW-8, and MW-9 collected on November 9, 2017.

# **Table 1: Groundwater Elevations Summary**

Former One-Hour Valet Dry Cleaners 1614 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	M	N-6	M\	N-7	M\	V-8	MV	V-9	PZ	-1 <sup>(1)</sup>
Top of Casing Elevation (TOC ft msl) <sup>(A)</sup>	64	8.11	649	9.74	649	9.80	650	).27	653	3.10
Ground Surface Elevation (ft) <sup>(A,B)</sup>	64	8.50	649	9.90	650	0.00	650	0.40	653	3.70
Top of Well Screen Elevation (ft msl) <sup>(A)</sup>	64	640.30		3.20	648	3.40	643	3.50	623	3.80
Bottom of Well Screen Elevation (ft msl) <sup>(A)</sup>	63	0.30	638	3.20	638	3.40	633	3.50	618	3.80
October 2019 Top of Casing Elevation (ft amsl)	64	8.26	649	9.56	649	9.63	650	0.73	N	IM
October 2019 Ground Surface (ft amsl)	64	8.51	649	9.75	649	9.77	651	1.39	N	IM
Sample Date	Depth to Water (ft)	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	10.90	637.36	9.53	640.03	8.70	640.93	16.92	633.81		

#### Notes:

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<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>-</sup>

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

 $<sup>\</sup>overset{\cdot}{\text{(3)}}$  Groundwater elevation calculated using October 2019 Survey data.

 $<sup>\</sup>mbox{*}$  Groundwater elevation measurements for MW-6, MW-7, MW-8, and MW-9 collected on November 9, 2017.

# **Table 1: Groundwater Elevations Summary**

Former One-Hour Valet Dry Cleaners 1614 West Wells Street, Milwaukee, Wisconsin Ramboll Project No. 1690005819

Well ID	PZ	-1R	PZ	<b>-2</b> <sup>(2)</sup>	PZ	-2R	PZ	-3 <sup>(1)</sup>	Pž	Z-4
Top of Casing Elevation (TOC ft msl) <sup>(A)</sup>				3.74				•	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) <sup>(A)</sup>	622.18		624	1.00	623	3.04	PZ-3/0   653.41   653.70   608.00   603.00   NM   NM   Plevation (ft msl)   NI   NI   NI   NI   NI   NI   NI   N		609	9.80
Bottom of Well Screen Elevation (ft msl) <sup>(A)</sup>	61	7.18	619	9.00	618	3.04	603	3.00	604	4.80
October 2019 Top of Casing Elevation (ft amsl)	65	2.18	N	M	649	.539	N	M	649	9.56
October 2019 Ground Surface (ft amsl)	65:	2.69	N	M	650	.002	N	M	650	0.20
Sample Date	Depth to Water (ft)	GW Elevation (ft msl)	Depth to Water (ft)	GW Elevation (ft msl)	Depth to Water (ft)	GW Elevation (ft msl)		Elevation	Depth to Water (ft)	GW Elevation (ft msl)
5/8/2002	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
7/11/2003	NI	NI	NI	NI	NI	NI	NI	NI	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	30.00	622.18			25.98	623.56			27.55	622.01

#### Notes:

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

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TOC = Top of Casing
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<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

 $<sup>\</sup>overset{\cdot}{\text{(3)}}$  Groundwater elevation calculated using October 2019 Survey data.

<sup>\*</sup> Groundwater elevation measurements for MW-6, MW-7, MW-8, and MW-9 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			
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	11.10	0.51	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	-15.16	-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	-13.20	-0.55	Downwaru
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	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	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			
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	104	10.9	0.039
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	9.5	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	104	9.7	0.055
MW-2	3/10/2020	654.70	8.41	646.29	184	8.9	0.048
MW-5	3/10/2020	649.23	11.82	637.41	104	0.9	0.046
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	0.9	0.046
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	0.0 <del>4</del> 5
MW-2	10/27/2021	654.70	9.73	644.97	194	0.4	0.051
MW-5	10/27/2021	649.23	13.69	635.54	184 9.4		0.031

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
	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
MW-2	8/7/2003	NR	0.10	2.30	NR	NR	NR
	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
MW-3	10/7/2003	NR	5.74	327.8	NR	NR	NR
	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
MW-4	5/2/2019	7.34	8.40	140.7	3.04	5,184	9.64
IVI VV4	8/14/2019	7.11	1.82	79.4	0.82	7,485	15.06
	3/10/2020	7.15	8.53	81.6	2.26	4,717	8.60
	10/28/2020	6.65	1.45	116	3.62	11,460	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
	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
MW-5	5/2/2019	7.49	2.01	159.1	4.99	3,070	9.92
IVI VV-3	8/14/2019	7.53	0.18	63.4	4.23	4,120	17.45
	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
	8/25/2009	NR	NR	-50.0	NR	NR	NR
	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
MW-6	8/14/2019	6.82	0.83	3.10	15.5	7,265	17.13
IVI VV-O	3/10/2020	7.62	0.01	-154.3	25.4	16,558	11.50
	10/28/2020	7.08	0.26	-137.5	0.78	10,037	12.60
	4/21/2021	7.36	0.41	-98.1	0.00	14,419	9.67
	10/27/2021	6.97	0.44	-50.4	3.74	13,947	15.31
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
MW-9	11/9/2017	7.75	6.40	-42.6	2.00	3,573	11.78

#### **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					•	•
	1/15/2002	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
			PZ-1 ab	andoned on 1/11/2018. PZ-	1R installed on 4/18/201	9.	•
	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
PZ-1R	3/10/2020	7.58	0.00	-270.1	5.21	3,818	11.10
FZ-IK	10/28/2020	6.47	0.21	-126.9	3.48	11,394	13.80
	4/21/2021	7.35	0.19	-487.7	4.01	6,890	10.28
	10/27/2021	6.43	0.18	-58.6	4.45	7,106	15.49
	8/8/2003	NR	0.19	-41.3	NR	NR	NR
	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-	2R installed on 7/19/201	9.	
	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
PZ-2R	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
	10/27/2021	7.19	0.38	-45.8	3.33	6,184	15.34
	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
				PZ-3 abandoned on	1/11/2018		
	8/25/2009	NR	0.72	-55.0	NR	NR	NR
	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
PZ-4	8/14/2019	6.95	0.24	-40.0	6.87	6,714	16.55
r <b>Z-4</b>	3/10/2020	6.98	0.24	-61.7	9.25	5,098	11.60
	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

#### 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	Ethane	Ethene	Iron, Dissolved	Iron, Ferric	Iron, Ferrous	Methane	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	Sulfate	Total Organic Carbon
	Date	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)
	1/14/2002	NA	NA	NA	NA	NA NA	NA	NA	NA.	NA
	5/8/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	10/7/2003	0.028	0.049	NA	NA	NA	14	NA	NA	NA
	8/25/2009	<10	<10	NA	NA	NA	<10	NA	NA	1.26
	11/1/2017	< 0.58	< 0.52	0.0126 J	0.00 J	< 0.017	<1.4	< 0.095	<100	< 0.25
	1/14/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA
MM 2	8/7/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	10/7/2003	0.018	0.021	NA	NA	NA	22	NA	NA	NA
	8/27/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/1/2017	< 0.58	< 0.52	1.77	0.54	1.2 H3	<1.4	< 0.095	93.5	< 0.25
	8/7/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
MM 2	10/7/2003	0.16	0.056	NA	NA	NA	45	NA	NA	NA
MW-3	8/27/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/1/2017 <sup>1</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/7/2003	0.021	0.033	NA	NA	NA	22	NA	NA	NA
	8/25/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/2/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/2/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	8/14/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/2020	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2020	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/27/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/7/2003	0.041	0.0097	NA	NA	NA	0.99	NA	NA	NA
	8/27/2009	<10	<10	NA	NA	NA	136	NA	NA	1.82
	11/2/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	5/2/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
1414A-2	8/14/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/2020	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2020	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/27/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/25/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/9/2017 <sup>1</sup>	< 0.58	< 0.52	13.6	8.3	5.2 H3	<1.4	< 0.095	82.4	< 0.25
	5/2/2019	< 0.58	< 0.52	103	1,030	< 0.20	<1.4	0.25 J	41.8	6.0
MW-6	8/14/2019	< 0.58	< 0.52	1.7	< 0.20	2.1 H3	<1.4	< 0.0	95.6	0.57 J
14144-0	3/10/2020	<1.2	<1.2	6.68	< 0.20	7.4 H3	75.2	< 0.059	87 J	1.8
	10/28/2020	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/27/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	8/26/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA
171 VV - /	11/9/2017 <sup>2</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-8	8/26/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA
ט־עעויו	11/9/2017 <sup>3</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	8/27/2009	<10	<10	NA	NA	NA	<10	NA	NA	1.27
פ-יייויו	11/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA

#### 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	Ethane	Ethene	Iron, Dissolved	Iron, Ferric	Iron, Fei	rrous	Methane	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	Sulfate	Total Organic Carbon
	Date	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/	L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)
	1/15/2002	NA	NA	NA	NA	NA		NA	NA	NA	NA
	5/8/2003	NA	NA	NA	NA	NA		NA	NA	NA	NA
PZ-1	8/8/2003	NA	NA	NA	NA	NA		NA	NA	NA	NA
L7-1	10/7/2003	1.7	0.48	NA	NA	NA		7	NA	NA	NA
	8/25/2009	<10	<10	NA	NA	NA		<10	NA	NA	2.04
	11/2/2017	<0.58	< 0.52	2.29	2.2	0.060	Н3	<1.4	0.33	155	0.50 J
	5/2/2019	337	32.4	5.88	< 0.20	5.8	Н3	23.1	< 0.095	101	124 J
	8/14/2019	3,060	87.2	5.70	< 0.20	6.5	Н3	129	< 0.095	93.1	184
PZ-1R	3/10/2020	2,130	974	4.60	< 0.20	5.1	Н3	162	< 0.059	85.9	115
PZ-IK	10/28/2020	1,560	1,320	NA	NA	168	C4, H3	1510	NA	4.9 J, D3	2,440
	4/21/2021	1,540	1,090	NA	NA	19.7	Н3	2,680	NA	<2.2	499
	10/27/2021	2.7 J	21.9	17.1	<28.1 H3	19.0	Н3	1,820	NA	<2.2 D3	959
	8/8/2003	NA	NA	NA	NA	NA		NA	NA	NA	NA
PZ-2	10/6/2003	1.3	0.79	NA	NA	NA		60	NA	NA	NA
PZ-Z	8/27/2009	NA	NA	NA	NA	NA		NA	NA	NA	NA
	11/1/2017 <sup>1</sup>	< 0.58	< 0.52	8.82	5.7	3.1		23.1	< 0.095	178	< 0.25
	8/14/2019	0.82 J	< 0.52	3.20	< 0.20	3.6	Н3	22	< 0.095	164	0.40 J
	3/10/2020	<1.2	<1.2	2.80	< 0.20	2.9	H3, M1	10.3	< 0.059	140	0.36 M0
PZ-2R	10/28/2020	NA	NA	NA	NA	NA		NA	NA	NA	NA
	4/21/2021	NA	NA	NA	NA	NA		NA	NA	NA	NA
	10/27/2021	NA	NA	NA	NA	NA		NA	NA	NA	NA
PZ-3	8/25/2009	NA	NA	NA	NA	NA		NA	NA	NA	NA
FZ-3	11/2/2017	NA	NA	NA	NA	NA		NA	NA	NA	NA
	8/25/2009	NA	NA	NA	NA	NA		NA	NA	NA	NA
	11/2/2017	NA	NA	NA	NA	NA		NA	NA	NA	NA
	5/2/2019	NA	NA	NA	NA	NA		NA	NA	NA	NA
PZ-4	8/14/2019	NA	NA	NA	NA	NA		NA	NA	NA	NA
rz-4	3/10/2020	NA	NA	NA	NA	NA		NA	NA	NA	NA
	10/28/2020	NA	NA	NA	NA	NA		NA	NA	NA	NA
	4/21/2021	NA	NA	NA	NA	NA		NA	NA	NA	NA
	10/27/2021	NA	NA	NA	NA	NA		NA	NA	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.

- (2) Monitoring well purged dry after first stabilization parameter reading. Well sampled later in day without collecting new stabilization parameters.
- (3) 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.
- (4) Monitoring well was damaged during site redevelopment activities and was not sampled.

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.
- 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.

