

December 18, 2020

Mr. John Mason Wisconsin Department of Natural Resources 3911 Fish Hatchery Road Fitchburg, WI 53711

Subject: Documentation Report for Management of Contaminated Soil

USH 51 – Wisconsin/Dewitt & Thompson Streets

Portage, Columbia County, Wisconsin TRC Project 317018.0000.0000

Dear Mr. Mason:

Enclosed is the Documentation Report for Management of Contaminated Soil for the USH 51 – Wisconsin/Dewitt & Thompson Streets project in Portage, Wisconsin.

Feel free to contact me at (608) 826-3672, or Dan Haak at (608) 826-3628, if you have any questions.

Sincerely,

TRC

Tom Perkins Project Engineer

cc: Aaron Jahnke – City of Portage (pdf via email)

Call-

Dan Haak, P.E. Project Manager



Management of Contaminated Soil

Wisconsin / Dewitt & Thompson Streets Portage, Columbia County, Wisconsin

December 2020

Prepared For:

City of Portage

Prepared By:

TRC

708 Heartland Trail, Suite 3000 Madison, Wisconsin 53717

Tom Perkins
Project Engineer

Dan Haak, P.E. Project Manager Bryan Bergmann, P.G. TRC Quality Assurance



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COMMONLY USED ABBREVIATIONS AND ACRONYMS

AST aboveground storage tank bgs below ground surface

BRRTS Bureau for Remediation and Redevelopment Tracking System

CERCLA Comprehensive Environmental Response, Compensation and Liability Act

CTH County Trunk Highway

CY cubic yards

DATCP Department of Agriculture, Trade and Consumer Protection

DRO diesel range organics

FDM Facilities Development Manual EMP Excavation Management Plan ERP Environmental Repair Program

ES Enforcement Standards

ESA Environmental Site Assessment

FINDS Facility Index System/Facility Identification Initiative Program Summary

Report

GIS Registry WDNR Geographic Information System (GIS) Registry of Closed

Remediation Sites

GRO gasoline range organics

HAZWOPER Code of Federal Registry Chapter 29 (29 CFR) Part 1910.120 Hazardous

Waste Operations and Emergency Response

HMA Hazardous Materials Assessment

IH Interstate Highway LQG large quantity generator

LUST leaking underground storage tank

NPL National Priorities List

NR ### Wisconsin Administrative Code (WAC) Natural Resources (NR) Chapter ###

PAHs polynuclear aromatic hydrocarbons

PAL Preventive Action Limits
PCBs polychlorinated biphenyls

PCE perchloroethylene/tetrachloroethylene

PID photoionization detector

PVOCs petroleum volatile organic compounds
RCLs Residual Contaminant Levels in NR 720
RCRA Resource Conservation and Recovery Act

RCRIS Resource Conservation and Recovery Information System

R/W or ROW right-of-way sf square feet

STH State Trunk Highway TCE trichloroethylene

TRIS Toxic Chemical Release Inventory System

USGS United States Geological Survey

USH United States Highway
UST underground storage tank
VOCs volatile organic compounds

WDNR Wisconsin Department of Natural Resources WisDOT Wisconsin Department of Transportation

WGNHS Wisconsin Geological and Natural History Survey WI ERP Wisconsin Environmental Repair Program database



Executive Summary

The City of Portage has completed street and utility improvements for portions of USH 51 (Wisconsin & Dewitt Streets) and Thompson Street, from Ontario Street to E. Pleasant Street in Portage, Wisconsin. The City of Portage street and utility improvement project corridor coincides with the Wisconsin Department of Transportation (WisDOT) USH 51 reconstruction project corridor, from Ontario Street to E. Pleasant Street (WisDOT Project ID #6918-01-02). The City of Portage street and utility improvements precede the WisDOT's reconstruction of USH 51. The City of Portage retained TRC Environmental Corporation (TRC) to provide environmental construction management services for this project. In accordance with the Special Provisions for the Management and Disposal of Contaminated Soil, TRC provided construction oversight, including the field-screening of potentially petroleum and metals contaminated soil and groundwater at sites identified in the Excavation Management Plan.

TRC personnel were on site multiple dates between July 9, 2020 through July 31, 2020, to observe the highway contractor (A-1 Excavating, Inc.) during street and utility improvements and to field-screen potentially contaminated soil. Petroleum-contaminated soil was encountered during construction at various depths at Sites 11, 15, and 19.

Contaminated soil was transported off site for landfill disposal. A total of 277.34 tons of petroleum-contaminated soil was transported to Waste Management's Deer Track Park Landfill in Watertown, Wisconsin for treatment and disposal. 219.20 tons of chlorinated compounds and metals-contaminated soil were transported to Waste Management's Madison Prairie Landfill in Sun Prairie, Wisconsin for disposal. Low-level contaminated soil (PID < 10 ppm) was beneficially reused as backfill on site where applicable.

Potentially contaminated groundwater was encountered during construction and was discharged to the City of Portage's wastewater treatment facility.

On the basis of the findings of the field observations, field-screening results, and information included in the Special Provisions, TRC recommends that the City of Portage take no further action to investigate or remediate soil or groundwater impacts that may remain at the investigated sites or within the construction project limits.



1.0 Introduction

1.1 Background

The City of Portage has completed street and utility improvements for portions of USH 51 (Wisconsin & Dewitt Streets) and Thompson Street, from Ontario Street to E. Pleasant Street in Portage, Wisconsin. The City of Portage street and utility improvement project corridor coincides with the Wisconsin Department of Transportation (WisDOT) USH 51 reconstruction project corridor, from Ontario Street to E. Pleasant Street (WisDOT Project ID #6918-01-02). The City of Portage street and utility improvements precede the WisDOT's reconstruction of USH 51. Appendix A includes construction plans in the areas of the contaminated soil management. The site location is shown on Figure 1.

TRC completed an Excavation Management Plan for the project corridor, which includes a summary of previous site investigations. Based on the results of the previous reports and City of Portage construction plans, potential contaminated soil and groundwater was expected to be encountered during construction at multiple locations described in the Excavation Management Plan and were included in the contract environmental Special Provisions for the Management and Disposal of Contaminated Soil, provided in Appendix B. The WDNR provided concurrence with these Special Provisions on March 16, 2020. The Special Provisions were prepared for the management of petroleum, chlorinated compounds, and metals-contaminated soil. The WDNR concurrence letter is included in Appendix B.

In accordance with the Special Provisions, the City of Portage retained TRC to oversee excavations in areas with potentially contaminated soil and/or groundwater.

1.2 Purpose and Scope

The purpose of this report is to document the results of field observations and field-screening during street and utility improvements at Wisconsin, Dewitt, and Thompson Streets in Portage, Wisconsin.

2.0 Field Summary

TRC observed the highway contractor, A-1 Excavating, Inc. (A-1), during construction within areas identified in the Special Provisions as potentially containing contaminated soil and groundwater. TRC provided oversight for the management of contaminated soil encountered during construction. The management of contaminated groundwater was overseen by the City of Portage. A photographic log is included in Appendix C.

2.1 Soil Contamination

TRC personnel were on site multiple days between July 9, 2020 and July 31, 2020, to field-screen soil excavated for the street and utility improvements at Wisconsin, Dewitt, and Thompson Streets, as identified in the Special Provisions. TRC personnel field-screened soil based on data from previous investigations, visual observations, odor, and through the use of a PID. Evidence of contaminated soil was observed at various depths during the construction of watermain and water laterals at Site 11, Site 15, and Site 19. Field-screening results are included in Table 1 and contaminated soil extents are shown on Figure 2.



A total of 277.34 tons of petroleum-contaminated soil was transported from excavations at Site 15 and Site 19 to Waste Management's Deer Track Park Landfill in Watertown, Wisconsin for treatment and disposal. A total of 219.20 tons of chlorinated compounds and metals-contaminated soil were transported from excavations at Site 11 to Waste Management's Madison Prairie Landfill in Sun Prairie, Wisconsin for disposal. Soil excavated at Site 11 that showed no field evidence of contamination was assumed to be contaminated below the water table due to groundwater contamination. Low-level contaminated soil (PID < 10 ppm) was beneficially reused as backfill on site where applicable. Landfill disposal documentation is included in Appendix D.

At the request of the WDNR, TRC collected trench bottom confirmation soil samples from multiple locations adjacent to Site 11. Laboratory analysis reports for these samples are included in Appendix E.

One underground storage tank was encountered during construction and was abandoned with oversight provided by TRC. The abandonment of the UST was summarized in TRC's Underground Storage Tank Abandonment Report submitted to the WDNR on October 29, 2020 (TRC, 2020).

2.2 Groundwater Contamination

Potentially contaminated groundwater was encountered during street and utility improvements at Wisconsin, Dewitt, and Thompson Streets at multiple sites and was pumped to the City of Portage sanitary sewer system. The highway contractor coordinated with the City of Portage to the sanitary sewer.

3.0 Conclusions and Recommendations

TRC's field observations and field-screening results indicate the following:

- A total of 277.34 tons of petroleum-contaminated soil was transported from excavations at Site 15 and Site 19 to Waste Management's Deer Track Park Landfill in Watertown, Wisconsin for treatment and disposal (Appendix D).
- A total of 219.20 tons of chlorinated compounds and metals contaminated soil were transported from excavations at Site 11 to Waste Management's Madison Prairie Landfill in Sun Prairie, Wisconsin for disposal (Appendix D).
- Low-level petroleum-contaminated soil encountered during construction was beneficially reused on site as backfill and capped by impervious material.
- The dewatering of petroleum- and metals-contaminated groundwater was required during construction. Petroleum- and metals-contaminated groundwater was discharged to the City of Portage's wastewater treatment facility for treatment.