# **Table 5: 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
C.F	AS	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
Un	its	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	10 ES	5	6	7	70	100	700	5	5	800	5	480	0.2	2000
NR 14	0 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 ND	<0.25	< 0.5	<0.5	< 0.5	<0.5	<1	<0.5	0.9 <0.25	0.3 J <0.25	<0.25	<0.25	<0.5 <0.5
	10/7/2003 8/25/2009	< 0.2	<0.25	< 0.5	<0.5	< 0.5	< 0.5	<1	<0.5	<0.25	<0.25	<0.25	<0.25	< 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
	1/14/2002	ND	<0.23	< 0.21	<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	<0.08	< 0.13	< 0.11	< 0.16	#N/A
MW-2	8/7/2003 10/7/2003	ND ND	<0.25 <0.25	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1	<0.5 <0.5	0.32 J <0.25	<0.25 <0.25	<0.25 <0.25	<0.25 <0.25	<0.5 <0.5
	8/27/2009	<0.2	<0.25	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.2	<0.25	<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	<0.25	< 0.5
	10/7/2003 8/27/2009	ND <0.2	<0.25 <0.2	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1	<0.5 <0.5	<0.25 <0.5	<0.25 <0.2	<0.25	<0.25 <0.2	<0.5 <0.5
	11/1/2017	< 0.50	<2.5	< 0.41	<0.26	<0.3	< 0.50	<0.23	< 0.50	< 0.50	< 0.2	< 0.50	<0.18	<1.5
	8/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	0.88 J	0.9	0.71 J	0.34 J	< 0.25	< 0.5
	10/7/2003	ND	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	<1	<u>0.57</u> <u>J</u>	< 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	7	< 0.5	<0.2	<0.2	<0.2	< 0.5
	11/2/2017 5/2/2019	<0.50 <0.49	<2.5 <2.5	<0.41	<0.26 23.0	<0.26 <2.2	<0.50 <0.44	<0.23	7.8 850	<0.50 <0.34	<0.33 5.0	<0.50 <1.7	<0.18	<1.5 <3.0
MW-4	8/14/2019	< 0.49	<1.3	< 0.49	0.43 J	<1.1	< 0.22	<0.58	79.1	< 0.17	0.99 <u>J</u>	< 0.84	< 0.17	<1.5
	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
	10/27/2021	<0.30 ND	<1.2	<0.58	< 0.47	<0.53	< 0.33	< 0.32	26.8 80	<0.29 0.9	<0.32 <b>7.9</b>	<0.45 0.34 J	< 0.17	<1.0
	8/7/2003 10/7/2003	ND	<0.25 <0.25	<0.5 <0.5	11 150	<0.5 1.2	<0.5 <0.5	<1 <1	93	<0.25	6.4	<0.25	<0.25 <0.25	<0.5 <0.5
	8/27/2009	< 0.2	< 0.2	< 0.5	110	1.2	< 0.5	<1	140	< 0.5	< 0.2	32	22	< 0.5
	11/2/2017	< 0.50	<2.5	< 0.41	73.6	1.5	< 0.50	< 0.23	30.3	< 0.50	3.2	< 0.50	0.45 J	<1.5
MW-5	5/2/2019	<0.25	<1.3	<0.24	11.3	<1.1	<0.22	<0.58	20.5	<0.17	3.8	< 0.84	2.1	<1.5
	8/14/2019 3/10/2020	<0.25 <0.25	<1.3 <1.3	<0.24	31.2 14.1	<1.1	<0.22	<0.58 <0.58	29.1 23.8	<0.17 <0.27	5.9 5.0	<0.84	0.73 J 2.2	<1.5 <1.5
	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	<u>12.3</u>	1.7	< 0.33	< 0.32	24.0	< 0.29	5.6	< 0.45	1.1	<1.0
	8/25/2009	<0.2	<2	<5	980	<5	<5	<10	<5	<5	18	<2	57	<5
	11/9/2017 5/2/2019	<0.50 <0.25	<2.5 <1.3	<0.41 <0.24	<b>4.5</b> < 0.27	<0.26 <1.1	<0.50 <0.22	<0.23 <0.58	<0.50 <0.33	<0.50 <0.17	<0.33 <0.26	<0.50 <0.84	<b>1.0</b> < 0.17	<1.5 <1.5
MW 6	8/14/2019	<0.25	<1.3	<0.24	14.7 M1	<1.1	<0.22	<0.58	1.3	<0.17	0.37 J	< 0.84	1.6	<1.5
MW-6	3/10/2020	< 0.25	<1.3	< 0.24	239	6.8	< 0.32	< 0.58	< 0.33	< 0.27	13.5	< 0.84	11.5	<1.5
	10/28/2020	<0.25	<1.3	< 0.24	172	5.4	< 0.32	<0.58	< 0.33	< 0.27	15.6	< 0.84	8.4	<1.5
	4/21/2021	< 0.30	<1.2	< 0.58	1.9	< 0.53	< 0.33	< 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 <0.5	< 0.53	<0.33	<0.32	<0.41 <0.5	<0.29 <0.5	<0.32 <0.2	<0.45	0.19 <u>J</u> <0.2	<1.0 <0.5
MW-7	8/26/2009 11/9/2017	<0.2	<0.2	<0.5	<0.5	< 0.5	< 0.50	<0.23	< 0.5	<0.5	<0.2	<0.2	<0.2	<0.5
MW 0	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
MW-8	11/9/2017 <sup>5</sup>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	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
1111	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

# **Table 5: Groundwater Analytical Results - Summary of Detected Constituents**

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

CA	Analyte <sup>1,2</sup>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CHOROLOGICAL CONTRACT	2-32-4 1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Methylene chloride	Tetrachloroethene	108-88-3	9-10-62 Trichloroethene	-5-4-6-5-1-6-1-6-1-6-1-6-1-6-1-6-1-6-1-6-1-6	25-10-4	1330-20-7
Uni									_					
		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		5	6	7	70	100	700	5	5	800	5	480	0.2	2000
NR 14	0 PAL	0.5	0.6	0.7	7	20	140	0.5	0.5	160	0.5	96	0.02	400
	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	22	<4	23 J	8,500	<4	2,800	<5.5	22 J	#N/A
	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	ND	<120	<250	2,600	<250	<250	<500	36,000	<120	2,600	<120	<120	<250
	8/25/2009	<32	<32	<80	2,000	<80	<80	<160	61,000	<80	1,600	<32	<32	<80
	11/2/2017	<125	<625	<103	414	<64.1	<125	<58.1	16,200	<125	435	<125	<43.9	<375
	= 10 100 10								vas installed on					
	5/2/2019	<123	<637	<122	30,000	<545	<109	<290	60,300	<86.1	3,310	<420	<87.3 1.110	<750
	8/14/2019 3/10/2020	<123 <123	<637 <637	140 J	108,000 36,400	<545 <545	<109 <159	<290 <290	83,700 23,200	<86.1 <135	5,450 9,060	<420 <420	2,630	<750 <750
PZ-1R	10/28/2020	<123	<637	<122 <122	6,500	<232	<159	<290	28,800	<135	2,280	<420	822	<750
	4/21/2021	<148	<591	<291	98,200	<264	<163	<160	64,500	<144	26,000	<224	10,800	<524
	10/27/2021	<148	<591	<291	69,500	<264	<163	<160	21,800	<144	10,800	<224	14,200	<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
	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	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	< 0.5	< 0.2	< 0.2	14	< 0.5
PZ-2	11/1/2017	< 0.50	<2.5	< 0.41	4.1	< 0.26	< 0.50	< 0.23	< 0.50	< 0.50	< 0.33	< 0.50	11.0	<1.5
	5/2/2019 <sup>6</sup>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
						PZ-2 abando	ned on 7/19/2	019. PZ-2R v	vas installed on	7/19/2019.				
	8/14/2019	< 0.25	<1.3	< 0.24	<u>26.9</u>	<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	33.9	<1.1	< 0.32	< 0.58	< 0.33	<0.27	< 0.26	< 0.84	11.3	<1.5
PZ-2R	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
	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
	8/26/2004	ND	<2	<5	440	<5	<5	<10	56	<2	<2	<2	<2	< 5
PZ-3	10/7/2004 8/25/2009	ND <2	<1 <2	<2.5 <5	300 1,100	<2.5 11.0	<2.5 <5	<5 <10	73 5.6	<1 <5	<1 <b>7.1</b>	<1 <2	<1	<2.5 <5
FZ-3	8/25/2009 11/2/2017	<25.0	<2	< 20.5	2,060	22.4 1	<5 <25.0	<10	<b>5.6</b>	<5 <25 0	144	<25.0	<b>3.9</b> <8.8	<5 <75.0
	11/2/201/	\Z3.U	×123	\ZU.3	2,000	22.4 J		ndoned on 1/		\ZJ.U	144	\ZJ.U	<0.0	
	8/25/2009	< 0.20	< 0.2	< 0.5	4.4	< 0.5	<0.5	<1	0.84	< 0.5	0.56	< 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	20.8	<2.2	< 0.44	<1.2	351	< 0.34	3	<1.7	1 J	<3.0
PZ-4	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
rZ-4	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
	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	0.94 J	< 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

#### Notes

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

ES = Enforcement Standard

PAL = Preventive Action Limit

Bold value = NR 140 ES Exceedance

<u>Italic Value</u> = 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.

<sup>2</sup> All sampling results prior to 2017 obtained from a Site Investigation Report prepared by GZA GeoEnvironmental, Inc. on February 24, 2012.

<sup>3</sup> 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.

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

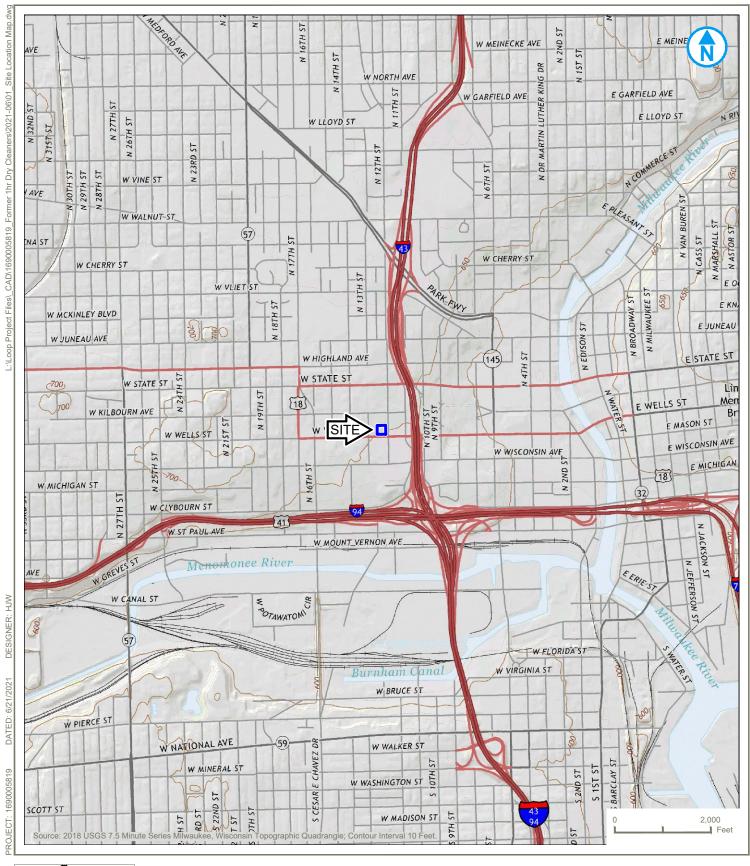
ND = Not detected at or above limit of detection.

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

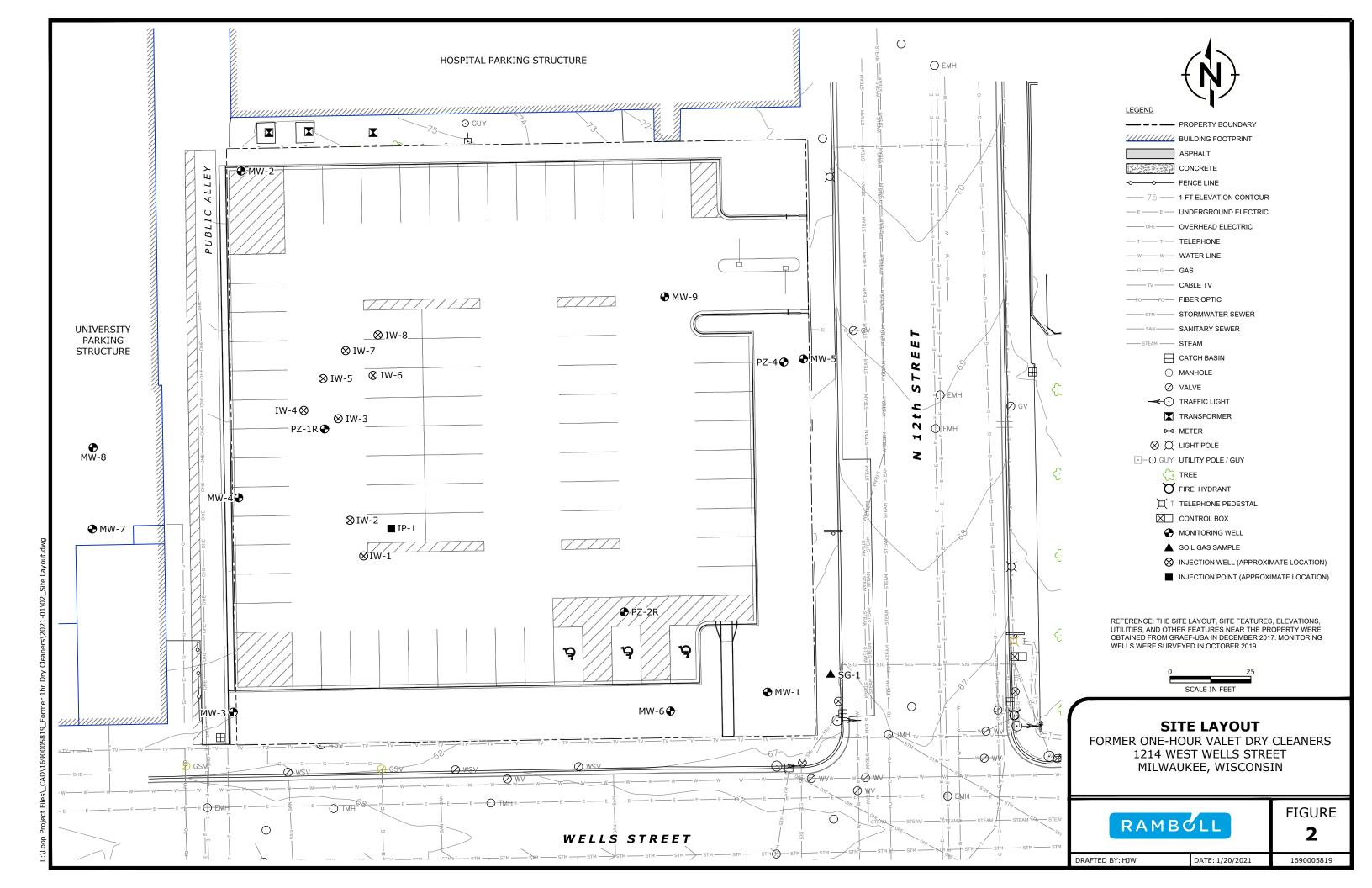
SITE LOCATION MAP

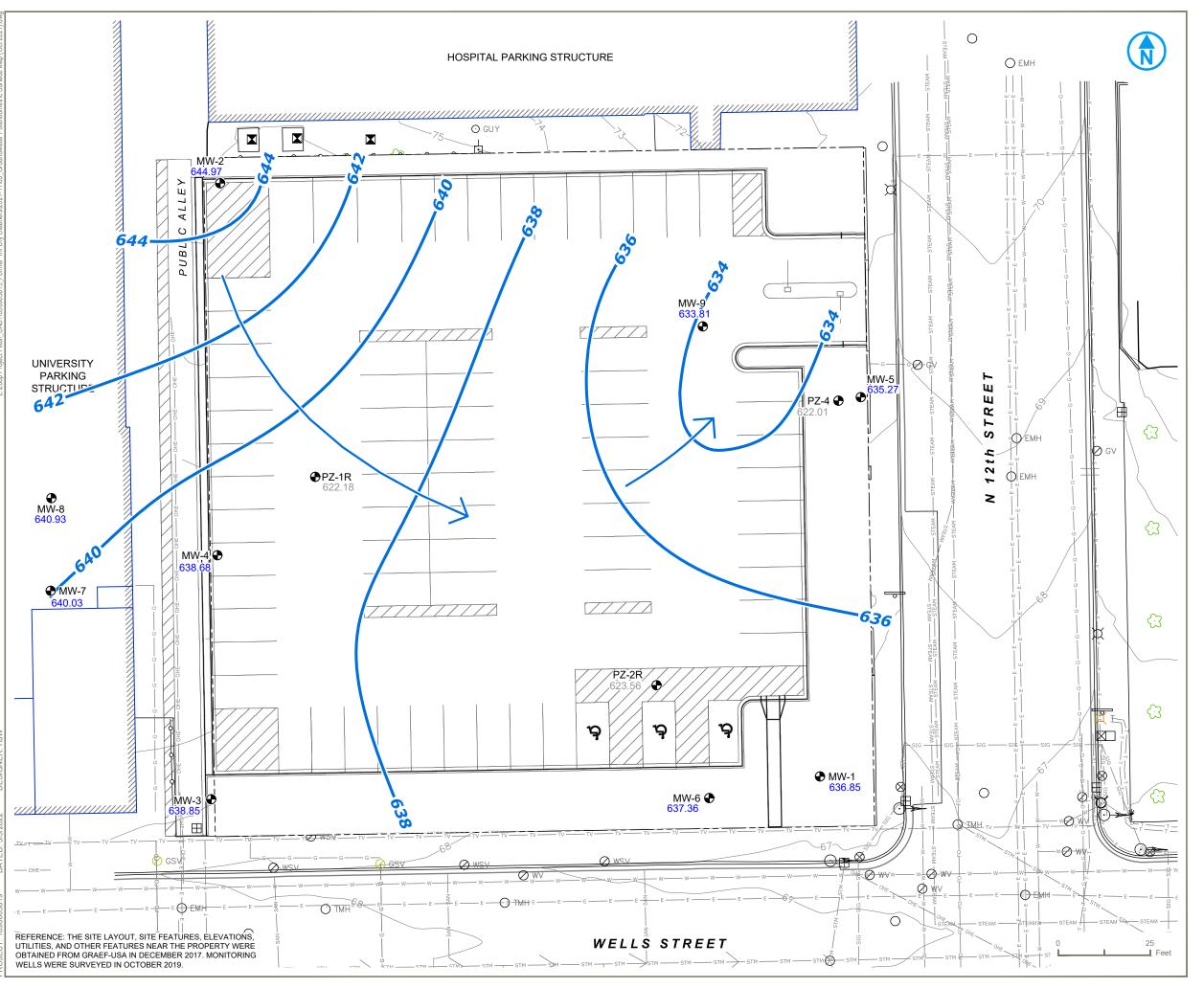
# FIGURE 1

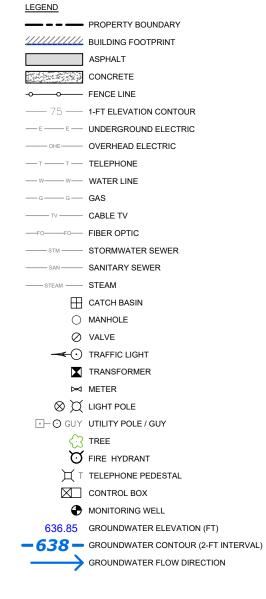
RAMBOLL US CONSULTING, INC.

A RAMBOLL COMPANY









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

# GROUNDWATER POTENTIOMETRIC SURFACE MAP (OCTOBER 2021)

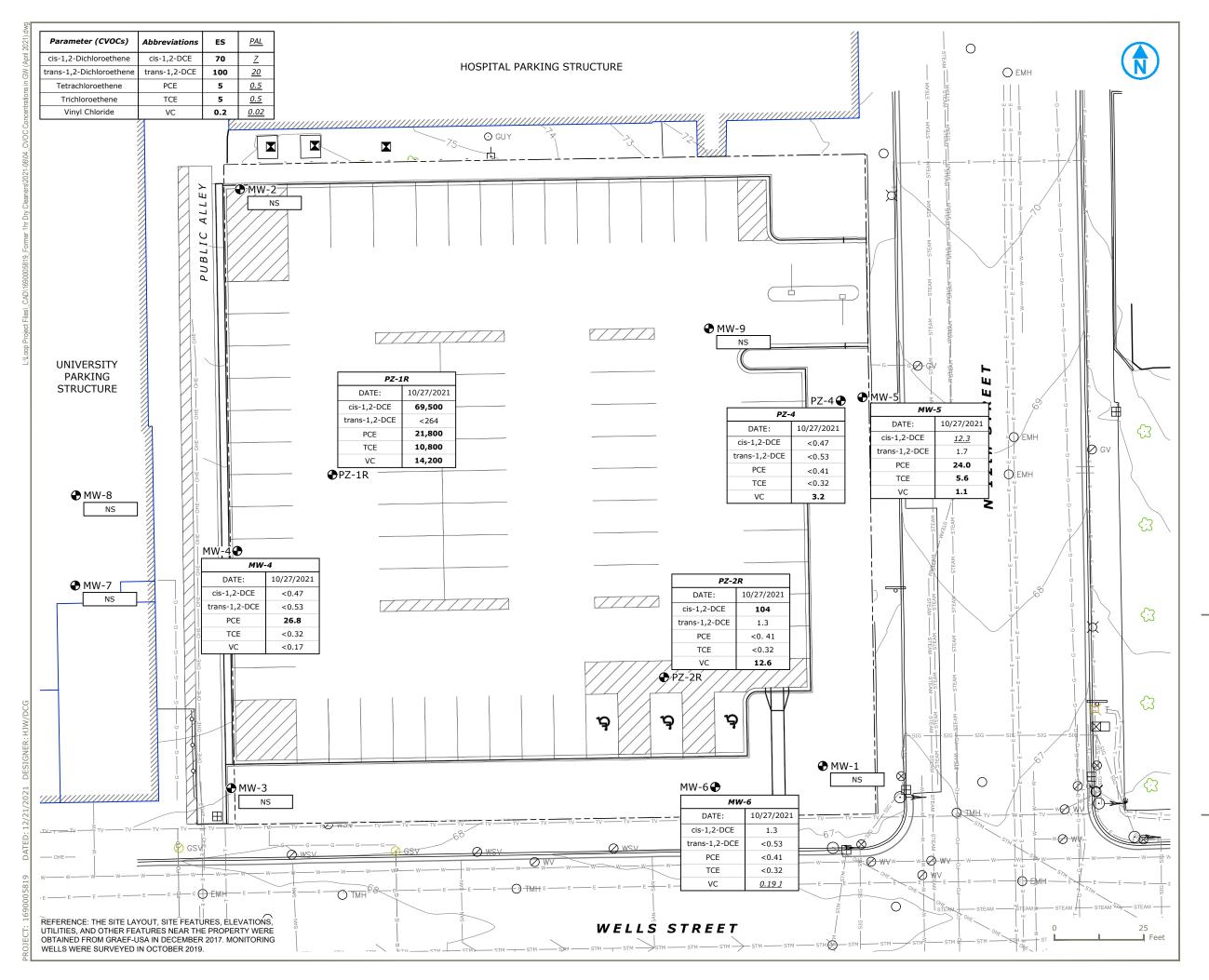
# FORMER ONE-HOUR VALET DRY CLEANERS

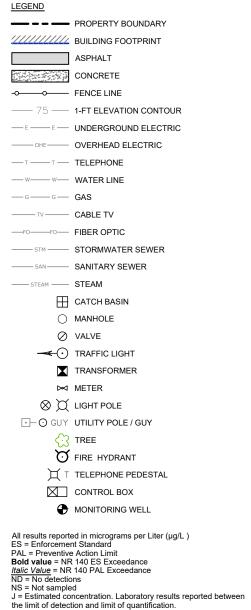
1214 WEST WELLS STREET MILWAUKEE, WISCONSIN

# FIGURE 3

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY







# **CVOC CONCENTRATIONS IN GROUNDWATER (OCTOBER 2021)**

# FORMER ONE-HOUR VALET DRY CLEANERS

1214 WEST WELLS STREET MILWAUKEE, WISCONSIN

# FIGURE 4

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



# **APPENDIX A**

**GROUNDWATER MONITORING PROGRAM LABORATORY ANALYTICAL REPORTS** 





November 19, 2021

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

RE: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

#### Dear Susan Petrofske:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

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

Project Manager

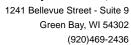
LVM-

**Enclosures** 

cc: Kyle Heimstead, Ramboll US Consulting, Inc.

Michele Peters, Ramboll







#### **CERTIFICATIONS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82 Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

#### **Pace Analytical Services National**

12065 Lebanon Road, Mt. Juliet, TN 37122

Alabama Certification #: 40660

Alaska Certification 17-026

Arizona Certification #: AZ0612

Arkansas Certification #: 88-0469

California Certification #: 2932

Canada Certification #: 1461.01

Colorado Certification #: TN00003 Connecticut Certification #: PH-0197

DOD Certification: #1461.01

EPA# TN00003

Florida Certification #: E87487

Georgia DW Certification #: 923

Georgia Certification: NELAP

Idaho Certification #: TN00003

Illinois Certification #: 200008

Indiana Certification #: C-TN-01

Iowa Certification #: 364

Kansas Certification #: E-10277

Kentucky UST Certification #: 16 Kentucky Certification #: 90010

Louisiana Certification #: Al30792

Louisiana DW Certification #: LA180010

Maine Certification #: TN0002

Maryland Certification #: 324

Massachusetts Certification #: M-TN003

Michigan Certification #: 9958

Minnesota Certification #: 047-999-395

Mississippi Certification #: TN00003

Montana Certification #: CERT0086 Nebraska Certification #: NE-OS-15-05

Missouri Certification #: 340

Nevada Certification #: TN-03-2002-34 New Hampshire Certification #: 2975 New Jersey Certification #: TN002

New Mexico DW Certification

New York Certification #: 11742

North Carolina Aquatic Toxicity Certification #: 41 North Carolina Drinking Water Certification #: 21704

North Carolina Environmental Certificate #: 375

North Dakota Certification #: R-140

Ohio VAP Certification #: CL0069

Oklahoma Certification #: 9915

Oregon Certification #: TN200002 Pennsylvania Certification #: 68-02979

Rhode Island Certification #: LAO00356

South Carolina Certification #: 84004

South Dakota Certification

Tennessee DW/Chem/Micro Certification #: 2006

Texas Mold Certification #: LAB0152

Texas Certification #: T 104704245-17-14

USDA Soil Permit #: P330-15-00234

Utah Certification #: TN00003

Virginia Certification #: VT2006

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: 460132

Washington Certification #: C847

West Virginia Certification #: 233

Wisconsin Certification #: 998093910

Wyoming UST Certification #: via A2LA 2926.01

A2LA-ISO 17025 Certification #: 1461.01 A2LA-ISO 17025 Certification #: 1461.02

AIHA-LAP/LLC EMLAP Certification #:100789

(920)469-2436



# **SAMPLE SUMMARY**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40235956001	PZ-2R	Water	10/27/21 09:15	10/28/21 08:15
40235956002	MW-6	Water	10/27/21 09:50	10/28/21 08:15
40235956003	MW-6DUP	Water	10/27/21 09:50	10/28/21 08:15
40235956004	PZ-4	Water	10/27/21 10:30	10/28/21 08:15
40235956005	MW-5	Water	10/27/21 11:05	10/28/21 08:15
40235956006	MW-4	Water	10/27/21 11:45	10/28/21 08:15
40235956007	PZ-1R	Water	10/27/21 12:45	10/28/21 08:15
40235956008	TRIP BLANK	Water	10/27/21 00:00	10/28/21 08:15

# **REPORT OF LABORATORY ANALYSIS**



# **SAMPLE ANALYTE COUNT**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40235956001	PZ-2R	EPA 8260	JAV	65	PASI-G
40235956002	MW-6	EPA 8260	JAV	65	PASI-G
40235956003	MW-6DUP	EPA 8260	JAV	65	PASI-G
40235956004	PZ-4	EPA 8260	JAV	65	PASI-G
40235956005	MW-5	EPA 8260	JAV	65	PASI-G
40235956006	MW-4	EPA 8260	JAV	65	PASI-G
40235956007	PZ-1R	EPA 8015B Modified	ALD	3	PASI-G
		EPA 6020	JPD	1	PAN
		EPA 8260	JAV	65	PASI-G
		SM 3500-Fe B	MRM	1	PAN
		Calculated	JPD	1	PAN
		EPA 300.0	HMB	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40235956008	TRIP BLANK	EPA 8260	JAV	65	PASI-G

PAN = Pace National - Mt. Juliet

PASI-G = Pace Analytical Services - Green Bay



# **SUMMARY OF DETECTION**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
0235956001	PZ-2R					
EPA 8260	cis-1,2-Dichloroethene	104	ug/L	1.0	11/01/21 13:28	
EPA 8260	trans-1,2-Dichloroethene	1.3	ug/L	1.0	11/01/21 13:28	
EPA 8260	Vinyl chloride	12.6	ug/L	1.0	11/01/21 13:28	
0235956002	MW-6					
EPA 8260	cis-1,2-Dichloroethene	1.3	ug/L	1.0	11/01/21 13:48	
EPA 8260	Vinyl chloride	0.19J	ug/L	1.0	11/01/21 13:48	
0235956003	MW-6DUP					
EPA 8260	cis-1,2-Dichloroethene	1.3	ug/L	1.0	11/01/21 14:07	
EPA 8260	Vinyl chloride	0.21J	ug/L	1.0	11/01/21 14:07	
0235956004	PZ-4					
EPA 8260	Vinyl chloride	3.2	ug/L	1.0	11/01/21 14:26	
0235956005	MW-5					
EPA 8260	cis-1,2-Dichloroethene	12.3	ug/L	1.0	11/01/21 14:46	
EPA 8260	trans-1,2-Dichloroethene	1.7	ug/L	1.0	11/01/21 14:46	
EPA 8260	Tetrachloroethene	24.0	ug/L	1.0	11/01/21 14:46	
EPA 8260	Trichloroethene	5.6	ug/L	1.0	11/01/21 14:46	
EPA 8260	Vinyl chloride	1.1	ug/L	1.0	11/01/21 14:46	
0235956006	MW-4					
EPA 8260	Tetrachloroethene	26.8	ug/L	1.0	11/01/21 15:05	
0235956007	PZ-1R					
EPA 8015B Modified	Ethane	2.7J	ug/L	5.6	11/02/21 14:28	
EPA 8015B Modified	Ethene	21.9	ug/L	5.0	11/02/21 14:28	
EPA 8015B Modified	Methane	1820	ug/L	56.0	11/02/21 18:42	
EPA 6020	Iron	17100	ug/L	93.7	11/19/21 13:56	
EPA 8260	cis-1,2-Dichloroethene	69500	ug/L	500	11/01/21 18:53	
EPA 8260	Tetrachloroethene	21800	ug/L	500	11/01/21 18:53	
EPA 8260	Trichloroethene	10800	ug/L	500	11/01/21 18:53	
EPA 8260	Vinyl chloride	14200	ug/L	500	11/01/21 18:53	
SM 3500-Fe B	Iron, Ferrous	19000	ug/L	500		H3
SM 5310C	Total Organic Carbon	959	mg/L	150	11/03/21 05:36	