On the basis of the results of field observations and field-screening, the City of Portage managed contaminated soil in accordance with the Special Provisions during the street and utility improvements for portions of USH 51 (Wisconsin & Dewitt Streets) and Thompson Street, from Ontario Street to E. Pleasant Street in Portage, Wisconsin. TRC recommends the City of Portage take no further action to investigate or remediate the contaminated sites.



4.0 References

TRC. 2020. Underground Storage Tank Abandonment Report, 205 Dewitt Street, Portage, Columbia County, Wisconsin. October 29, 2020.

Table 1: Summary of Soil Field Screening Results
USH 51 - Wisconsin/Dewitt & Thompson Streets , Portage, Wisconsin

DATE	UTILITY	Site Number	APPROX. STATION	LEFT/RIGHT OF REF. LINE	DEPTH (feet BGS)	PID (ppm)	ODOR	SOIL DESCRIPTION
			115+40 WI	At RL	4-6	<1	None	Brown sand
7/9/2020	Water	19	115+40 WI	5 ft Right	8-10	<1	None	Brown sand
			115+40 WI	10 ft Right	6-8	<1	None	Brown sand
			115+40 WI	15 ft Right	8-10	<1	None	Brown sand
			116+10 WI	35 ft Right	0.5	<1	None	Dark to medium brown sand with trace gravel, no staining.
			116+10 WI	35 ft Right	7-8	1200	Strong Petroleum Odors	Wet stained black sand
			116+20 WI	10 ft Right	3-4	2	None	Brown Sand
			116+20 WI 116+20 WI	At RL 5 ft Right	4-6 3-5	2	None None	Wet brown sand, no staining Brown sand, moisture present, no staining.
			116+20 WI	15 ft Left	<u>3-5</u> 6-7	1	None	Wet gray/brown sand, peat present, no staining.
			116+20 WI	15 ft Left	7-8	<1	None	Wet gray/brown sand, peat present, no staining Wet gray/brown sand, peat present, no staining
			116+25 WI	35 ft Right	2-3	<1	None	Brown sand with trace gravel, no staining
			116+25 WI	35 ft Right	4	227	Strong Petroleum Odors	Brown sand with staining
			116+25 WI	35 ft Right	5-6	209	Strong Petroleum Odors	Brown sand/ black clay, staining present
			116+75 WI	35 ft Right	0-1	<1	None	Medium to fine grain brown sand, not staining.
	Water	19	116+75 WI	30 ft Right	2-3	<1	None	White to light brown sand, no staining
			116+75 WI	35 ft Right	5-6	<1	None	Medium to light brown sand with trace gravel, no staining
7/20/2020			116+75 WI	35 ft Right	6-7	4	None	Wet brown sand, no staining
			116+75 WI	35 ft Right	6-7	16	Slight Petroleum Odor	Dark brown stained sand.
			116+70 WI	35 ft Right	6-8	572	Strong Petroleum Odor	Dark brown stained sand.
			116+75 WI	25 ft Right	4-5	<1	None	Medium brown sand, no staining
			116+75 WI	25 ft Right	5-7	1	None	Dark brown/gray sand, no staining
			116+80 WI	25 ft Right	5-7	24	Slight Petroleum Odor	Gray/black sand
			116+75 WI	10 ft Right	4-5	<1	None	Brown sand with some pockets of peat.
			116+75 WI	10 ft Right	5-6	<1	None	Wet gray sand, no staining
			116+75 WI	At RL	4-6	<1	None	Brown sand with slight moisture.
			116+75 WI	At RL	6-8	5	None	Wet gray sand with peat, no staining.
			116+75 WI	At RL	6-8	10	Slight Petroleum Odor	Wet gray sand slight staining.
			116+75 WI	10 ft Left	7-9	8	Slight Petroleum Odor	Gray sand
			107+75 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.
			107+50 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.
	Water	11	107+30 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.
7/21/2020			107+15 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.
			107+00 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.
			106+90 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.
			106+75 WI	10 ft Right	2-8	<1	None	Dark to medium brown sand with gravel. Saturated at ~ 7 ft.

Table 1: Summary of Soil Field Screening Results
USH 51 - Wisconsin/Dewitt & Thompson Streets , Portage, Wisconsin

DATE	UTILITY	Site Number	APPROX. STATION	LEFT/RIGHT OF REF. LINE	DEPTH (feet BGS)	PID (ppm)	ODOR	SOIL DESCRIPTION
7/22/2020	Water	11	106+60 WI	10 ft Right	7-8	<1	None	Brown sand
			106+40 WI	10 ft Right	7-8	<1	None	Brown sand
			106+20 WI	10 ft Right	7-8	<1	None	Brown sand
			105+90 WI	10 ft Right	7-8	<1	None	Brown sand
			105+60 WI	10 ft Right	7-8	<1	None	Brown sand
			105+30 WI	10 ft Right	7-8	<1	None	Brown sand
			105+20 WI	10 ft Right	7-8	<1	None	Brown sand
			111+50 WI	25 ft Left	0-5	<1	None	Tan to light brown sand with some gravel. Saturated at ~ 8ft.
			111+50 WI	25 ft Left	5-10	780	Strong Petroleum Odor	Tan sand with some gravel.
			111+50 WI	15 ft Left	0-5	26	Slight Petroleum Odor	Tan to light brown sand with some gravel. Saturated at ~ 8ft.
	Water	15	111+50 WI	15 ft Left	5-10	534	Strong Petroleum Odor	Tan sand with some gravel.
7/07/0000			111+50 WI	5 ft Left	0-5	<1	None	Tan to light brown sand with some gravel. Saturated at ~ 8ft.
7/27/2020			111+50 WI	5 ft Left	5-10	250	Strong Petroleum Odor	Tan sand with some gravel.
			111+50 WI	RL	0-5	<1	None	Tan to light brown sand with some gravel. Saturated at ~ 8ft.
			111+50 WI	RL	5-10	55	Petroleum Odor	Tan sand with some gravel.
			111+50 WI	10 ft Right	0-5	<1	None	Tan to light brown sand with some gravel. Saturated at ~ 8ft.
			111+50 WI	10 ft Right	5-10	<1	None	Tan sand with some gravel.
	Water	11	104+80 WI	10 ft Right	4-5	<1	None	Brown sand
			104+80 WI	10 ft Right	7-8	2.1	Slight Solvent Odor	Brown sand, no staining
7/29/2020			104+90 WI	10 ft Right	4-5	<1	None	Brown sand
112912020			104+90 WI	10 ft Right	7-8	2	Slight Solvent Odor	Brown sand, no staining
			102+40 WI	10 ft Right	5-6	<1	None	Brown sand
			105+05 WI	10 ft Right	7-8	<1	None	Brown sand
	Water	11	105+00 WI	10 ft Right	0-4	<1	None	Tan sand with some gravel.
			105+00 WI	10 ft Right	4-8	<1	None	Tan sand with some gravel. Saturated at ~8 ft.
			105+00 WI	15 ft Right	0-4	<1	None	Tan sand with some gravel.
7/31/2020			105+00 WI	15 ft Right	4-8	<1	None	Tan sand with some gravel. Saturated at ~8 ft.
1,0.,2020			105+00 WI	25 ft Right	0-4	<1	None	Tan sand with some gravel.
Notes			105+00 WI	25 ft Right	4-8	<1	None	Tan sand with some gravel. Saturated at ~8 ft.
			105+00 WI	35 ft Right	0-4	<1	None	Tan sand with some gravel.
			105+00 WI	35 ft Right	4-8	<1	None	Tan sand with some gravel. Saturated at ~8 ft.

Notes:

1. bgs = below ground surface

2. PID = photoionization detector

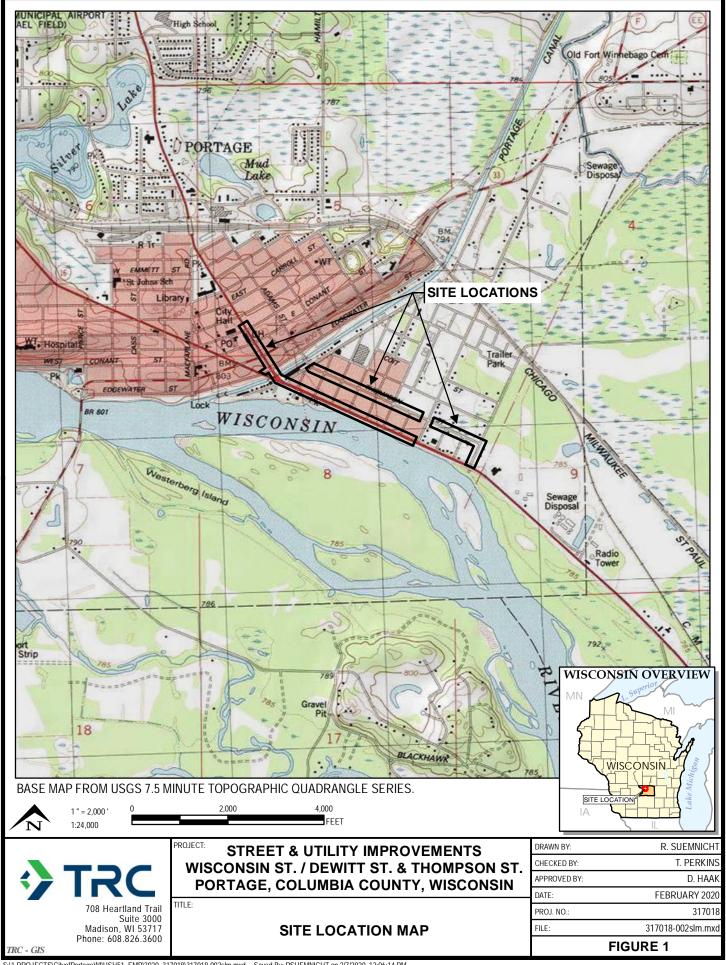
3. ppm = parts per million

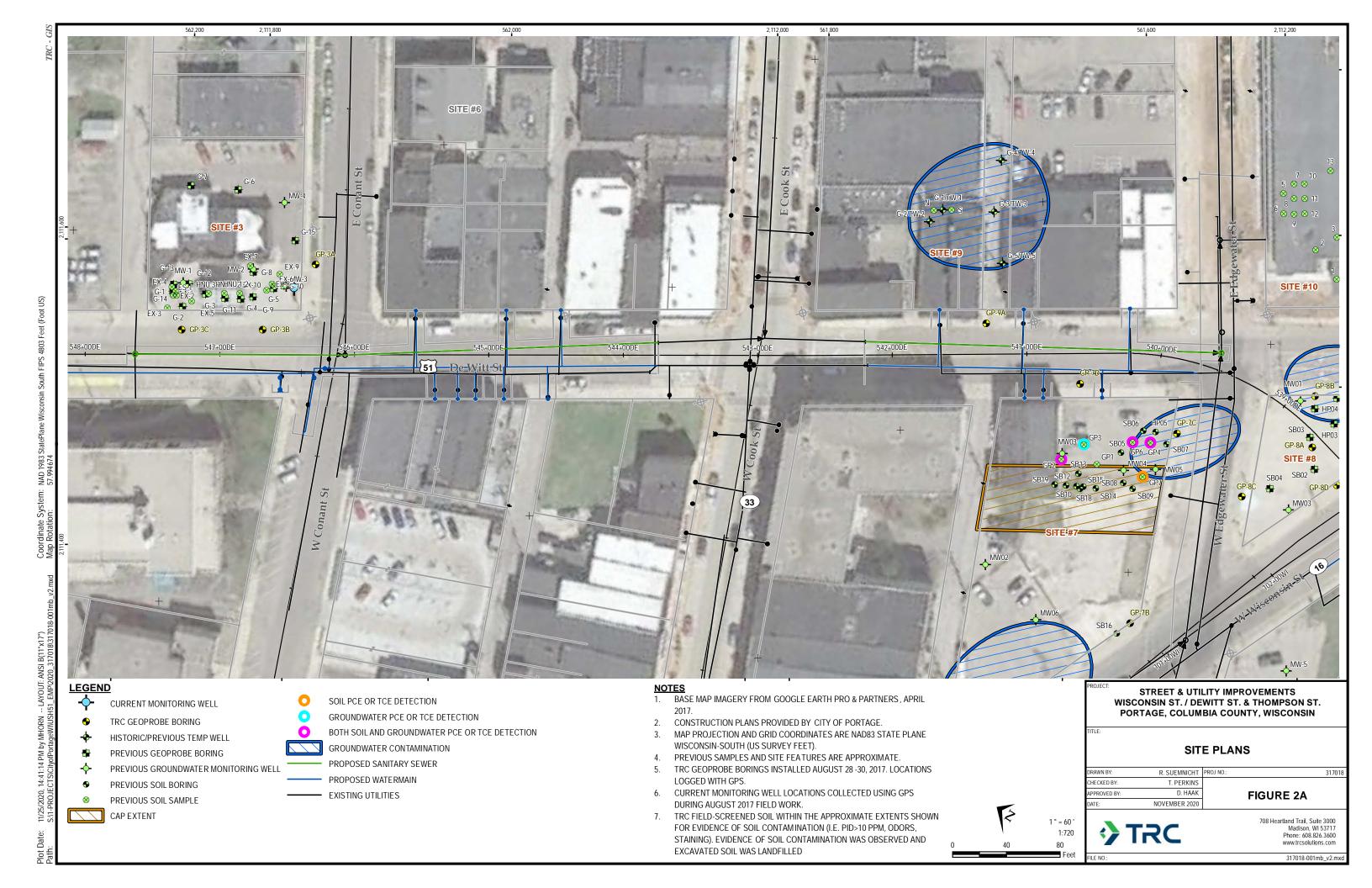
4. Sample results recorded as <1 ppm are generally deemed to be false detections due to influence from sample container, ambient air, moisture, etc.