# **REPORT OF LABORATORY ANALYSIS**



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: PZ-2R Lab ID: 40235956001 Collected: 10/27/21 09:15 Received: 10/28/21 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
8260 MSV	Analytical	Method: EPA	8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		11/01/21 13:28	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 13:28		
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		11/01/21 13:28		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 13:28		
Bromoform	<3.8	ug/L	5.0	3.8	1		11/01/21 13:28		
Bromomethane	<1.2	ug/L	5.0	1.2	1		11/01/21 13:28		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 13:28		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		11/01/21 13:28		
ert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		11/01/21 13:28		
Carbon tetrachloride	<0.37	ug/L	1.0	0.33	1		11/01/21 13:28		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 13:28		
Chloroethane	<1.4	-	5.0	1.4	1		11/01/21 13:28		
Chloroform	<1.4 <1.2	ug/L	5.0 5.0	1.4	1		11/01/21 13:28		
Chloromethane		ug/L			1		11/01/21 13:28		
	<1.6	ug/L	5.0	1.6					
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 13:28		
I-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 13:28		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		11/01/21 13:28		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		11/01/21 13:28		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		11/01/21 13:28		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		11/01/21 13:28		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 13:28		
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 13:28		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		11/01/21 13:28		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		11/01/21 13:28	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 13:28	75-34-3	
,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		11/01/21 13:28	107-06-2	
,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/01/21 13:28	75-35-4	
cis-1,2-Dichloroethene	104	ug/L	1.0	0.47	1		11/01/21 13:28	156-59-2	
rans-1,2-Dichloroethene	1.3	ug/L	1.0	0.53	1		11/01/21 13:28	156-60-5	
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		11/01/21 13:28	78-87-5	
,3-Dichloropropane	< 0.30	ug/L	1.0	0.30	1		11/01/21 13:28	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		11/01/21 13:28	594-20-7	
,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		11/01/21 13:28	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		11/01/21 13:28	10061-01-5	
rans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		11/01/21 13:28	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 13:28	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 13:28		
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		11/01/21 13:28		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		11/01/21 13:28		
o-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		11/01/21 13:28		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		11/01/21 13:28		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 13:28		
Naphthalene	<1.1	ug/L	5.0	1.1	1		11/01/21 13:28		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 13:28		
Styrene	<0.36	ug/L ug/L	1.0	0.36	1		11/01/21 13:28		

# **REPORT OF LABORATORY ANALYSIS**

11/01/21 13:28 2037-26-5

(920)469-2436



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Toluene-d8 (S)

Date: 11/19/2021 03:55 PM

Sample: PZ-2R	Lab ID: 40235956001		Collected	Collected: 10/27/21 09:15 F		Received: 10/28/21 08:15 Matrix: Wate			ter	
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		11/01/21 13:28	630-20-6		
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		11/01/21 13:28	79-34-5		
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/01/21 13:28	127-18-4		
Toluene	<0.29	ug/L	1.0	0.29	1		11/01/21 13:28	108-88-3		
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		11/01/21 13:28	87-61-6		
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		11/01/21 13:28	120-82-1		
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 13:28	71-55-6		
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		11/01/21 13:28	79-00-5		
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/01/21 13:28	79-01-6		
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 13:28	75-69-4		
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		11/01/21 13:28	96-18-4		
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		11/01/21 13:28	95-63-6		
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 13:28	108-67-8		
Vinyl chloride	12.6	ug/L	1.0	0.17	1		11/01/21 13:28	75-01-4		
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		11/01/21 13:28	1330-20-7		
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		11/01/21 13:28	179601-23-1		
o-Xylene	<0.35	ug/L	1.0	0.35	1		11/01/21 13:28	95-47-6		
Surrogates		-								
4-Bromofluorobenzene (S)	89	%	70-130		1		11/01/21 13:28	460-00-4		
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		11/01/21 13:28	2199-69-1		

70-130

102

%

Matrix: Water

CAS No.

Qual



#### **ANALYTICAL RESULTS**

LOQ

Collected: 10/27/21 09:50

LOD

DF

Received: 10/28/21 08:15

Analyzed

11/01/21 13:48 106-46-7

11/01/21 13:48 75-71-8

11/01/21 13:48 75-34-3

11/01/21 13:48 107-06-2

11/01/21 13:48 75-35-4

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48

11/01/21 13:48 99-87-6

11/01/21 13:48 75-09-2

11/01/21 13:48 91-20-3

11/01/21 13:48 103-65-1

11/01/21 13:48 100-42-5

11/01/21 13:48 1634-04-4

156-59-2

156-60-5

78-87-5

142-28-9

594-20-7

563-58-6

108-20-3

100-41-4

87-68-3

98-82-8

10061-01-5

10061-02-6

Prepared

Project: 1690005819 FORMER ONE-HOUR VAL

Lab ID: 40235956002

Units

Results

<0.89

< 0.46

< 0.30

<0.29

<0.58

<0.53

<0.45

< 0.30

<4.2

< 0.41

< 0.36

<3.5

<1.1

< 0.33

<2.7

<1.0

<1.0

< 0.32

<1.1

<1.1

< 0.35

<0.36

1.3

ug/L

Pace Project No.: 40235956

**Parameters** 

Sample: MW-6

1,4-Dichlorobenzene

1,1-Dichloroethane

1.2-Dichloroethane

1,1-Dichloroethene

cis-1,2-Dichloroethene

1,2-Dichloropropane

1,3-Dichloropropane

2,2-Dichloropropane

1,1-Dichloropropene

Diisopropyl ether

p-Isopropyltoluene

Methylene Chloride

Methyl-tert-butyl ether

Date: 11/19/2021 03:55 PM

Ethylbenzene

Naphthalene

Styrene

n-Propylbenzene

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

Hexachloro-1,3-butadiene

Isopropylbenzene (Cumene)

trans-1,2-Dichloroethene

Dichlorodifluoromethane

Analytical Method: EPA 8260 8260 MSV Pace Analytical Services - Green Bay Benzene <0.30 ug/L 1.0 0.30 11/01/21 13:48 71-43-2 1 Bromobenzene < 0.36 ug/L 1.0 0.36 1 11/01/21 13:48 108-86-1 Bromochloromethane < 0.36 ug/L 5.0 0.36 1 11/01/21 13:48 74-97-5 Bromodichloromethane <0.42 ug/L 1.0 0.42 1 11/01/21 13:48 75-27-4 Bromoform <3.8 ug/L 5.0 3.8 1 11/01/21 13:48 75-25-2 Bromomethane <1.2 ug/L 5.0 1.2 1 11/01/21 13:48 74-83-9 n-Butylbenzene <0.86 ug/L 1.0 0.86 1 11/01/21 13:48 104-51-8 135-98-8 sec-Butylbenzene < 0.42 ug/L 1.0 0.42 1 11/01/21 13:48 0.59 98-06-6 tert-Butylbenzene <0.59 ug/L 1.0 1 11/01/21 13:48 Carbon tetrachloride < 0.37 ug/L 1.0 0.37 1 11/01/21 13:48 56-23-5 Chlorobenzene <0.86 1.0 0.86 11/01/21 13:48 108-90-7 ug/L 1 Chloroethane <1.4 ug/L 5.0 1.4 1 11/01/21 13:48 75-00-3 Chloroform <1.2 ug/L 5.0 1.2 1 11/01/21 13:48 67-66-3 Chloromethane <1.6 ug/L 5.0 1.6 1 11/01/21 13:48 74-87-3 2-Chlorotoluene <0.89 ug/L 5.0 0.89 1 11/01/21 13:48 95-49-8 0.89 4-Chlorotoluene < 0.89 ug/L 5.0 1 11/01/21 13:48 106-43-4 11/01/21 13:48 96-12-8 1,2-Dibromo-3-chloropropane <2.4 ug/L 5.0 2.4 1 2.6 Dibromochloromethane <2.6 5.0 1 11/01/21 13:48 124-48-1 ug/L 11/01/21 13:48 106-93-4 0.31 1,2-Dibromoethane (EDB) < 0.31 ug/L 1.0 1 Dibromomethane <0.99 ug/L 5.0 0.99 1 11/01/21 13:48 74-95-3 1,2-Dichlorobenzene < 0.33 ug/L 1.0 0.33 1 11/01/21 13:48 95-50-1 1,3-Dichlorobenzene <0.35 0.35 11/01/21 13:48 541-73-1 ug/L 1.0 1

1.0

5.0

1.0

1.0

1.0

1.0

1.0

1.0

1.0

5.0

1.0

1.0

5.0

5.0

1.0

5.0

5.0

5.0

5.0

5.0

5.0

1.0

1.0

0.89

0.46

0.30

0.29

0.58

0.47

0.53

0.45

0.30

0.41

0.36

3.5

1.1

2.7

1.0

1.0

1.1

1.1

0.35

0.36

0.32

0.33

4.2

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

11/01/21 13:48 2037-26-5

(920)469-2436



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Toluene-d8 (S)

Date: 11/19/2021 03:55 PM

Sample: MW-6	Lab ID:	40235956002	Collecte	d: 10/27/2	09:50	Received: 10	/28/21 08:15 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		11/01/21 13:48	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		11/01/21 13:48	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/01/21 13:48	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		11/01/21 13:48	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		11/01/21 13:48	87-61-6	
1,2,4-Trichlorobenzene	< 0.95	ug/L	5.0	0.95	1		11/01/21 13:48	120-82-1	
1,1,1-Trichloroethane	< 0.30	ug/L	1.0	0.30	1		11/01/21 13:48	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		11/01/21 13:48	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/01/21 13:48	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 13:48	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		11/01/21 13:48	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		11/01/21 13:48	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 13:48	108-67-8	
Vinyl chloride	0.19J	ug/L	1.0	0.17	1		11/01/21 13:48	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		11/01/21 13:48	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		11/01/21 13:48	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		11/01/21 13:48	95-47-6	
Surrogates		-							
4-Bromofluorobenzene (S)	87	%	70-130		1		11/01/21 13:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		11/01/21 13:48	2199-69-1	

70-130

100

%



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: MW-6DUP Lab ID: 40235956003 Collected: 10/27/21 09:50 Received: 10/28/21 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EP/	A 8260						
	Pace Anal	ytical Service	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		11/01/21 14:07	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:07		
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		11/01/21 14:07		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 14:07		
Bromoform	<3.8	ug/L	5.0	3.8	1		11/01/21 14:07		
Bromomethane	<1.2	ug/L	5.0	1.2	1		11/01/21 14:07	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 14:07	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		11/01/21 14:07		
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		11/01/21 14:07		
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		11/01/21 14:07		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 14:07		
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/01/21 14:07		
Chloroform	<1.2	ug/L	5.0	1.2	1		11/01/21 14:07		
Chloromethane	<1.6	ug/L	5.0	1.6	1		11/01/21 14:07		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 14:07		
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 14:07		
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		11/01/21 14:07		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		11/01/21 14:07		
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		11/01/21 14:07		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		11/01/21 14:07		
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 14:07		
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 14:07		
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		11/01/21 14:07		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		11/01/21 14:07		
1,1-Dichloroethane	<0.30	ug/L	1.0	0.40	1		11/01/21 14:07		
1,2-Dichloroethane	<0.29	ug/L	1.0	0.30	1		11/01/21 14:07		
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/01/21 14:07		
cis-1,2-Dichloroethene	1.3	ug/L ug/L	1.0	0.38	1		11/01/21 14:07		
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/01/21 14:07		
1,2-Dichloropropane	<0.45	ug/L ug/L	1.0	0.33	1		11/01/21 14:07		
1,3-Dichloropropane	<0.30	ug/L ug/L	1.0	0.43	1		11/01/21 14:07		
2,2-Dichloropropane	<0.30 <4.2	ug/L ug/L	5.0	4.2	1		11/01/21 14:07		
	<0.41	ug/L ug/L	1.0	0.41	1		11/01/21 14:07		
1,1-Dichloropropene cis-1,3-Dichloropropene	<0.41	ug/L ug/L	1.0	0.41	1		11/01/21 14:07		
·	<0.36 <3.5	-	5.0	3.5	1		11/01/21 14:07		
trans-1,3-Dichloropropene		ug/L							
Diisopropyl ether	<1.1 <0.22	ug/L	5.0	1.1	1		11/01/21 14:07 11/01/21 14:07		
Ethylbenzene Hexachloro-1,3-butadiene	<0.33 <2.7	ug/L ug/L	1.0 5.0	0.33 2.7	1 1		11/01/21 14:07		
Isopropylbenzene (Cumene)	<2. <i>i</i> <1.0	ug/L ug/L	5.0	1.0	1		11/01/21 14:07		
		-							
p-Isopropyltoluene	<1.0 -0.22	ug/L	5.0	1.0	1		11/01/21 14:07		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		11/01/21 14:07		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 14:07		
Naphthalene	<1.1	ug/L	5.0	1.1	1		11/01/21 14:07		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 14:07		
Styrene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:07	100-42-5	



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: MW-6DUP	Lab ID:	40235956003	Collected:	10/27/21	09:50	Received: 10	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		11/01/21 14:07	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		11/01/21 14:07	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/01/21 14:07	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		11/01/21 14:07	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		11/01/21 14:07	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		11/01/21 14:07	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 14:07	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		11/01/21 14:07	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/01/21 14:07	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 14:07	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		11/01/21 14:07	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		11/01/21 14:07	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:07	108-67-8	
Vinyl chloride	0.21J	ug/L	1.0	0.17	1		11/01/21 14:07	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		11/01/21 14:07	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		11/01/21 14:07	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		11/01/21 14:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		11/01/21 14:07	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		11/01/21 14:07	2199-69-1	
Toluene-d8 (S)	102	%	70-130		1		11/01/21 14:07	2037-26-5	



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: PZ-4 Lab ID: 40235956004 Collected: 10/27/21 10:30 Received: 10/28/21 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EP/	A 8260						
	Pace Anal	ytical Servic	es - Green Ba	y					
Benzene	<0.30	ug/L	1.0	0.30	1		11/01/21 14:26	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:26		
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		11/01/21 14:26		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 14:26		
Bromoform	<3.8	ug/L	5.0	3.8	1		11/01/21 14:26		
Bromomethane	<1.2	ug/L	5.0	1.2	1		11/01/21 14:26		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 14:26		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		11/01/21 14:26		
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		11/01/21 14:26		
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		11/01/21 14:26		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1			108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		11/01/21 14:26		
Chloroform	<1.2	ug/L	5.0	1.4	1		11/01/21 14:26		
Chloromethane	<1.6	ug/L	5.0	1.6	1		11/01/21 14:26		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 14:26		
4-Chlorotoluene	<0.89	ug/L ug/L	5.0	0.89	1			106-43-4	
1,2-Dibromo-3-chloropropane	<0.69 <2.4	ug/L ug/L	5.0 5.0	2.4	1		11/01/21 14:26		
Dibromochloromethane	<2.4 <2.6	ug/L ug/L	5.0 5.0	2.4	1		11/01/21 14:26		
	<0.31	_	1.0	0.31	1		11/01/21 14:26		
1,2-Dibromoethane (EDB)		ug/L	5.0	0.31	1		11/01/21 14:26		
Dibromomethane	<0.99	ug/L			1				
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 14:26		
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35			11/01/21 14:26		
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		11/01/21 14:26		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		11/01/21 14:26		
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 14:26		
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1			107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/01/21 14:26		
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1			156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/01/21 14:26		
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		11/01/21 14:26		
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1			142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		11/01/21 14:26		
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		11/01/21 14:26		
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:26		
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		11/01/21 14:26	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1			108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 14:26		
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		11/01/21 14:26		
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		11/01/21 14:26		
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		11/01/21 14:26		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		11/01/21 14:26		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 14:26		
Naphthalene	<1.1	ug/L	5.0	1.1	1		11/01/21 14:26		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 14:26		
Styrene	< 0.36	ug/L	1.0	0.36	1		11/01/21 14:26	100-42-5	