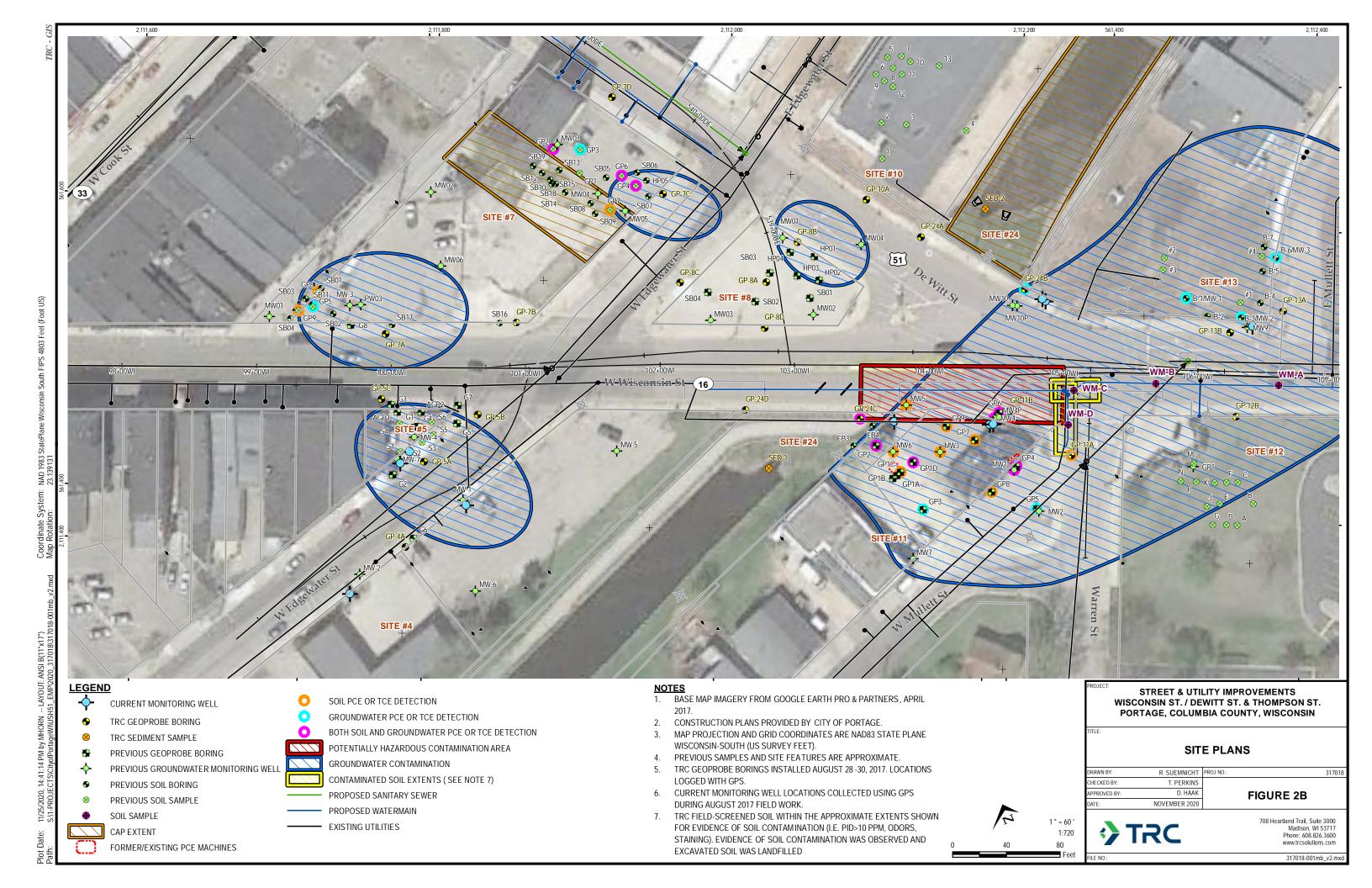
5. -- = information not recorded

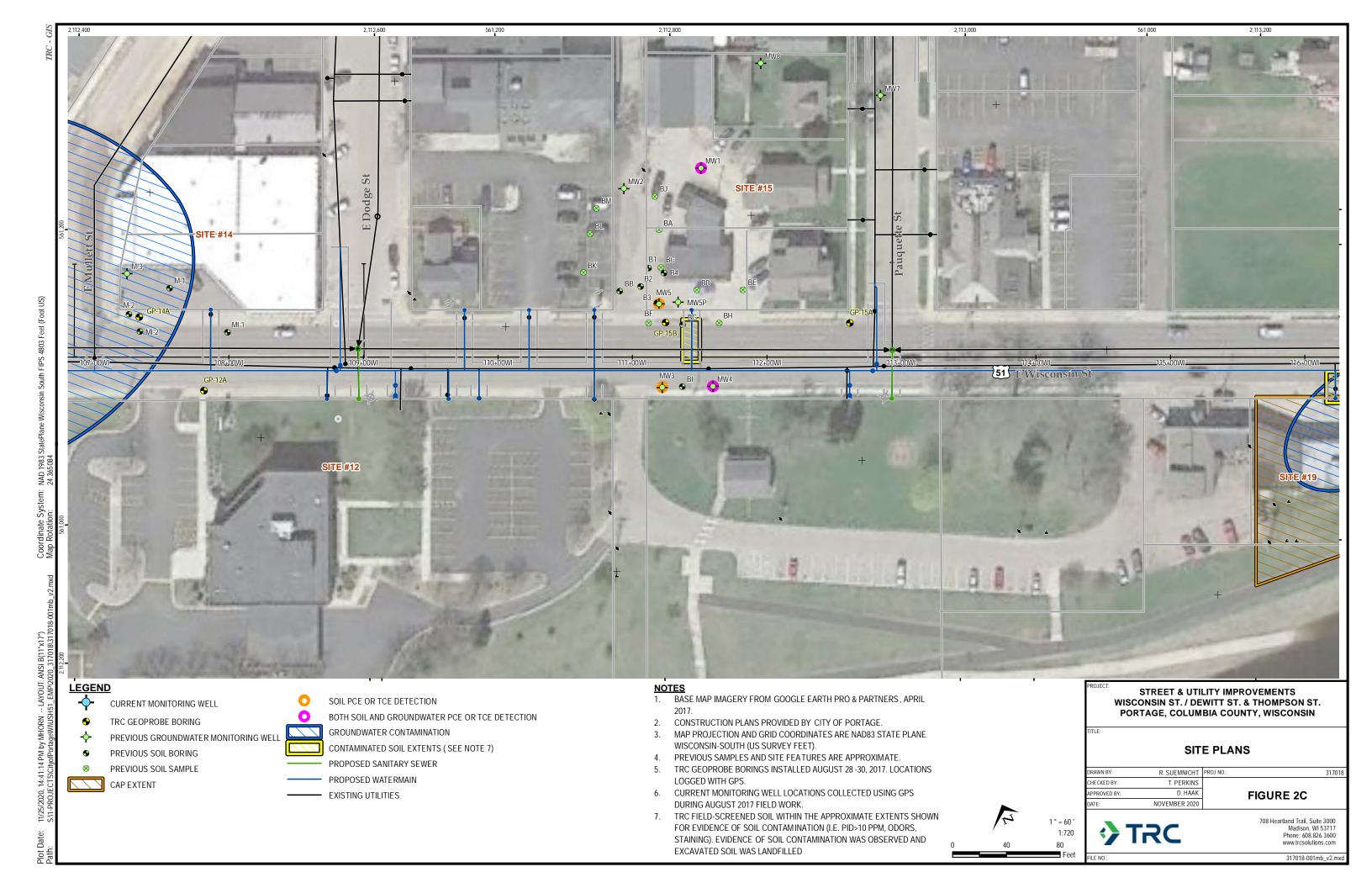
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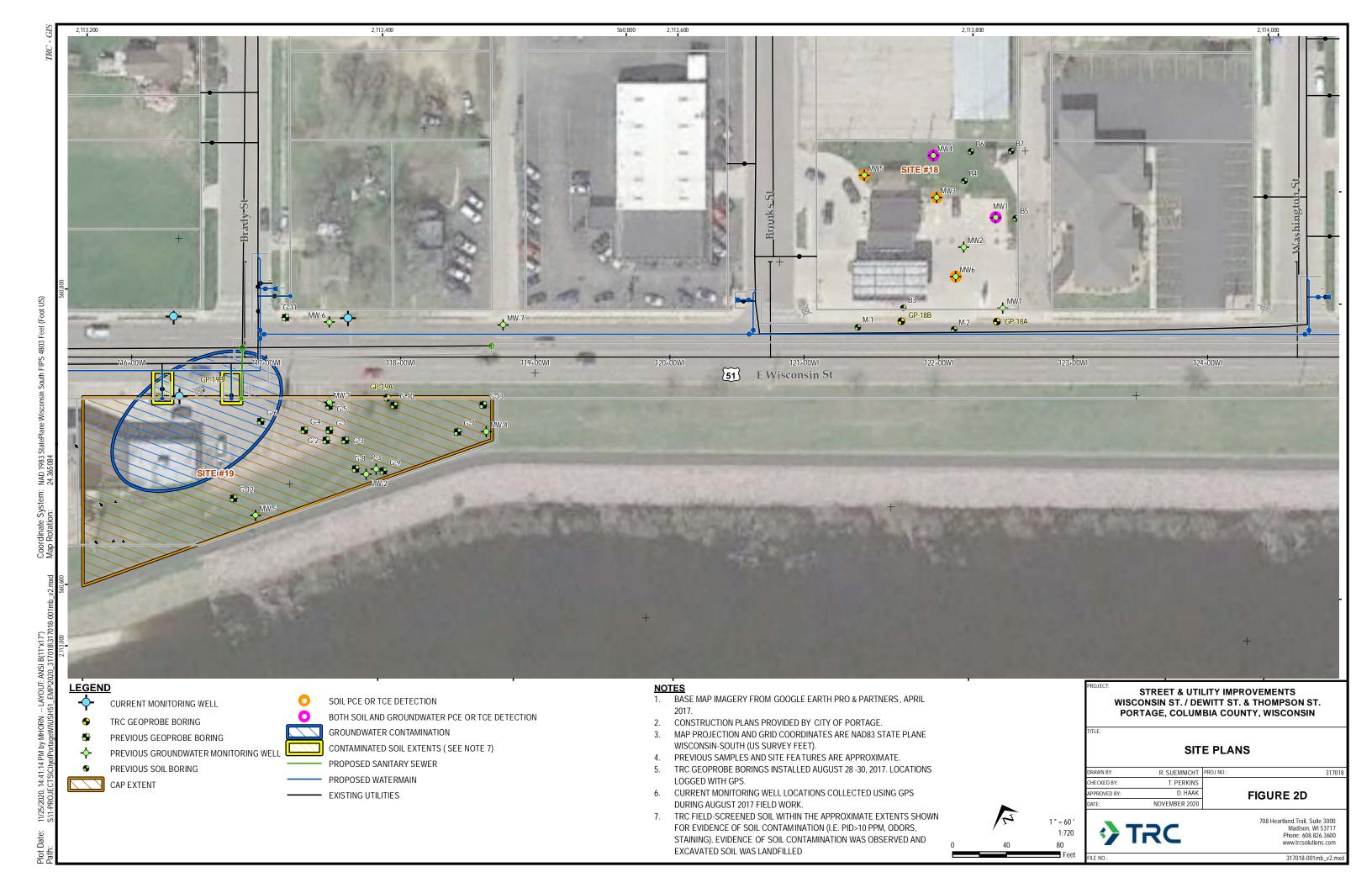
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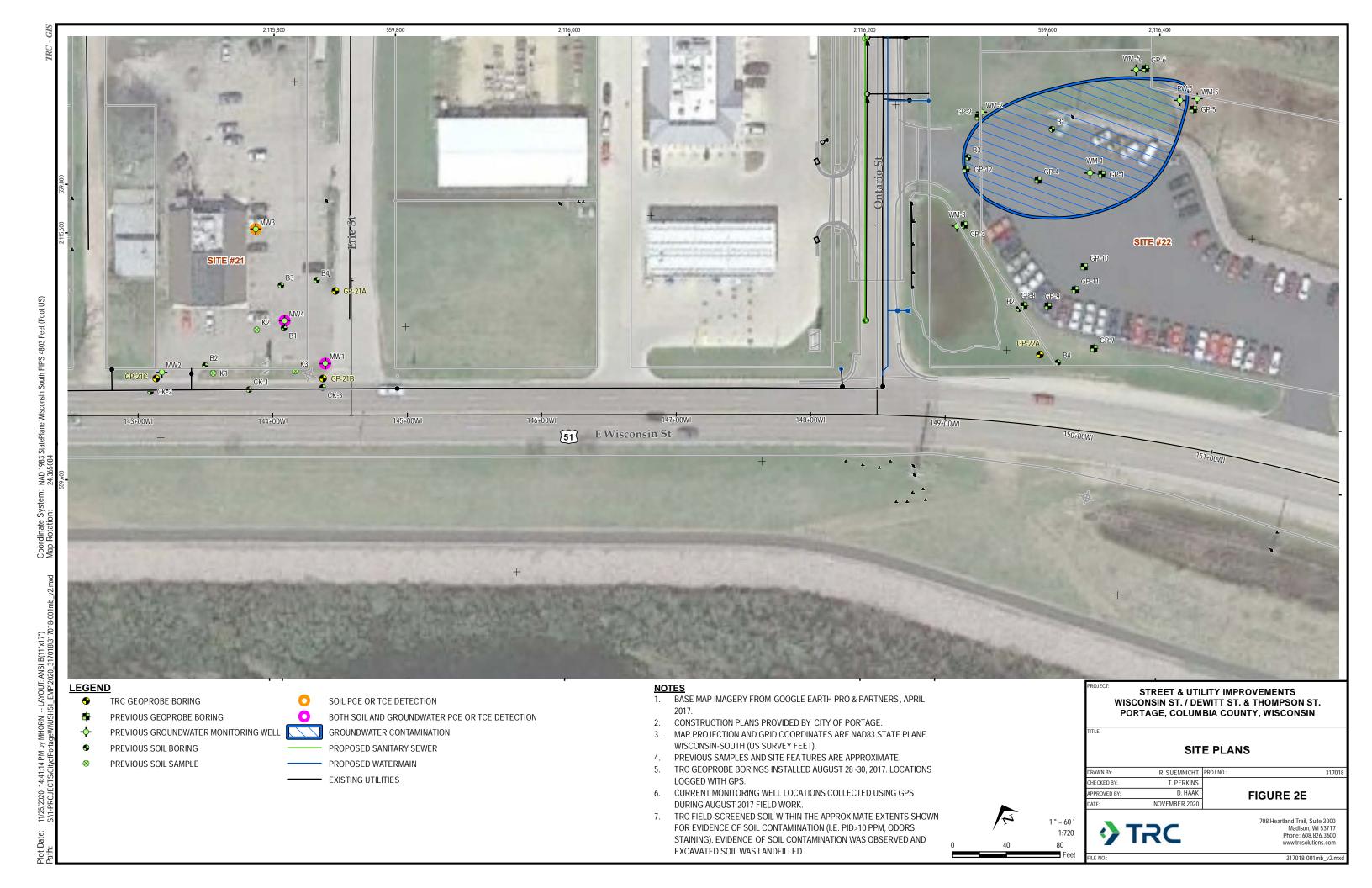






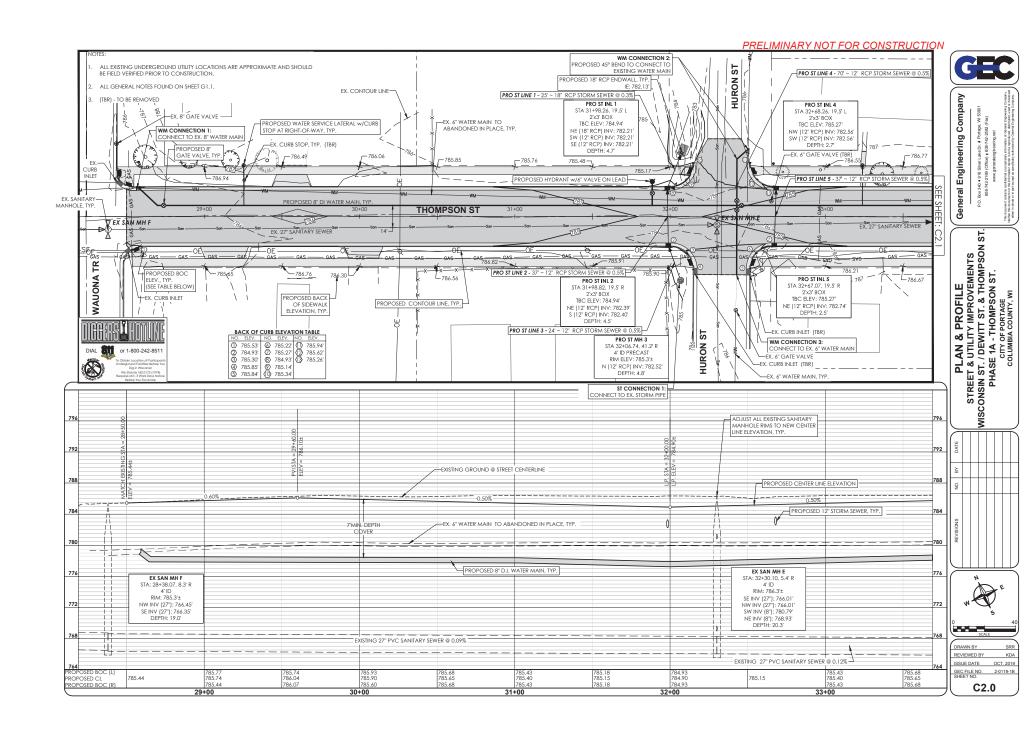


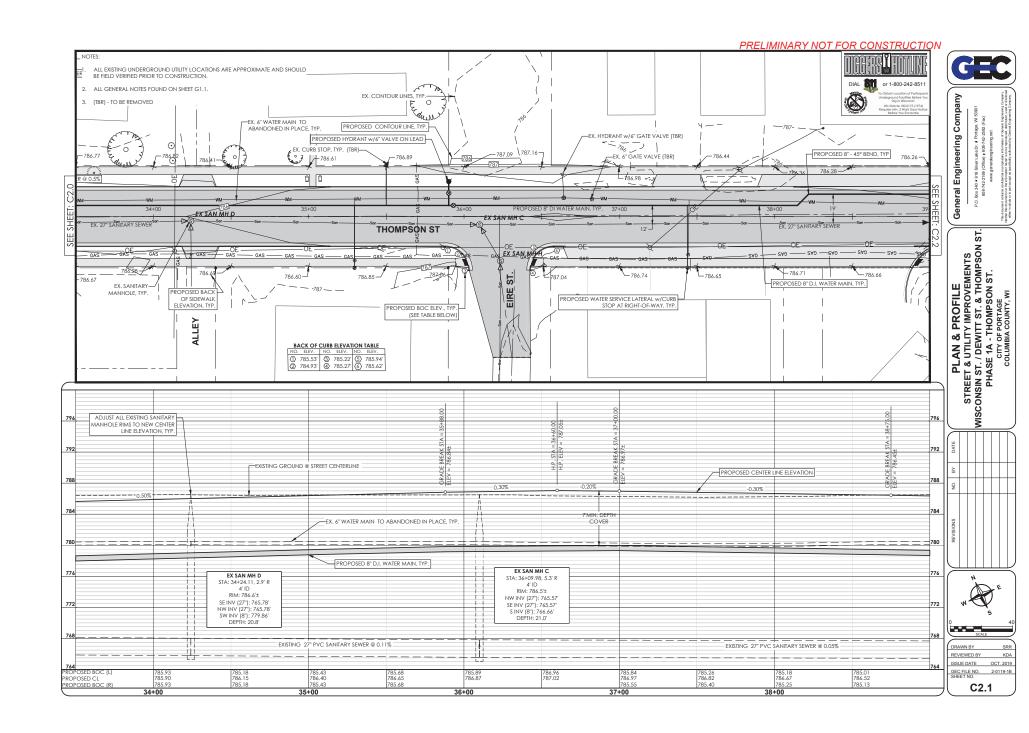


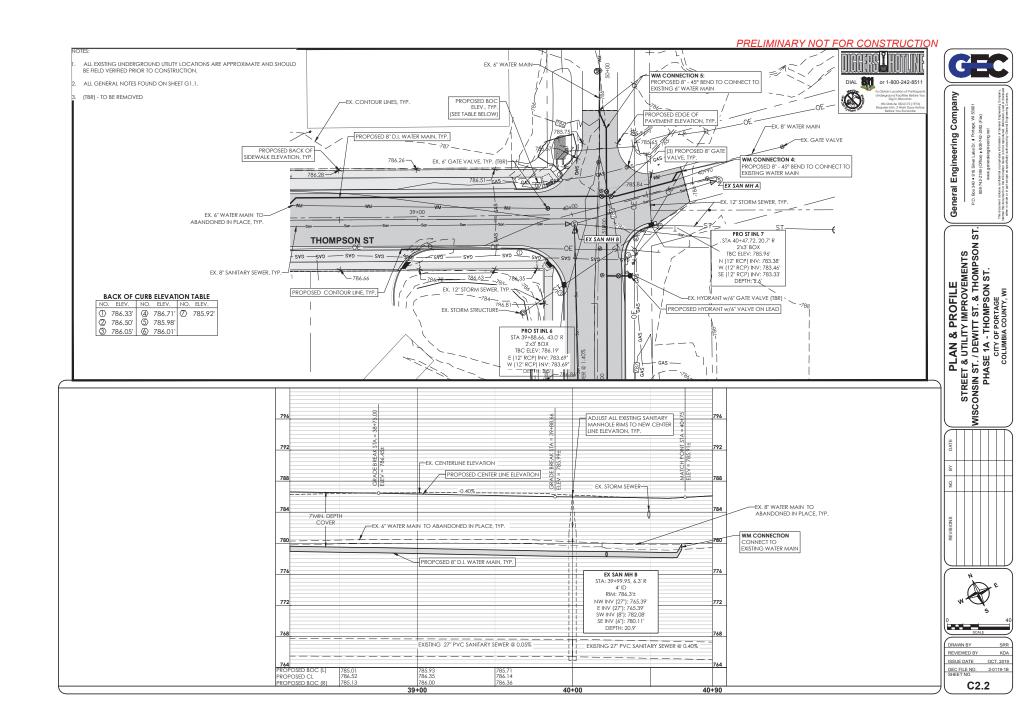


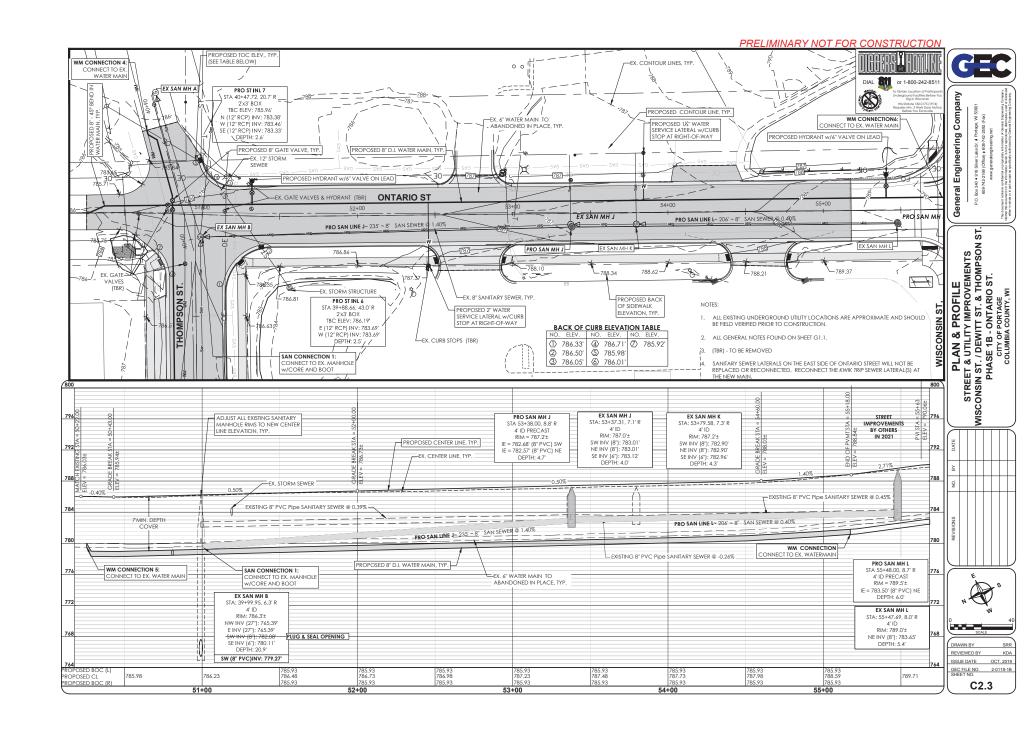


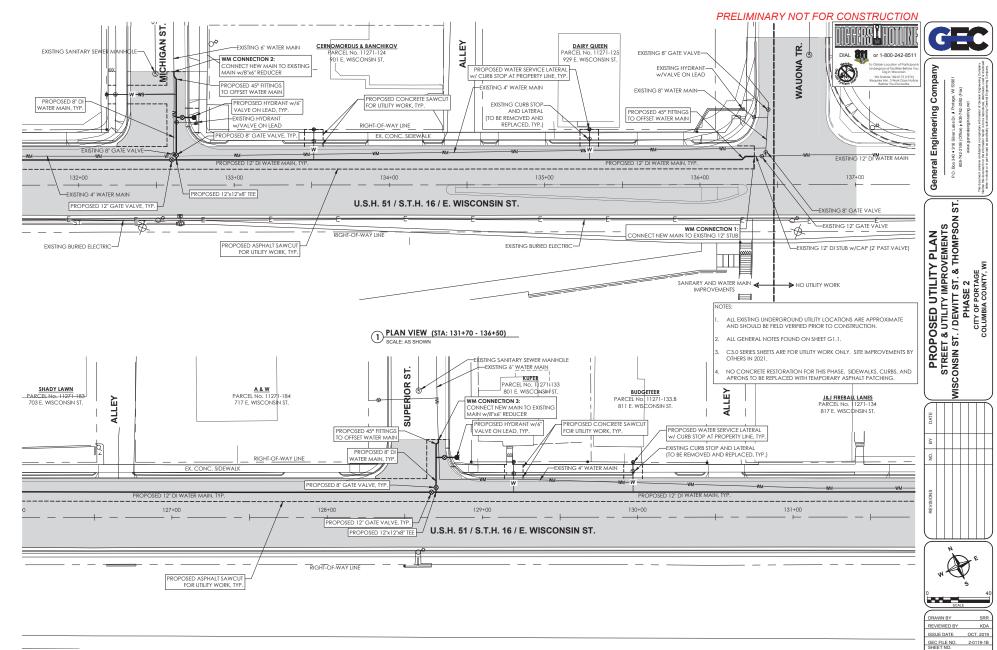
Appendix A: Construction Plans





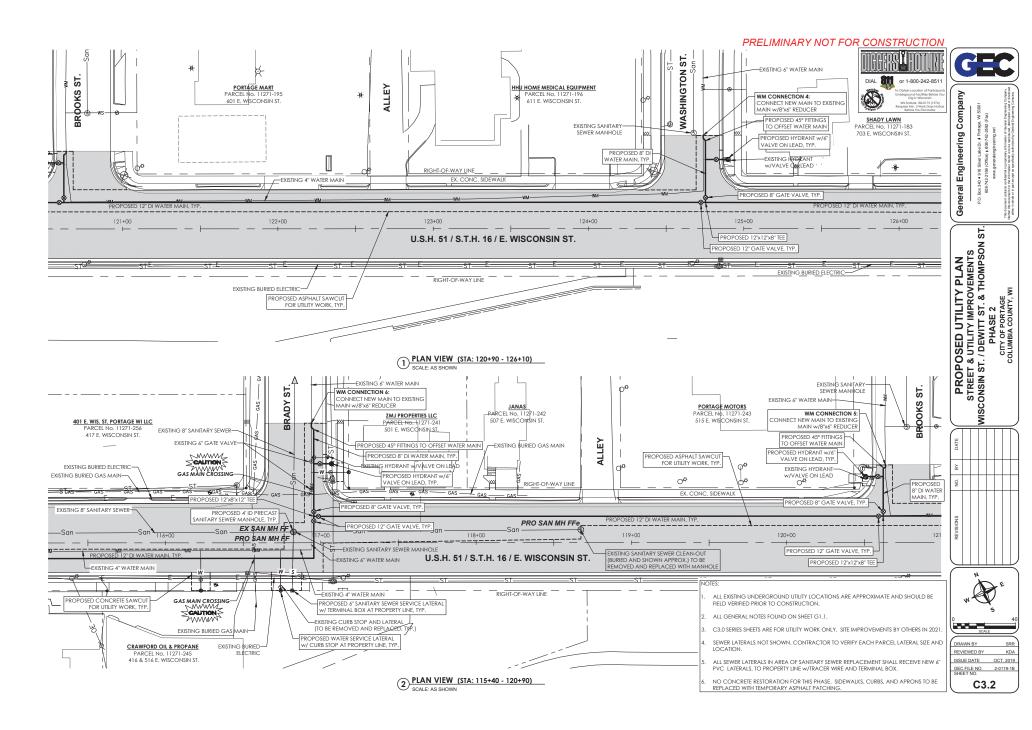


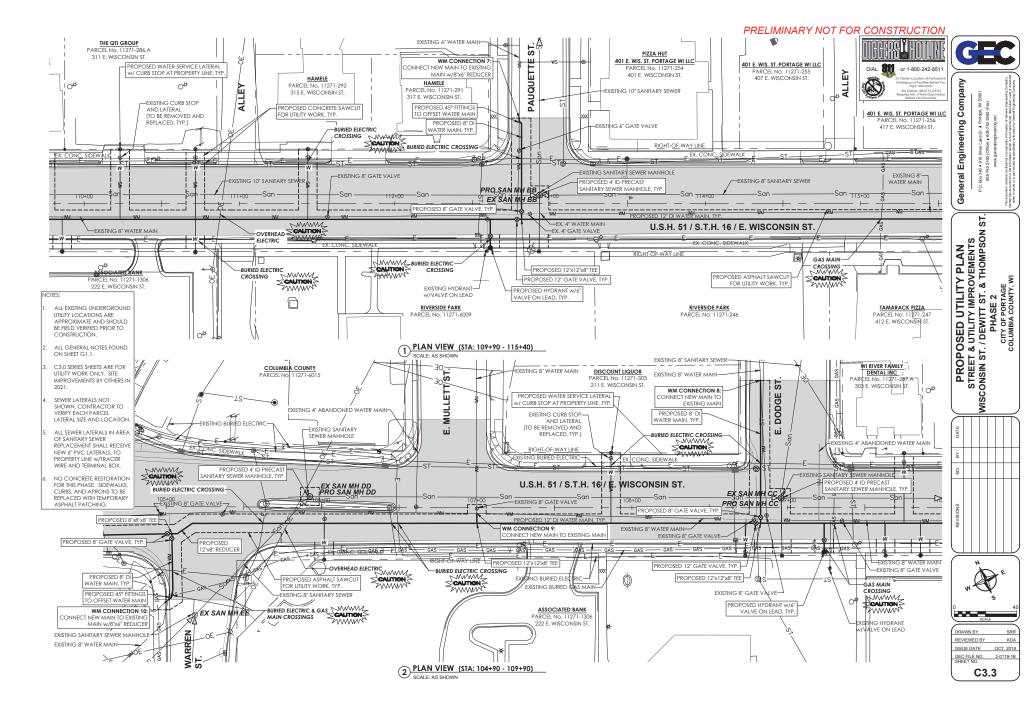




2 PLAN VIEW (STA: 126+10 - 131+70)
SCALE: AS SHOWN

C3.1





ALLEY

CAUTION ?

PROPOSED WATER SERVICE LATERAL

w/ CURB STOP AT PROPERTY LINE, TYP.

-EXISTING 8" PVC SANITARY SEWER (INSTALLED 2007)

-EXISTING 8" DI WATER MAIN

SAN CONNECTION:

EXISTING MAIN

CONNECT NEW MAIN TO

(INSTALLED 2007)

ALL EXISTING UNDERGROUND UTILITY

OCATIONS ARE APPROXIMATE AND SHOULD

BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

ALL GENERAL NOTES FOUND ON SHEET G1.1.