11/01/21 14:26 2037-26-5

(920)469-2436



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Toluene-d8 (S)

Date: 11/19/2021 03:55 PM

Sample: PZ-4	Lab ID:	40235956004	Collecte	d: 10/27/2	1 10:30	Received: 10	)/28/21 08:15 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	у					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		11/01/21 14:26	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		11/01/21 14:26	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/01/21 14:26	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		11/01/21 14:26	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		11/01/21 14:26	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		11/01/21 14:26	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 14:26	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		11/01/21 14:26	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/01/21 14:26	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 14:26	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		11/01/21 14:26	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		11/01/21 14:26	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:26	108-67-8	
Vinyl chloride	3.2	ug/L	1.0	0.17	1		11/01/21 14:26	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		11/01/21 14:26	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		11/01/21 14:26	179601-23-1	
o-Xylene	< 0.35	ug/L	1.0	0.35	1		11/01/21 14:26	95-47-6	
Surrogates		-							
4-Bromofluorobenzene (S)	86	%	70-130		1		11/01/21 14:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		11/01/21 14:26	2199-69-1	

70-130

102



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: MW-5 Lab ID: 40235956005 Collected: 10/27/21 11:05 Received: 10/28/21 08:15 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		11/01/21 14:46	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:46	-	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		11/01/21 14:46		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 14:46		
Bromoform	<3.8	ug/L	5.0	3.8	1		11/01/21 14:46		
Bromomethane	<1.2	ug/L	5.0	1.2	1		11/01/21 14:46		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 14:46		
sec-Butylbenzene	<0.42	ug/L ug/L	1.0	0.42	1		11/01/21 14:46		
ert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		11/01/21 14:46		
Carbon tetrachloride	<0.37	•	1.0	0.39	1		11/01/21 14:46		
Chlorobenzene		ug/L		0.86	1				
	<0.86	ug/L	1.0				11/01/21 14:46		
Chloroethane	<1.4	ug/L	5.0	1.4	1 1		11/01/21 14:46		
Chloroform	<1.2	ug/L	5.0	1.2			11/01/21 14:46		
Chloromethane	<1.6	ug/L	5.0	1.6	1		11/01/21 14:46		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 14:46		
I-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 14:46		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		11/01/21 14:46		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		11/01/21 14:46		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		11/01/21 14:46		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		11/01/21 14:46		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 14:46		
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 14:46		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		11/01/21 14:46		
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		11/01/21 14:46	75-71-8	
,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 14:46	75-34-3	
,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		11/01/21 14:46	107-06-2	
,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/01/21 14:46	75-35-4	
cis-1,2-Dichloroethene	12.3	ug/L	1.0	0.47	1		11/01/21 14:46	156-59-2	
rans-1,2-Dichloroethene	1.7	ug/L	1.0	0.53	1		11/01/21 14:46	156-60-5	
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		11/01/21 14:46	78-87-5	
,3-Dichloropropane	< 0.30	ug/L	1.0	0.30	1		11/01/21 14:46	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		11/01/21 14:46	594-20-7	
,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		11/01/21 14:46	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		11/01/21 14:46	10061-01-5	
rans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		11/01/21 14:46	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 14:46	108-20-3	
Ethylbenzene	< 0.33	ug/L	1.0	0.33	1		11/01/21 14:46		
lexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		11/01/21 14:46		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		11/01/21 14:46		
o-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		11/01/21 14:46		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		11/01/21 14:46		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 14:46		
Naphthalene	<1.1	ug/L	5.0	1.1	1		11/01/21 14:46		
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 14:46		
Styrene	<0.36	ug/L ug/L	1.0	0.36	1		11/01/21 14:46		

11/01/21 14:46 460-00-4

11/01/21 14:46 2199-69-1

11/01/21 14:46 2037-26-5



#### **ANALYTICAL RESULTS**

Collected: 10/27/21 11:05 Received: 10/28/21 08:15 Matrix: Water

Project: 1690005819 FORMER ONE-HOUR VAL

Lab ID: 40235956005

89

104

101

%

%

%

Pace Project No.: 40235956

Sample: MW-5

Surrogates

Toluene-d8 (S)

4-Bromofluorobenzene (S)

1,2-Dichlorobenzene-d4 (S)

Date: 11/19/2021 03:55 PM

Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Analytical	Method: EPA	A 8260						
Pace Anal	ytical Service	es - Green Ba	у					
<0.36	ug/L	1.0	0.36	1		11/01/21 14:46	630-20-6	
<0.38	ug/L	1.0	0.38	1		11/01/21 14:46	79-34-5	
24.0	ug/L	1.0	0.41	1		11/01/21 14:46	127-18-4	
<0.29	ug/L	1.0	0.29	1		11/01/21 14:46	108-88-3	
<1.0	ug/L	5.0	1.0	1		11/01/21 14:46	87-61-6	
<0.95	ug/L	5.0	0.95	1		11/01/21 14:46	120-82-1	
<0.30	ug/L	1.0	0.30	1		11/01/21 14:46	71-55-6	
<0.34	ug/L	5.0	0.34	1		11/01/21 14:46	79-00-5	
5.6	ug/L	1.0	0.32	1		11/01/21 14:46	79-01-6	
<0.42	ug/L	1.0	0.42	1		11/01/21 14:46	75-69-4	
<0.56	ug/L	5.0	0.56	1		11/01/21 14:46	96-18-4	
<0.45	ug/L	1.0	0.45	1		11/01/21 14:46	95-63-6	
< 0.36	ug/L	1.0	0.36	1		11/01/21 14:46	108-67-8	
1.1	ug/L	1.0	0.17	1		11/01/21 14:46	75-01-4	
<1.0	ug/L	3.0	1.0	1		11/01/21 14:46	1330-20-7	
<0.70	ug/L	2.0	0.70	1		11/01/21 14:46	179601-23-1	
<0.35	ug/L	1.0	0.35	1		11/01/21 14:46	95-47-6	
	Analytical Pace Anal  <0.36 <0.38 24.0 <0.29 <1.0 <0.95 <0.30 <0.34 5.6 <0.42 <0.56 <0.45 <0.36 1.1 <1.0 <0.70	Analytical Method: EPA Pace Analytical Service  <0.36	Analytical Method: EPA 8260 Pace Analytical Services - Green Bacteria	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay  <0.36	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay  <0.36	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay  <0.36	Analytical Method: EPA 8260  Pace Analytical Services - Green Bay  <0.36	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay  <0.36

70-130

70-130

70-130

1

1

Matrix: Water

CAS No.

Qual



#### **ANALYTICAL RESULTS**

LOQ

Collected: 10/27/21 11:45

LOD

DF

Received: 10/28/21 08:15

Analyzed

11/01/21 15:05 124-48-1

11/01/21 15:05 106-93-4

11/01/21 15:05 74-95-3

11/01/21 15:05 95-50-1

11/01/21 15:05 541-73-1

11/01/21 15:05 106-46-7

11/01/21 15:05 75-71-8

11/01/21 15:05 75-34-3

11/01/21 15:05 107-06-2

11/01/21 15:05 75-35-4

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

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11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05

11/01/21 15:05 99-87-6

11/01/21 15:05 75-09-2

11/01/21 15:05 91-20-3

11/01/21 15:05 103-65-1

11/01/21 15:05 100-42-5

11/01/21 15:05 1634-04-4

156-59-2

156-60-5

78-87-5

142-28-9

594-20-7

563-58-6

108-20-3

100-41-4

87-68-3

98-82-8

10061-01-5

10061-02-6

Prepared

Project: 1690005819 FORMER ONE-HOUR VAL

Lab ID: 40235956006

Units

Results

<2.6

< 0.31

<0.99

< 0.33

<0.35

<0.89

< 0.46

<0.30

<0.29

<0.58

<0.47

< 0.53

<0.45

< 0.30

<4.2

< 0.41

< 0.36

<3.5

<1.1

< 0.33

<2.7

<1.0

<1.0

< 0.32

<1.1

<1.1

< 0.35

<0.36

ug/L

Pace Project No.: 40235956

**Parameters** 

Sample: MW-4

Dibromochloromethane

Dibromomethane

1,2-Dichlorobenzene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,1-Dichloroethane

1.2-Dichloroethane

1,1-Dichloroethene

cis-1,2-Dichloroethene

1,2-Dichloropropane

1,3-Dichloropropane

2,2-Dichloropropane

1,1-Dichloropropene

Diisopropyl ether

p-Isopropyltoluene

Methylene Chloride

Methyl-tert-butyl ether

Date: 11/19/2021 03:55 PM

Ethylbenzene

Naphthalene

Styrene

n-Propylbenzene

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

Hexachloro-1,3-butadiene

Isopropylbenzene (Cumene)

trans-1,2-Dichloroethene

Dichlorodifluoromethane

1,2-Dibromoethane (EDB)

Analytical Method: EPA 8260 8260 MSV Pace Analytical Services - Green Bay Benzene <0.30 ug/L 1.0 0.30 11/01/21 15:05 71-43-2 1 Bromobenzene < 0.36 ug/L 1.0 0.36 1 11/01/21 15:05 108-86-1 Bromochloromethane < 0.36 ug/L 5.0 0.36 1 11/01/21 15:05 74-97-5 Bromodichloromethane <0.42 ug/L 1.0 0.42 1 11/01/21 15:05 75-27-4 Bromoform <3.8 ug/L 5.0 3.8 1 11/01/21 15:05 75-25-2 Bromomethane <1.2 ug/L 5.0 1.2 1 11/01/21 15:05 74-83-9 n-Butylbenzene <0.86 ug/L 1.0 0.86 1 11/01/21 15:05 104-51-8 135-98-8 sec-Butylbenzene < 0.42 ug/L 1.0 0.42 1 11/01/21 15:05 0.59 98-06-6 tert-Butylbenzene <0.59 ug/L 1.0 1 11/01/21 15:05 Carbon tetrachloride < 0.37 ug/L 1.0 0.37 1 11/01/21 15:05 56-23-5 Chlorobenzene <0.86 1.0 0.86 11/01/21 15:05 108-90-7 ug/L 1 Chloroethane <1.4 ug/L 5.0 1.4 1 11/01/21 15:05 75-00-3 Chloroform <1.2 ug/L 5.0 1.2 1 11/01/21 15:05 67-66-3 Chloromethane <1.6 ug/L 5.0 1.6 1 11/01/21 15:05 74-87-3 2-Chlorotoluene <0.89 ug/L 5.0 0.89 1 11/01/21 15:05 95-49-8 0.89 4-Chlorotoluene < 0.89 ug/L 5.0 1 11/01/21 15:05 106-43-4 11/01/21 15:05 96-12-8 1,2-Dibromo-3-chloropropane <2.4 ug/L 5.0 2.4 1

5.0

1.0

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5.0

5.0

5.0

5.0

5.0

1.0

1.0

2.6

0.31

0.99

0.33

0.35

0.89

0.46

0.30

0.29

0.58

0.47

0.53

0.45

0.30

0.41

0.36

3.5

1.1

2.7

1.0

1.0

1.1

1.1

0.35

0.36

0.32

0.33

4.2

1

1

1

1

1

1

1

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1

1

1

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11/01/21 15:05 2037-26-5

(920)469-2436



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Toluene-d8 (S)

Date: 11/19/2021 03:55 PM

Sample: MW-4	Lab ID: 40235956		6006 Collected: 10/27/21 11:45 Re		Received: 10	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		11/01/21 15:05	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		11/01/21 15:05	79-34-5	
Tetrachloroethene	26.8	ug/L	1.0	0.41	1		11/01/21 15:05	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		11/01/21 15:05	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		11/01/21 15:05	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		11/01/21 15:05	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 15:05	71-55-6	
1,1,2-Trichloroethane	< 0.34	ug/L	5.0	0.34	1		11/01/21 15:05	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/01/21 15:05	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 15:05	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		11/01/21 15:05	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		11/01/21 15:05	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 15:05	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/01/21 15:05	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		11/01/21 15:05	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		11/01/21 15:05	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		11/01/21 15:05	95-47-6	
Surrogates		•							
4-Bromofluorobenzene (S)	89	%	70-130		1		11/01/21 15:05	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		11/01/21 15:05	2199-69-1	

70-130

104



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: PZ-1R	Lab ID:	40235956007	Collecte	d: 10/27/2	1 12:45	Received: 10	/28/21 08:15 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qua
Methane, Ethane, Ethene GCV	Analytical	Method: EPA	3015B Modif	fied					
	Pace Anal	ytical Services	- Green Ba	у					
Ethane	2.7J	ug/L	5.6	0.39	1		11/02/21 14:28	74 94 0	
Ethene	21.9	ug/L ug/L	5.0	0.39	1		11/02/21 14:28		
Methane	1820	ug/L ug/L	56.0	11.5	20		11/02/21 14:28		
Wethane	1020	ug/L	30.0	11.0	20		11/02/21 10:42	74-02-0	
Metals (ICPMS) 6020	Analytical	Method: EPA	6020 Prepa	ration Meth	od: 301	5			
	Pace Nati	onal - Mt. Julie	t						
Iron	17100	ug/L	93.7	28.1	1	11/18/21 11:50	11/19/21 13:56	7439-89-6	
8260 MSV	Analytical	Method: EPA	3260						
6200 WIS V	•			.,					
	race Ana	lytical Services	- Green Ba	•					
Benzene	<148	ug/L	500	148	500		11/01/21 18:53	71-43-2	
Bromobenzene	<180	ug/L	500	180	500		11/01/21 18:53	108-86-1	
Bromochloromethane	<179	ug/L	2500	179	500		11/01/21 18:53		
Bromodichloromethane	<208	ug/L	500	208	500		11/01/21 18:53	75-27-4	
Bromoform	<1900	ug/L	2500	1900	500		11/01/21 18:53	75-25-2	
Bromomethane	<596	ug/L	2500	596	500		11/01/21 18:53	74-83-9	
n-Butylbenzene	<429	ug/L	500	429	500		11/01/21 18:53	104-51-8	
sec-Butylbenzene	<212	ug/L	500	212	500		11/01/21 18:53	135-98-8	
tert-Butylbenzene	<293	ug/L	500	293	500		11/01/21 18:53	98-06-6	
Carbon tetrachloride	<185	ug/L	500	185	500		11/01/21 18:53	56-23-5	
Chlorobenzene	<428	ug/L	500	428	500		11/01/21 18:53	108-90-7	
Chloroethane	<690	ug/L	2500	690	500		11/01/21 18:53		
Chloroform	<591	ug/L	2500	591	500		11/01/21 18:53	67-66-3	
Chloromethane	<818	ug/L	2500	818	500		11/01/21 18:53	74-87-3	
2-Chlorotoluene	<445	ug/L	2500	445	500		11/01/21 18:53		
4-Chlorotoluene	<447	ug/L	2500	447	500		11/01/21 18:53		
1,2-Dibromo-3-chloropropane	<1180	ug/L	2500	1180	500		11/01/21 18:53		
Dibromochloromethane	<1320	ug/L	2500	1320	500		11/01/21 18:53		
1,2-Dibromoethane (EDB)	<155	ug/L	500	155	500		11/01/21 18:53		
Dibromomethane	<495	ug/L	2500	495	500		11/01/21 18:53		
1,2-Dichlorobenzene	<163	ug/L	500	163	500		11/01/21 18:53		
1,3-Dichlorobenzene	<176	ug/L	500	176	500		11/01/21 18:53		
1,4-Dichlorobenzene	<446	ug/L	500	446	500		11/01/21 18:53		
Dichlorodifluoromethane	<228	ug/L	2500	228	500		11/01/21 18:53		
1,1-Dichloroethane	<148	ug/L	500	148	500		11/01/21 18:53		
1,2-Dichloroethane	<146	ug/L	500	146	500		11/01/21 18:53		
1,1-Dichloroethene	<291	ug/L	500	291	500		11/01/21 18:53		
cis-1,2-Dichloroethene	69500	ug/L	500	236	500		11/01/21 18:53		
trans-1,2-Dichloroethene	<264	ug/L	500	264	500		11/01/21 18:53		
1,2-Dichloropropane	<224	ug/L	500	224	500		11/01/21 18:53		
1,3-Dichloropropane	<152	ug/L	500	152	500		11/01/21 18:53		
2,2-Dichloropropane	<2090	ug/L	2500	2090	500		11/01/21 18:53		
1,1-Dichloropropene	<205	ug/L	500	205	500		11/01/21 18:53		
cis-1,3-Dichloropropene	<179	ug/L	500	179	500		11/01/21 18:53		
trans-1,3-Dichloropropene	<1730	ug/L	2500	1730	500		11/01/21 18:53	10061-02-6	