COOK

ш

PRELIMINARY NOT FOR CONSTRUCTION

or 1-800-242-851

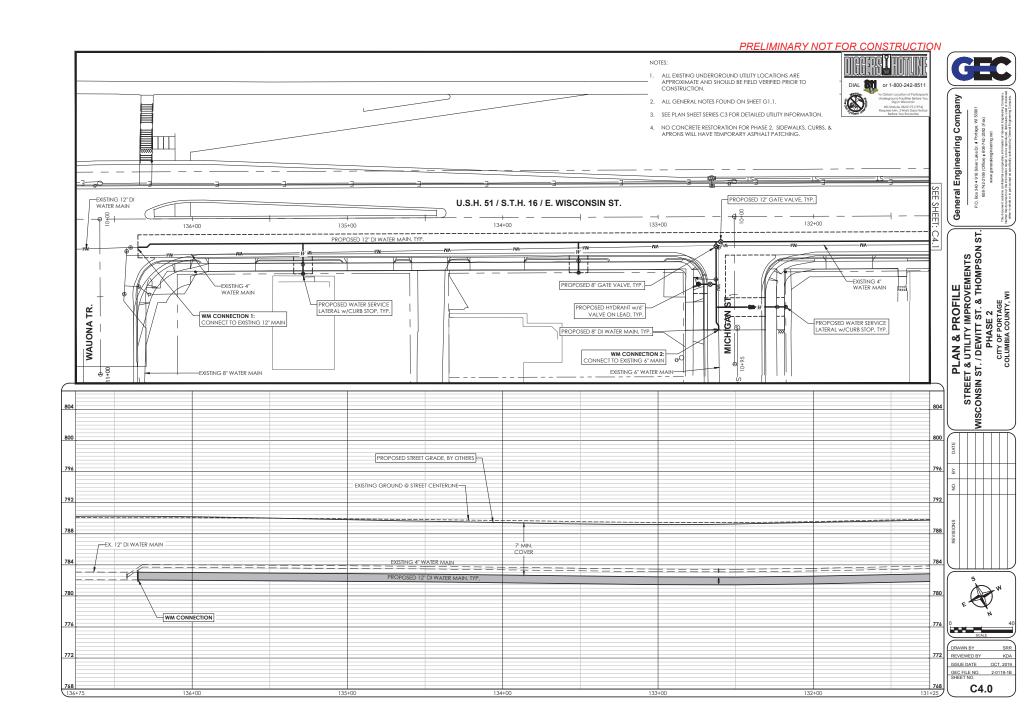
GAS MAIN

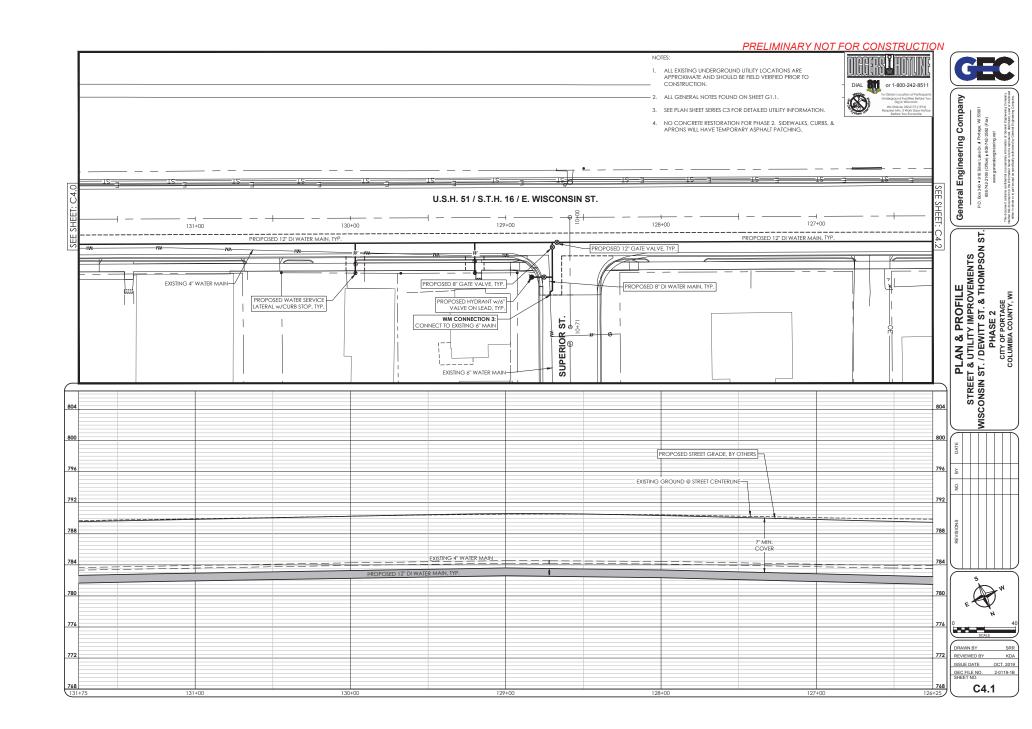
-EXISTING 8" DI WATER

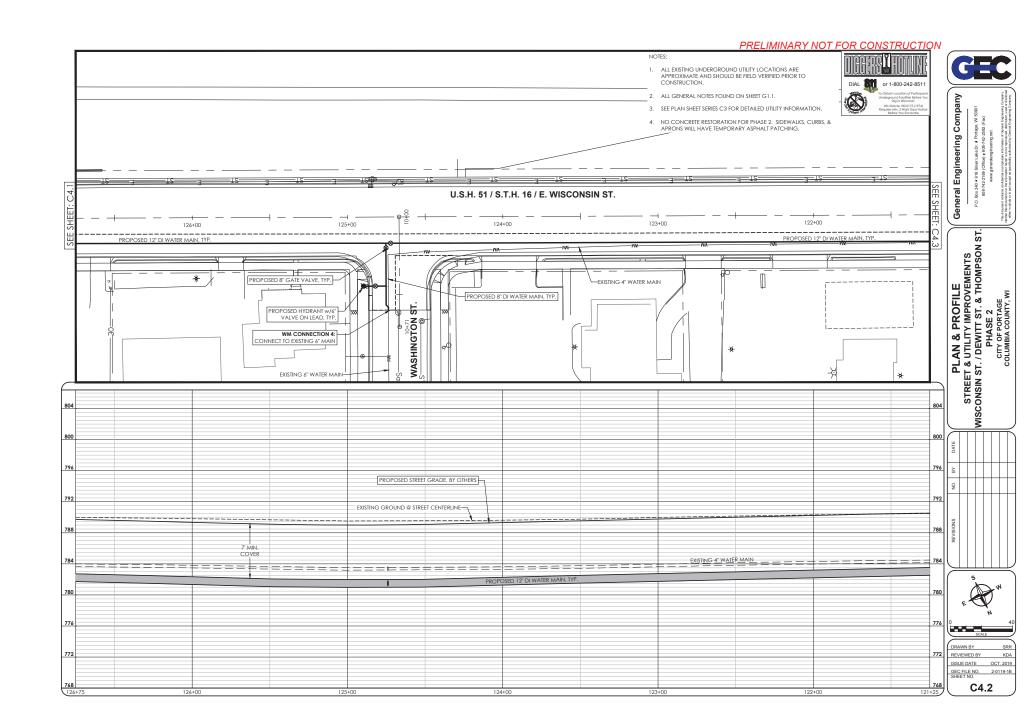
MAIN (INSTALLED 2016)