# **ANALYTICAL RESULTS**

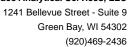
Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: PZ-1R	Lab ID:	40235956007	Collected	10/27/2	1 12:45	Received: 10	/28/21 08:15 M	latrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Ana	lytical Services	- Green Bay						
Diisopropyl ether	<550	ug/L	2500	550	500		11/01/21 18:53	108-20-3	
Ethylbenzene	<163	ug/L	500	163	500		11/01/21 18:53		
Hexachloro-1,3-butadiene	<1370	ug/L	2500	1370	500		11/01/21 18:53		
Isopropylbenzene (Cumene)	<500	ug/L	2500	500	500		11/01/21 18:53		
p-Isopropyltoluene	<522	ug/L	2500	522	500		11/01/21 18:53		
Methylene Chloride	<160	ug/L	2500	160	500		11/01/21 18:53		
Methyl-tert-butyl ether	<565	ug/L ug/L	2500	565	500		11/01/21 18:53		
Naphthalene	<565	ug/L ug/L	2500	565	500		11/01/21 18:53		
·	<173	_	500	173	500		11/01/21 18:53		
n-Propylbenzene	<173	ug/L	500	173	500		11/01/21 18:53		
Styrene		ug/L			500				
1,1,1,2-Tetrachloroethane	<178	ug/L	500	178			11/01/21 18:53		
1,1,2,2-Tetrachloroethane	<189	ug/L	500	189	500		11/01/21 18:53		
Tetrachloroethene	21800	ug/L	500	204	500		11/01/21 18:53		
Toluene	<144	ug/L	500	144	500		11/01/21 18:53		
1,2,3-Trichlorobenzene	<509	ug/L	2500	509	500		11/01/21 18:53		
1,2,4-Trichlorobenzene	<475	ug/L	2500	475	500		11/01/21 18:53		
1,1,1-Trichloroethane	<151	ug/L	500	151	500		11/01/21 18:53		
1,1,2-Trichloroethane	<172	ug/L	2500	172	500		11/01/21 18:53		
Trichloroethene	10800	ug/L	500	160	500		11/01/21 18:53		
Trichlorofluoromethane	<209	ug/L	500	209	500		11/01/21 18:53		
1,2,3-Trichloropropane	<278	ug/L	2500	278	500		11/01/21 18:53		
1,2,4-Trimethylbenzene	<224	ug/L	500	224	500		11/01/21 18:53		
1,3,5-Trimethylbenzene	<179	ug/L	500	179	500		11/01/21 18:53		
Vinyl chloride	14200	ug/L	500	87.2	500		11/01/21 18:53		
Xylene (Total)	<524	ug/L	1500	524	500		11/01/21 18:53	1330-20-7	
m&p-Xylene	<350	ug/L	1000	350	500		11/01/21 18:53	179601-23-1	
o-Xylene	<174	ug/L	500	174	500		11/01/21 18:53	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		500		11/01/21 18:53		
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		500		11/01/21 18:53		
Toluene-d8 (S)	102	%	70-130		500		11/01/21 18:53	2037-26-5	
Wet Chemistry 3500Fe B-2011	Analytical	Method: SM 35	00-Fe B Pre	eparation I	Method:	3500Fe B-2011			
,	•	ional - Mt. Juliet		•					
Iron, Ferrous	19000	ug/L	500	150	10	11/04/21 10:33	11/04/21 10:33		НЗ
Calculated Results	-	Method: Calcul ional - Mt. Juliet		ation Meth	nod: Cal	C.			
Iron, Ferric	<28.1	ug/L	93.7	28.1	1	11/19/21 13:56	11/19/21 13:56	7439-89-6	НЗ
300.0 IC Anions	•	Method: EPA 3							
Sulfate	<2.2	mg/L	10.0	2.2	5		11/04/21 00:47	14808-70-9	D3
Juliate	<2.2	mg/L	10.0	2.2	J		11/04/21 00.47	14000-79-8	DS

11/03/21 05:36 7440-44-0





# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Total Organic Carbon

Date: 11/19/2021 03:55 PM

Sample: PZ-1R	Lab ID:	40235956007	Collecte	ed: 10/27/2	1 12:45	Received: 10/	28/21 08:15 I	Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
5310C TOC	Analytica	l Method: SM 53	10C						

41.5 300

150

Pace Analytical Services - Green Bay

mg/L

959



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: TRIP BLANK Lab ID: 40235956008 Collected: 10/27/21 00:00 Received: 10/28/21 08:15 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		11/01/21 10:54	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 10:54		
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		11/01/21 10:54		
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 10:54		
Bromoform	<3.8	ug/L	5.0	3.8	1		11/01/21 10:54		
Bromomethane	<1.2	ug/L	5.0	1.2	1		11/01/21 10:54		
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 10:54		
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		11/01/21 10:54		
ert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		11/01/21 10:54		
Carbon tetrachloride	<0.37	ug/L	1.0	0.33	1		11/01/21 10:54		
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		11/01/21 10:54		
Chloroethane	<1.4	_	5.0	1.4	1		11/01/21 10:54		
		ug/L			1		11/01/21 10:54		
Chloroform	<1.2	ug/L	5.0	1.2	1				
Chloromethane	<1.6	ug/L	5.0	1.6			11/01/21 10:54		
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 10:54		
I-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		11/01/21 10:54		
,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		11/01/21 10:54		
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		11/01/21 10:54		
,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		11/01/21 10:54		
Dibromomethane	<0.99	ug/L	5.0	0.99	1		11/01/21 10:54		
,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 10:54	95-50-1	
,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		11/01/21 10:54		
,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		11/01/21 10:54	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		11/01/21 10:54	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 10:54	75-34-3	
,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		11/01/21 10:54	107-06-2	
,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		11/01/21 10:54	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		11/01/21 10:54	156-59-2	
rans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		11/01/21 10:54	156-60-5	
,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		11/01/21 10:54	78-87-5	
,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		11/01/21 10:54	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		11/01/21 10:54	594-20-7	
,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		11/01/21 10:54	563-58-6	
cis-1,3-Dichloropropene	< 0.36	ug/L	1.0	0.36	1		11/01/21 10:54	10061-01-5	
rans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		11/01/21 10:54	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 10:54	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		11/01/21 10:54		
lexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		11/01/21 10:54		
sopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		11/01/21 10:54		
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		11/01/21 10:54		
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		11/01/21 10:54		
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		11/01/21 10:54		
Naphthalene	<1.1	ug/L ug/L	5.0	1.1	1		11/01/21 10:54		
n-Propylbenzene	<0.35	-			1		11/01/21 10:54		
Styrene	<0.35 <0.36	ug/L ug/L	1.0 1.0	0.35 0.36	1		11/01/21 10:54		



# **ANALYTICAL RESULTS**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Sample: TRIP BLANK	Lab ID:	40235956008	Collecte	d: 10/27/2	00:00	Received: 10	)/28/21 08:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	260						
	Pace Ana	lytical Services	- Green Ba	У					
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		11/01/21 10:54	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		11/01/21 10:54	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		11/01/21 10:54	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		11/01/21 10:54	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		11/01/21 10:54	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		11/01/21 10:54	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		11/01/21 10:54	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		11/01/21 10:54	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		11/01/21 10:54	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		11/01/21 10:54	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		11/01/21 10:54	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		11/01/21 10:54	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		11/01/21 10:54	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		11/01/21 10:54	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		11/01/21 10:54	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		11/01/21 10:54	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		11/01/21 10:54	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	87	%	70-130		1		11/01/21 10:54		
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		11/01/21 10:54	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		11/01/21 10:54	2037-26-5	



#### **QUALITY CONTROL DATA**

Project: 1690005819 FORMER ONE-HOUR VAL

EPA 8015B Modified

Pace Project No.: 40235956

QC Batch Method:

QC Batch: 400349

49 Analysis Method:

Analysis Description: Methane, Ethane, Ethene GCV

Laboratory:

Pace Analytical Services - Green Bay

EPA 8015B Modified

Associated Lab Samples: 40235956007

METHOD BLANK: 2311980

Date: 11/19/2021 03:55 PM

Matrix: Water

Associated Lab Samples: 40235956007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.39	5.6	11/02/21 10:35	
Ethene	ug/L	< 0.25	5.0	11/02/21 10:35	
Methane	ug/L	< 0.58	2.8	11/02/21 10:35	

LABORATORY CONTROL SAMPLE &		23	311982							
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Ethane	ug/L	53.6	56.4	57.7	105	108	80-120	2	20	
Ethene	ug/L	50	53.5	54.4	107	109	80-120	2	20	
Methane	ug/L	28.6	33.0	34.0	115	119	80-121	3	20	

MATRIX SPIKE & MATRIX SF	IKE DUPL	ICATE: 2311	983		2311984							
			MS	MSD								
		40235597009	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Ethane	ug/L	<3.9	536	536	502	546	94	102	80-122	9	20	
Ethene	ug/L	<2.5	500	500	472	513	94	103	80-122	8	20	
Methane	ug/L	1800	286	286	2990	2820	416	357	10-200	6	20	E,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.



**QUALITY CONTROL DATA** 

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

QC Batch: 1776517 Analysis Method: EPA 6020

QC Batch Method: 3015 Analysis Description: Metals (ICPMS) 6020

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 40235956007

METHOD BLANK: R3731692-1 Matrix: Water

Associated Lab Samples: 40235956007

Blank Reporting

 Parameter
 Units
 Result
 Limit
 Analyzed
 Qualifiers

 Iron
 ug/L
 <28.1</td>
 93.7
 11/19/21 12:33

LABORATORY CONTROL SAMPLE: R3731692-2

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits Qualifiers

Iron ug/L 5000 4790 95.8 80.0-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3731692-4 R3731692-5

MS MSD

L1424185-11 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Result ND Iron ug/L 5000 5000 4730 4690 94.5 93.7 75.0-125 0.852 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 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

QC Batch: 400082 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40235956001, 40235956002, 40235956003, 40235956004, 40235956005, 40235956006, 40235956007,

40235956008

METHOD BLANK: 2310219 Matrix: Water

Associated Lab Samples: 40235956001, 40235956002, 40235956003, 40235956004, 40235956005, 40235956006, 40235956007,

40235956008

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.36	1.0	11/01/21 09:18	
1,1,1-Trichloroethane	ug/L	< 0.30	1.0	11/01/21 09:18	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	11/01/21 09:18	
1,1,2-Trichloroethane	ug/L	< 0.34	5.0	11/01/21 09:18	
1,1-Dichloroethane	ug/L	< 0.30	1.0	11/01/21 09:18	
1,1-Dichloroethene	ug/L	<0.58	1.0	11/01/21 09:18	
1,1-Dichloropropene	ug/L	<0.41	1.0	11/01/21 09:18	
1,2,3-Trichlorobenzene	ug/L	<1.0	5.0	11/01/21 09:18	
1,2,3-Trichloropropane	ug/L	< 0.56	5.0	11/01/21 09:18	
1,2,4-Trichlorobenzene	ug/L	< 0.95	5.0	11/01/21 09:18	
1,2,4-Trimethylbenzene	ug/L	< 0.45	1.0	11/01/21 09:18	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	11/01/21 09:18	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	11/01/21 09:18	
1,2-Dichlorobenzene	ug/L	< 0.33	1.0	11/01/21 09:18	
1,2-Dichloroethane	ug/L	<0.29	1.0	11/01/21 09:18	
1,2-Dichloropropane	ug/L	< 0.45	1.0	11/01/21 09:18	
1,3,5-Trimethylbenzene	ug/L	< 0.36	1.0	11/01/21 09:18	
1,3-Dichlorobenzene	ug/L	< 0.35	1.0	11/01/21 09:18	
1,3-Dichloropropane	ug/L	< 0.30	1.0	11/01/21 09:18	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	11/01/21 09:18	
2,2-Dichloropropane	ug/L	<4.2	5.0	11/01/21 09:18	
2-Chlorotoluene	ug/L	<0.89	5.0	11/01/21 09:18	
4-Chlorotoluene	ug/L	< 0.89	5.0	11/01/21 09:18	
Benzene	ug/L	< 0.30	1.0	11/01/21 09:18	
Bromobenzene	ug/L	< 0.36	1.0	11/01/21 09:18	
Bromochloromethane	ug/L	< 0.36	5.0	11/01/21 09:18	
Bromodichloromethane	ug/L	< 0.42	1.0	11/01/21 09:18	
Bromoform	ug/L	<3.8	5.0	11/01/21 09:18	
Bromomethane	ug/L	<1.2	5.0	11/01/21 09:18	
Carbon tetrachloride	ug/L	< 0.37	1.0	11/01/21 09:18	
Chlorobenzene	ug/L	<0.86	1.0	11/01/21 09:18	
Chloroethane	ug/L	<1.4	5.0	11/01/21 09:18	
Chloroform	ug/L	<1.2	5.0	11/01/21 09:18	
Chloromethane	ug/L	<1.6	5.0	11/01/21 09:18	
cis-1,2-Dichloroethene	ug/L	< 0.47	1.0	11/01/21 09:18	
cis-1,3-Dichloropropene	ug/L	< 0.36	1.0	11/01/21 09:18	
Dibromochloromethane	ug/L	<2.6	5.0	11/01/21 09:18	
Dibromomethane	ug/L	<0.99	5.0	11/01/21 09:18	
Dichlorodifluoromethane	ug/L	< 0.46	5.0	11/01/21 09:18	

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 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

METHOD BLANK: 2310219 Matrix: Water

Associated Lab Samples: 40235956001, 40235956002, 40235956003, 40235956004, 40235956005, 40235956006, 40235956007,

40235956008

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	<1.1	5.0	11/01/21 09:18	
Ethylbenzene	ug/L	< 0.33	1.0	11/01/21 09:18	
Hexachloro-1,3-butadiene	ug/L	<2.7	5.0	11/01/21 09:18	
Isopropylbenzene (Cumene)	ug/L	<1.0	5.0	11/01/21 09:18	
m&p-Xylene	ug/L	< 0.70	2.0	11/01/21 09:18	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	11/01/21 09:18	
Methylene Chloride	ug/L	< 0.32	5.0	11/01/21 09:18	
n-Butylbenzene	ug/L	<0.86	1.0	11/01/21 09:18	
n-Propylbenzene	ug/L	< 0.35	1.0	11/01/21 09:18	
Naphthalene	ug/L	<1.1	5.0	11/01/21 09:18	
o-Xylene	ug/L	< 0.35	1.0	11/01/21 09:18	
p-Isopropyltoluene	ug/L	<1.0	5.0	11/01/21 09:18	
sec-Butylbenzene	ug/L	< 0.42	1.0	11/01/21 09:18	
Styrene	ug/L	< 0.36	1.0	11/01/21 09:18	
tert-Butylbenzene	ug/L	< 0.59	1.0	11/01/21 09:18	
Tetrachloroethene	ug/L	<0.41	1.0	11/01/21 09:18	
Toluene	ug/L	< 0.29	1.0	11/01/21 09:18	
trans-1,2-Dichloroethene	ug/L	< 0.53	1.0	11/01/21 09:18	
trans-1,3-Dichloropropene	ug/L	<3.5	5.0	11/01/21 09:18	
Trichloroethene	ug/L	< 0.32	1.0	11/01/21 09:18	
Trichlorofluoromethane	ug/L	< 0.42	1.0	11/01/21 09:18	
Vinyl chloride	ug/L	<0.17	1.0	11/01/21 09:18	
Xylene (Total)	ug/L	<1.0	3.0	11/01/21 09:18	
1,2-Dichlorobenzene-d4 (S)	%	100	70-130	11/01/21 09:18	
4-Bromofluorobenzene (S)	%	87	70-130	11/01/21 09:18	
Toluene-d8 (S)	%	102	70-130	11/01/21 09:18	

LABORATORY CONTROL SAMPLE:	2310220					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	58.2	116	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.1	102	66-130	
1,1,2-Trichloroethane	ug/L	50	56.6	113	70-130	
1,1-Dichloroethane	ug/L	50	52.4	105	68-132	
1,1-Dichloroethene	ug/L	50	54.7	109	85-126	
1,2,4-Trichlorobenzene	ug/L	50	53.8	108	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	43.8	88	51-126	
1,2-Dibromoethane (EDB)	ug/L	50	56.6	113	70-130	
1,2-Dichlorobenzene	ug/L	50	57.4	115	70-130	
1,2-Dichloroethane	ug/L	50	46.4	93	70-130	
1,2-Dichloropropane	ug/L	50	51.3	103	78-125	
1,3-Dichlorobenzene	ug/L	50	57.0	114	70-130	
1,4-Dichlorobenzene	ug/L	50	58.5	117	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 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

LABORATORY CONTROL SAMPLE:	2310220					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
enzene	ug/L	50	55.3	111	70-132	
romodichloromethane	ug/L	50	54.8	110	70-130	
romoform	ug/L	50	51.9	104	65-130	
omomethane	ug/L	50	35.0	70	44-128	
rbon tetrachloride	ug/L	50	55.9	112	70-130	
orobenzene	ug/L	50	59.2	118	70-130	
oroethane	ug/L	50	53.0	106	73-137	
oroform	ug/L	50	56.6	113	80-122	
oromethane	ug/L	50	31.6	63	27-148	
-1,2-Dichloroethene	ug/L	50	55.1	110	70-130	
1,3-Dichloropropene	ug/L	50	49.2	98	70-130	
romochloromethane	ug/L	50	56.2	112	70-130	
nlorodifluoromethane	ug/L	50	28.9	58	22-151	
ylbenzene	ug/L	50	59.4	119	80-123	
propylbenzene (Cumene)	ug/L	50	63.4	127	70-130	
p-Xylene	ug/L	100	119	119	70-130	
hyl-tert-butyl ether	ug/L	50	48.6	97	66-130	
nylene Chloride	ug/L	50	53.7	107	70-130	
ylene	ug/L	50	60.6	121	70-130	
rene	ug/L	50	62.1	124	70-130	
achloroethene	ug/L	50	63.5	127	70-130	
uene	ug/L	50	57.5	115	80-121	
s-1,2-Dichloroethene	ug/L	50	55.6	111	70-130	
ns-1,3-Dichloropropene	ug/L	50	49.8	100	58-125	
chloroethene	ug/L	50	55.8	112	70-130	
chlorofluoromethane	ug/L	50	49.5	99	84-148	
yl chloride	ug/L	50	43.7	87	63-142	
ene (Total)	ug/L	150	180	120	70-130	
-Dichlorobenzene-d4 (S)	%			98	70-130	
romofluorobenzene (S)	%			89	70-130	
uene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SI	PIKE DUPL	ICATE: 2311	560 MS	MSD	2311561							
Davassatas	l laita	40235988002	Spike	Spike	MS	MSD	MS	MSD	% Rec	DDD	Max	0
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
1,1,1-Trichloroethane	ug/L	< 0.30	50	50	57.1	57.7	114	115	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/L	< 0.38	50	50	50.9	52.7	102	105	66-130	3	20	
1,1,2-Trichloroethane	ug/L	< 0.34	50	50	56.2	58.7	112	117	70-130	4	20	
1,1-Dichloroethane	ug/L	< 0.30	50	50	51.4	53.3	103	107	68-132	4	20	
1,1-Dichloroethene	ug/L	<0.58	50	50	54.9	54.7	110	109	76-132	0	20	
1,2,4-Trichlorobenzene	ug/L	< 0.95	50	50	56.3	57.8	113	116	70-130	2	20	
1,2-Dibromo-3- chloropropane	ug/L	<2.4	50	50	43.8	45.3	88	91	51-126	3	20	
1,2-Dibromoethane (EDB)	ug/L	<0.31	50	50	56.8	58.2	114	116	70-130	2	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 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

MATRIX SPIKE & MATRIX SP	IKE DUPI	LICATE: 2311			2311561							
			MS	MSD								
_		40235988002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	_
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qua
1,2-Dichlorobenzene	ug/L	< 0.33	50	50	56.2	58.7	112	117	70-130	4	20	
1,2-Dichloroethane	ug/L	< 0.29	50	50	51.1	48.4	102	97	70-130	6	20	
1,2-Dichloropropane	ug/L	< 0.45	50	50	49.9	53.2	100	106	77-125	6	20	
1,3-Dichlorobenzene	ug/L	< 0.35	50	50	53.6	58.6	107	117	70-130	9	20	
1,4-Dichlorobenzene	ug/L	<0.89	50	50	56.9	58.6	114	117	70-130	3	20	
Benzene	ug/L	< 0.30	50	50	55.0	56.6	110	113	70-132	3	20	
Bromodichloromethane	ug/L	< 0.42	50	50	55.1	57.5	110	115	70-130	4	20	
Bromoform	ug/L	<3.8	50	50	52.5	53.3	105	107	65-130	2	20	
Bromomethane	ug/L	<1.2	50	50	43.4	48.7	87	97	44-128	12	21	
Carbon tetrachloride	ug/L	< 0.37	50	50	58.5	58.4	117	117	70-132	0	20	
Chlorobenzene	ug/L	< 0.86	50	50	59.6	60.2	119	120	70-130	1	20	
Chloroethane	ug/L	<1.4	50	50	52.3	52.7	105	105	70-137	1	20	
Chloroform	ug/L	<1.2	50	50	56.2	58.3	112	117	80-122	4	20	
Chloromethane	ug/L	<1.6	50	50	31.0	31.6	62	63	17-149	2	20	
cis-1,2-Dichloroethene	ug/L	< 0.47	50	50	54.9	57.2	110	114	70-130	4	20	
cis-1,3-Dichloropropene	ug/L	< 0.36	50	50	50.1	52.3	100	105	70-130	4	20	
Dibromochloromethane	ug/L	<2.6	50	50	56.6	59.0	113	118	70-130	4	20	
Dichlorodifluoromethane	ug/L	< 0.46	50	50	28.2	28.2	56	56	22-158	0	20	
Ethylbenzene	ug/L	< 0.33	50	50	58.4	59.1	117	118	80-123	1	20	
sopropylbenzene (Cumene)	ug/L	<1.0	50	50	63.0	63.2	126	126	70-130	0	20	
m&p-Xylene	ug/L	< 0.70	100	100	120	121	120	121	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<1.1	50	50	49.9	52.2	100	104	66-130	5	20	
Methylene Chloride	ug/L	< 0.32	50	50	52.7	55.6	105	111	70-130	5		
o-Xylene	ug/L	<0.35	50	50	60.0	61.4	120	123	70-130	2		
Styrene	ug/L	<0.36	50	50	61.2	63.5	122	127	70-130	4		
Tetrachloroethene	ug/L	<0.41	50	50	62.5	63.0	125	126	70-130	1	20	
Toluene	ug/L	<0.29	50	50	58.1	58.1	116	116	80-121	0		
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	54.4	56.8	109	114	70-134	4	_	
rans-1,3-Dichloropropene	ug/L	<3.5	50	50	49.1	50.8	98	102	58-130	3	-	
Trichloroethene	ug/L	<0.32	50	50	55.6	56.9	111	114	70-130	2		
Trichlorofluoromethane	ug/L	<0.42	50	50	48.3	48.9	97	98	82-151	1	20	
Vinyl chloride	ug/L	<0.17	50	50	43.0	42.6	86	85	61-143	1	20	
Xylene (Total)	ug/L	<1.0	150	150	180	182	120	121	70-130	1	20	
1,2-Dichlorobenzene-d4 (S)	%			.50	. 30	. 3-	97	98	70-130	•	_,	
4-Bromofluorobenzene (S)	%						89	88	70-130			
Toluene-d8 (S)	%						102	100	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.



1690005819 FORMER ONE-HOUR VAL Project:

3500Fe B-2011

Pace Project No.: 40235956

QC Batch Method:

QC Batch: 1768678 Analysis Method: Analysis Description: SM 3500-Fe B

Wet Chemistry 3500Fe B-2011

Laboratory:

Pace National - Mt. Juliet

40235956007 Associated Lab Samples:

METHOD BLANK: R3725426-1 Matrix: Water

Associated Lab Samples:

40235956007

Blank Reporting

Parameter Units Limit

Analyzed Qualifiers

Iron, Ferrous <15.0 50.0 11/04/21 10:31 ug/L

LABORATORY CONTROL SAMPLE:

Parameter

R3725426-2

Units

Result

Units

ug/L

ug/L

53.0

Spike Conc.

Result

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Iron, Ferrous ug/L

1000

932

93.2

MS

% Rec

5.13

89.2

85.0-115

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

R3725426-4 MS

MSD

1000

L1425923-07 Spike Conc. Spike Conc.

20.0

ND

MS Result

R3725426-5

945

19.0J

MSD Result

954

MSD % Rec % Rec Limits

90.1 80.0-120

Max **RPD** RPD

0.948 20

Qual

SAMPLE DUPLICATE: R3725426-3

Iron, Ferrous

Iron, Ferrous

Iron, Ferrous

Parameter

Units

ug/L

L1425923-06 Result

1000

Dup Result

RPD

Max RPD

Qualifiers

20 J

20

SAMPLE DUPLICATE: R3725426-6

Date: 11/19/2021 03:55 PM

Parameter

Parameter Units L1425996-07 Result

Dup Result <15.0

RPD 0.00 Max RPD

Qualifiers

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 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

QC Batch: 400476 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40235956007

METHOD BLANK: 2312757 Matrix: Water

Associated Lab Samples: 40235956007

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Sulfate mg/L <0.44 2.0 11/03/21 18:05

LABORATORY CONTROL SAMPLE: 2312758

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Sulfate 20 20.3 102 90-110 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2312759 2312760

MSD MS 40235597010 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Result Result % Rec % Rec **RPD** RPD Result Conc. Limits Qual Sulfate mg/L 19.4 100 100 120 116 101 97 90-110 3 15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2312761 2312762

MS MSD 40235667006 MS MSD MS MSD % Rec Spike Spike Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Sulfate 100 5 63.9 100 164 173 101 109 15 mg/L 90-110

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 FORMER ONE-HOUR VAL Project:

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

QC Batch: 400132 Analysis Method: SM 5310C

QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40235956007

METHOD BLANK: 2311281 Matrix: Water

Associated Lab Samples: 40235956007

> Blank Reporting Parameter Units Result Limit Analyzed Qualifiers

**Total Organic Carbon** < 0.14 0.50 11/02/21 07:04 mg/L

LABORATORY CONTROL SAMPLE: 2311282

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units

**Total Organic Carbon** 12.5 13.7 110 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2311283 2311284

> MSD MS

40235746008 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Result Limits Qual **Total Organic Carbon** 105 mg/L 8.7 60 60 71.5 71.1 104 80-120 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2311285 2311286

mg/L

MS MSD 40235749001 MS MSD MS MSD % Rec Spike Spike Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Total Organic Carbon 4.2 6 6 10.7 2 10.8 108 110 80-120 10

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 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

#### **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: 11/19/2021 03:55 PM

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

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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

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

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



# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 1690005819 FORMER ONE-HOUR VAL

Pace Project No.: 40235956

Date: 11/19/2021 03:55 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40235956007	PZ-1R	EPA 8015B Modified	400349		
40235956007	PZ-1R	3015	1776517	EPA 6020	1776517
40235956001	PZ-2R	EPA 8260	400082		
40235956002	MW-6	EPA 8260	400082		
40235956003	MW-6DUP	EPA 8260	400082		
40235956004	PZ-4	EPA 8260	400082		
40235956005	MW-5	EPA 8260	400082		
40235956006	MW-4	EPA 8260	400082		
40235956007	PZ-1R	EPA 8260	400082		
40235956008	TRIP BLANK	EPA 8260	400082		
40235956007	PZ-1R	3500Fe B-2011	1768678	SM 3500-Fe B	1768678
40235956007	PZ-1R	Calc.	1776517	Calculated	1776517
40235956007	PZ-1R	EPA 300.0	400476		
40235956007	PZ-1R	SM 5310C	400132		

(Please Print Clearly)			1	UPPER MIDWEST REGION Page 1 of													
Company Name: ZAM BOLL			MN: 612-607-1700 WI: 920-469-2438														
Branch/Locat	· • • • • • • • • • • • • • • • • • • •		7 /	Pace Analytical *								ノ					
Project Contact: 5USAN PETROFSKE				www.pacelabs.com							Quote #:						
Phone: 262 961 3501			1 '		H	<b>VIN</b>	OF	C	US'	TO	DY	•		Mail To Contact:		1.0	
Project Numb			CHAIN OF CUSTODY  *Preservation Codes  *Preservatio							Mail To Company:							
Project Name		61	A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other							Mail To Address:							
Project State:	1	wite)	FILTERED? (YES/NO) Y/N N N N N N														
<u> </u>	WILLIAM		PRESE	RVATION	Pick	B	3	<b>B</b>	7	A				Invoice To Contact:	SUGAL	1 PETROLES	Vé
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Data Packa (billa	ible) A=	Air .	w = Water			8261		70		戶					POLICES !		
	Level III (billable) C=	Biota Charcoal	DW = Drink GW = Grou SW = Surfa	nd Water	/ses	1	v	3	0					Invoice To Phone:			
☐ EPA	Level IV   Line in leaded on  s =		WW = Was	te Water	Analyse	VOC	MEE	FERROUS	195	SULARE				CLIENT	LAB C	OMMENTS	Profile #
PACE LAB#	CLIENT FIELD ID	DATE	LECTION	MATRIX		>	2	1/4	12	N				COMMENTS	(Lab l	Jse Only)	
001	PZ-ZR	10.27:	21915	Gui	7	×											
002	mw-6	1	950			×											
ω3	mw-600P		950			×											
004	P2-4		1030	<del>                                     </del>		×											
005	mw-5		1105			×											
006	mw-4		1145			×											
007	PZ-IR	40	1245	4		*	×	*	05	×							
3	TRIP BLANK	_				×											
0.0	11111 22/107				1.11	<u> </u>											
			1		1.0												
			<b>-</b>														
			<del></del>	1			<del>                                     </del>	<b></b>							,		
			+							<b></b>	<del> </del>						
Rush Tur	rnaround Time Requested - Prelims	Reli	inquished By:		0	<b>\</b>	Da	te/Time:	<u> </u>	1166	Receive	d By:		Date/Time:	- الام	PACE Pr	oject No.
	AT subject to approval/surcharge)		YV i	راد	10		<u></u>	2-27	-21	1700	-C\A	C	5 La	GISTICS Date/Time:	-21 1700	14 N2:	3599/1
Date Needed: Rein Transmit Prelim Rush Results by (complete what you want):		TOURS OF STREET									Receipt Temp =	<u> </u>					
Email #1:			inquished By:			<del></del>		ite/Time:	·		Receive	d By:		Date/Time:			ecelpt pH
Email #2: Telephone: Relin			inquished By:	guished By: Date/Time: Rece					Receive	Received By: Date/Time: OK / Adjusted							
Fax:				juished by. Date/Time. R						Coole Custody Seal							
Samples on HOLD are subject to Relinq			inquished By:	quished By: Date/Time: Received By:						Date/Time:		Present /	lot Presen lot In <del>Bag</del> e 34 of				
spec	cial pricing and release of liability										L					Version 6.0 06/14/06	

Sample Preservation Receipt Form

Client Name: Rambol | Project # 10 3556

Date/ Initial when All containers needing preservation have been checked and noted below: Yes oNo oN/A completeq: Time: Lab Lot# of pH paper: (1) 01 0 Lab Std #ID of preservation (if pH adjusted): VaOH+Zn Act pH ≥9 Vials (>6mm) oH after adjusted Glass **Plastic** Vials General Jars laOH pH ≥12 12SO4 pH ≤2 Volume 1NO3 pH ≤2 (mL) NGFU WPFU VG9M AG5U AG10 BG1U AG1H AG2S врзв VG9A VG9U VG9H VG9D JG9N ZPLC **BG3U** BP1U **BP3U BP3N BP3S** DG9T JGFU SP5T Pace /0A) Z U Lab # 7 2.5 / 5 / 10 001 ৰ্ 2.5/5/10 002 2.5 / 5 / 10 003 Ž 004 3 2.5 / 5 / 10 005 2.5 / 5 / 10 006 7 2.5 / 5 / 10 007 8 2.5 / 5 / 10 (#) 2.5/5/10 008 009 2.5 / 5 / 10 010 2.5/5/10 2.5 / 5 / 10 011 2.5 / 5 / 10 012 2.5 / 5 / 10 013 2.5/6/10 014 2.5 / 5 / 10 015 016 2.5/5/10 017 2.5 / 5 / 10 2.5/5/10 018 ARTOURNE 2.5 / 5 / 10 019 2.5/5/10 020 Headspace in VOA Vials (>6mm): □Yes □N/A \*If yes look in headspace column Coliform, toc. Exceptions to preservation check VOA. TOX, TOH, O&G, WI DRO, Phenolics, Other: AG1U 1 liter amber glass BP1U 1 liter plastic unpres VG9A 40 mL clear ascorbic JGFU 4 oz amber jar unpres JG9U 9 oz amber jar unpres BP3U DG9T BG1U 1 liter clear glass 250 mL plastic unpres 40 mL amber Na Thio AG1H 1 liter amber glass HCL BP3B 250 mL plastic NaOH VG9U 40 mL clear vial unpres WGFU 4 oz clear jar unpres AG4S 125 mL amber glass H2SO4 BP3N 250 mL plastic HNO3 VG9H 40 mL clear vial HCL **WPFU** 4 oz plastic jar unpres BP3S 250 mL plastic H2SO4 VG9M 40 mL clear vial MeOH SP5T 120 mL plastic Na Thiosulfate AG4U 120 mL amber glass unpres **ZPLC** VG9D 40 mL clear vial DI ziploc bag AG5U 100 mL amber glass unpres 250 mlan #250 GN AG2S 500 mL amber glass H2SO4 BG3U 250 mL clear glass unpres

Pace Analytical <sup>®</sup>
1241 Bellevue Street, Green Bay, WI 54302

# Document Name: Sample Condition Upon Receipt (SCUR)

Document No.: ENV-FRM-GBAY-0014-Rev.00 Document Revised: 26Mar2020

Author:

Pace Green Bay Quality Office

# Sample Condition Upon Receipt Form (SCUR)

		Project #:		
Client Name: Ramboll		<b>}</b>	MO#: 4	0235956
Courier: CS Logistics Fed Ex Speedee	UPS 🗖	Waltco		
Client Pace Other:				
Tracking #:			40235956	
Custody Seal on Cooler/Box Present: yes no	Seals inta	act: 🔲 yes 🔲 no		
Custody Seal on Samples Present:  yes no		act: 🗌 yes 🔲 no		
Packing Material:   Bubble Wrap   Bubble Bag				
	of Ice: W	let Blue Dry None _	Samples on	ice, cooling process has begun  Person examining contents:
Cooler Temperature Uncorr: / /Corr: \	<del></del> .`			. •
Temp Blank Present:	al Tissue is Frozen:	yes <b>ı</b> no	Date: 10/28/11/Initials	
Temp should be above freezing to 6°C.  Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.		····		Labeled By Initials:
Chain of Custody Present:		N/A 1.		
Chain of Custody Filled Out: □Yes		N/A 2. Mail		W/94/0128p
Chain of Custody Relinquished:	□No □i	N/A 3.		
Sampler Name & Signature on COC:		N/A 4.		
Samples Arrived within Hold Time:	□No	5.		
- VOA Samples frozen upon receipt ☐Yes	□No	Date/Time:		
Short Hold Time Analysis (<72hr): □Yes	No	6.		
Rush Turn Around Time Requested: □Yes	⊠No	7.		
Sufficient Volume:		8.		
For Analysis: ☑Yes ☐No MS/MSD: ☐Yes		N/A		
Correct Containers Used:	□No	9.		
-Pace Containers Used:		N/A		
-Pace IR Containers Used: □Yes	□No 121	N/A		
Containers Intact:	□No	10.		
Filtered volume received for Dissolved tests □Yes		N/A 11.		
Sample Labels match COC:	□No □I	N/A 12.		
-Includes date/time/ID/Analysis Matrix:				
Trip Blank Present:	□No □I	N/A 13.		
Trip Blank Custody Seals Present	□No □	N/A		
Pace Trip Blank Lot # (if purchased): 471				
Client Notification/ Resolution:	Da		checked, see attach	ned form for additional comments
Person Contacted: Comments/ Resolution:	ate/Time:			
Commonto, Noodidion.				

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

Page 2 of 2

# **APPENDIX B**

INVESTIGATION DERIVED WASTE DISPOSAL DOCUMENTATION

Ramboll Environment & Health



Please print or type. 4. Manifest Tracking Number UNIFORM HAZARDOUS WASTE MANIFEST WID053684478 (877) 818-0087 DENNIS DAYE MARQUETTE UNIVERSITY 1214 WEST WELLS STREET MILWAUKEE, WI 53233 ACADEMIC SUPPORT FACILITY, 110 P O BOX 1881 MILWAUKEE, WI 53201 Generator's Phone: 414 288-8411 6. Transporter 1 Company Name VEOLIA ES TECHNICAL SOLUTIONS N J D 0 8 0 5 3 1 4 c VEOLIA ES TECHNICAL SOLUTIONS. W124 N9451 BOUNDARY MENOMONEE FALLS, WI 53051 262 255-6655 and Packing Group (if any)) NA3082, HAZARDOUS WASTE, LIQUID, n.o.s X GENERATOR (TETRACHLOROETHYLENE), 9, III, RQ (F002) ER Service Contracted by VESTS -- WIFS OU36190 -- 1) ERG 171 W 555475 A: CWDTWILIO 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged. marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Cor 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 II quar Generator's/Offeror's Printed/Typed Name W Export from U.S. Port of entry/exit: Transporter signature (for exports only) Date leaving U.S. 17. Transporter Acknowledgment of Receipt of Materials TRANSPORTER ranaporter 1 Printed/Typed Name 1001 06 23 Fransporter 2 Printed/Typed Name 18. Discrepancy 18a. Discrepancy Indication Space DESIGNATED FACILITY Facility's Phone



Form Approved. OMB No. 2050-0039 4. Manifest Tracking Number 2. Page 1 of 3. Emergency Response Phone Please print or type. UNIFORM HAZARDOUS 1. Generator ID Number 002039050 (\$77) 818-0087 WASTENANIFEST W 1 D 0 5 3 6 8 4 4 7 8 Generator's Site Address (if different than mailing address) 5. Generator's Name and Mailing Addressennis DAYE 1214 WEST WELLS STREET ROUETTE UNIVERSITY MILWAUKEE, WI 53233 ACADEM IC SUPPORT FACILITY, 110 P.O. BOX 1881 NILWAL DEE, WI 53201 414 288-8411 U.S. EPA ID Number Generator's Phone: J D O 8 O 6 3 1 3 6 9 6. Transporter 1 Company Name BOLIA ESTECHNICAL SOLUTIONS U.S. EPA ID Number 7. Trar sporter 2 Company Name U.S. EPA ID Number 8. Designated Facility Name and Site AddresoLIA HS TECHNICAL SOLUTIONS. W124 N9451 BOUNDARY MENOMONER FALLS, WI 53051 W I D 0 0 3 9 6 7 1 4 8 Facility's Phon 2.62 255-6655 11. Total 12. Unit 13. Waste Codes 10. Containers 9b.U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, Wt./Vol Quantity Type No. P002 1007 and Packing Group (if any)) HM NA3082, HAZARDOUS WASTE, LIQUID, B.O.A., TETRACHLOROETHYLENE), 9, III, RQ (F002) OF 3 8 GENERATOR 1 ER Service Contracted by VESTS + Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf, "PLACARDS AND ERG 14. Special Handling Instructions and Additional Information BOOK WERE OFFERED BY MARQUETTE AND REFUSED BY VEOLIA" + 1) OU 36190 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 generated and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national gen Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. Day Month S 2 Generator's/Offeror's Printed/Typed Name entry/exit: Export from U.S. 6. International Shipments Date leaving U.S. Transporter signature (for exports only): Day 17. Transporter Acknowledgment of Receipt of Materials Month Signature 12 8 Transporter 1 Printed/Typed Name TRANSPOR Signature Transporter 2 Printed/Typed Name Full Rejection 18. Discrepancy Partial Rejection Residue Type 18a. Discrepancy Indication Space \_ Quantity Manifest Reference Number: U.S. EPA ID Number 18b. Alternate Facility (or Generator) Month Day Facility's Phone: 18c. Signature of Alternate Facility (or Generator) DESIGNATED 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Month Day Printed/Typed Name DESIGNATED FACILITY TO EPA's e-MANIFEST SYST - Juliana ara ahaalata

# **PACKING SUMMARY**

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

Marquette University 4734 A Minet Minite Chant

Milwaukee, WI 53233

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

Fleid Symam It:

002039050VES

HH

Work Order Number:

CO TODOGOVO

Date Shipped:

12/08/2021

Container#: HH-2519888000-001 Weste Area: Manifest Pece/Line: 01 /

WP: 655475

DiapossiCods: CWDTWILIQ

PHY State: L

Data Accumulated: 12/09/2021

Gen Drum ID:

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

Source: G19

No. of Commons: 01

Outer Container: 051H1-DF

innar Containar:

Primery Weste Codes: F002

PCS Sariel #:

Total Crime Wt: 38

Form: W219 System: H141 OOS Date: // Cubic Ft.: 0.88

F002

**EPA/State Codes** 

Individual Common Weights:

1 (2 38 (POUNDS)

Units Container Stre Net Weight

SIC: 8221

Chemical Name

5 GAL

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

# Land Disposal Restriction Notification Form

Cienerator Name	Marquette Universi	Ŋ	
EPAID Number	WID053664478	Manifest	002036050VE8
restricted from is each container is permit status asso subcategories, lis	and disposal by the USE the designation of the v colsted with the treatme	IPA under the land disposal restrict waters a swatcwater or non-water mi/disposal facility, applicable was livent constituents that are present in	water, the Clean Water Act (CWA) to codes and any corresponding
Container Number:	HH-251980000-001	(1/ 1)	
WIP / App	roval Code:	555475 / CWDTWILIQ	
Form Desi	gnation / CWA Status:	Non-Westewater / Non-CWA	
Wante Cod	les (Subcategories):	F002	
Constituen	ts (F001 - F005):		TRICHLOROETHYLENE (TCE)
UHCa Pres	seni:	Not Applicable	
Treatment Additional	Requirements: Notices:	Restricted waste requires tre	atment to applicable standard
	nat all information in the est of my knowledge an	is and associated land disposal rest d information.	riction documents is complete and
Signature	100		
Title 1	Vicasor E	Date Date	12/8/2021