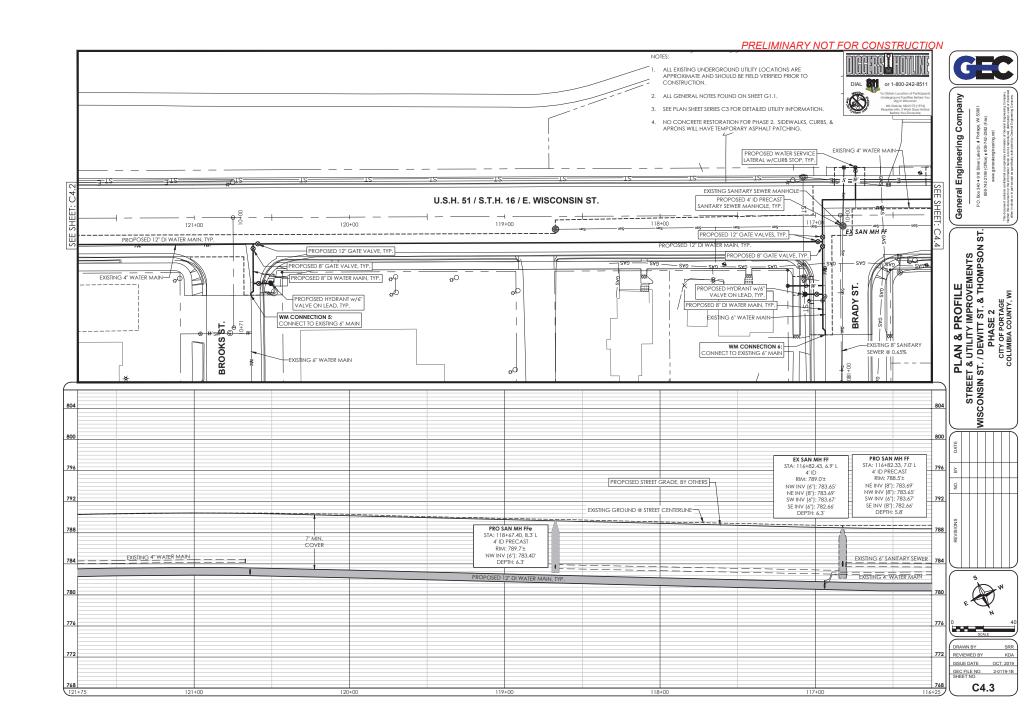
EXISTING 20" SANITARY SEWER+

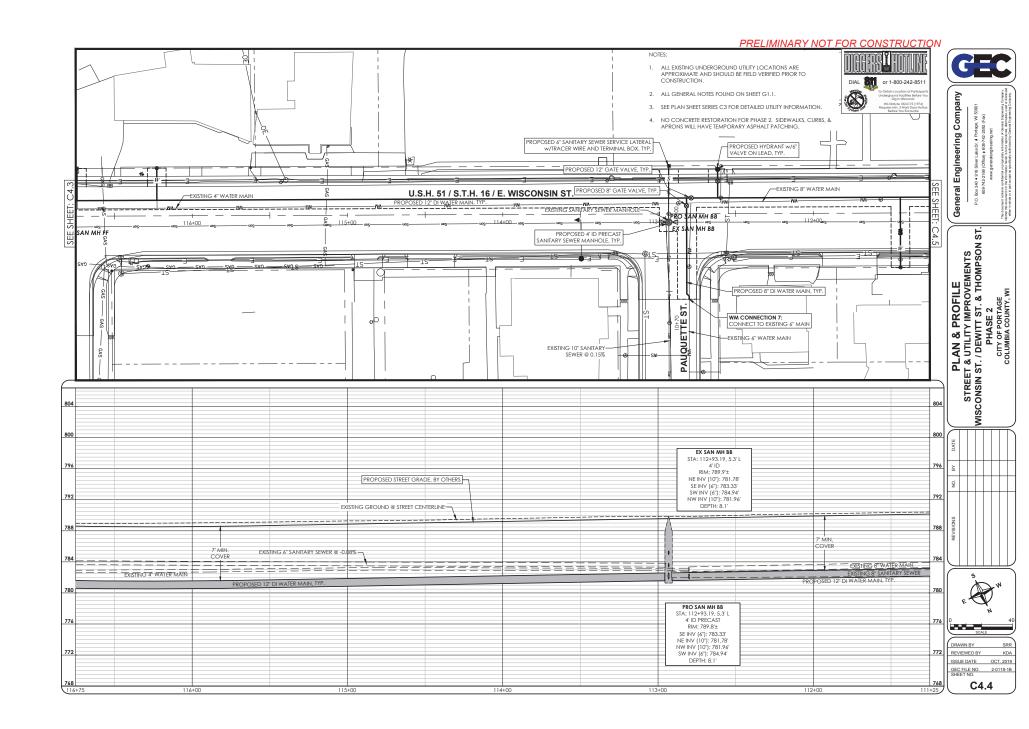
PROPOSED ASPHALT SAWCUT FOR UTILITY WORK, TYP.

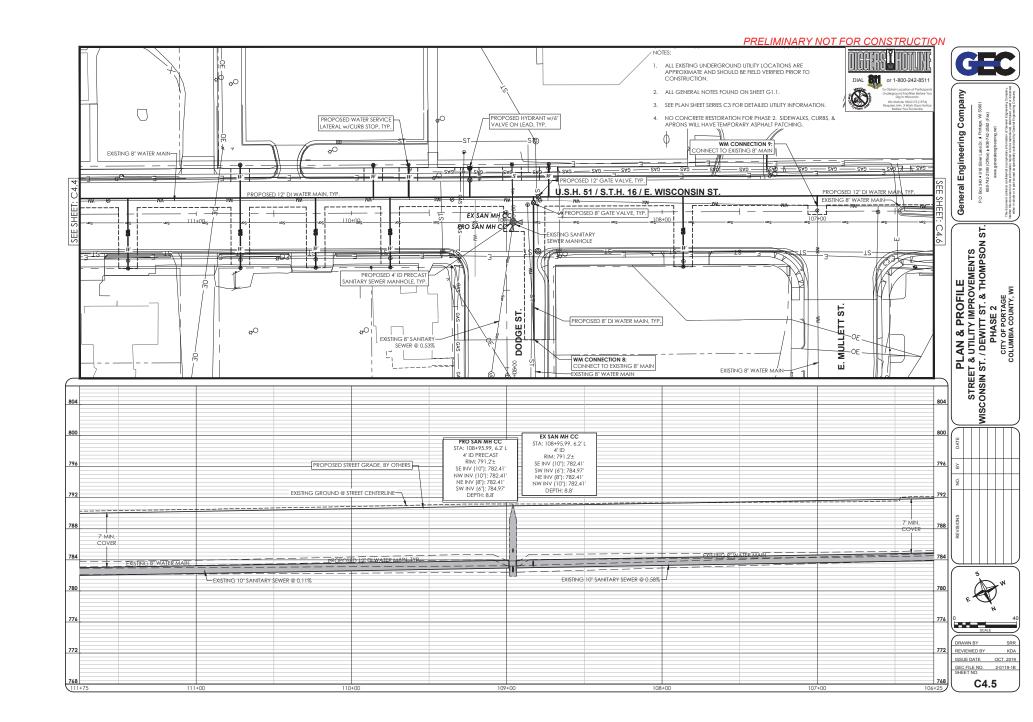


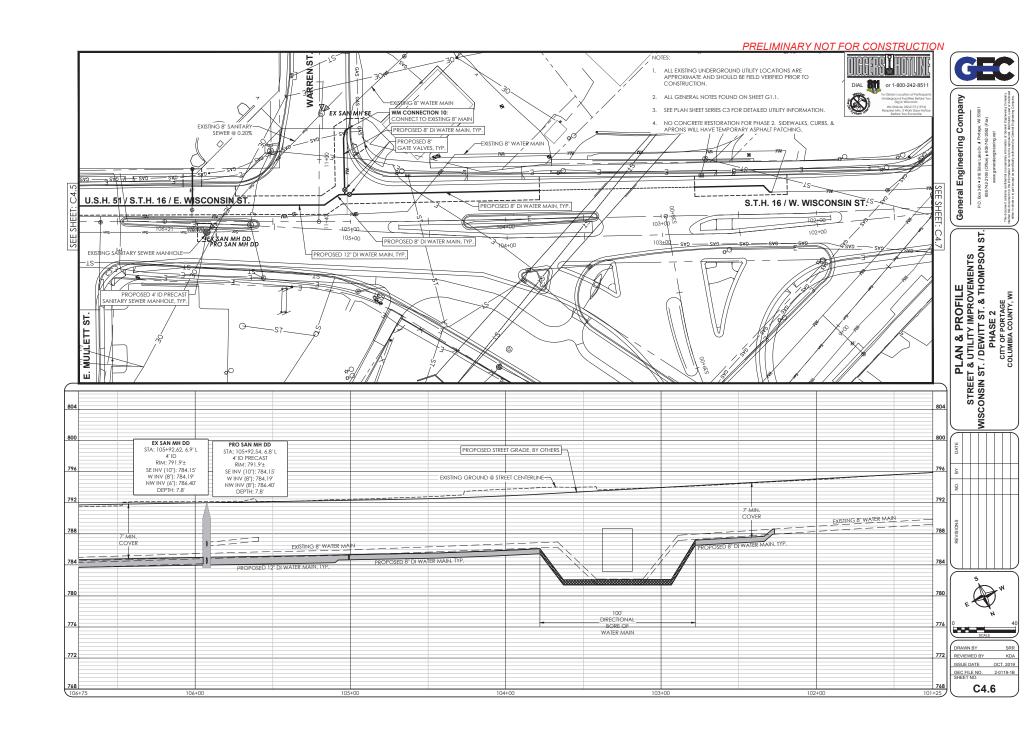


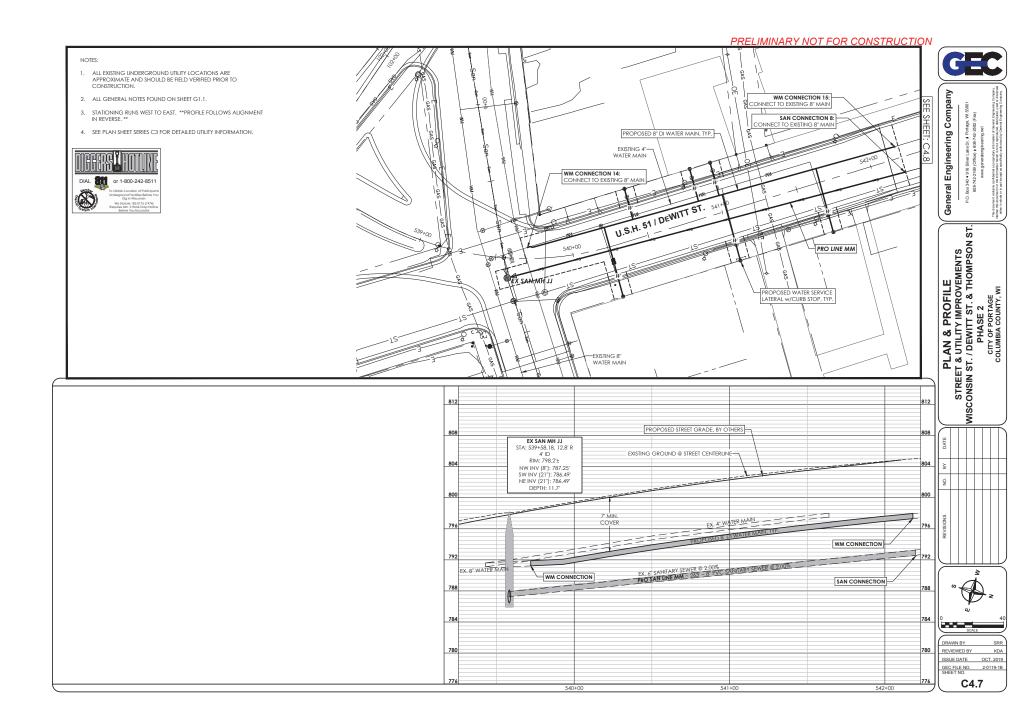


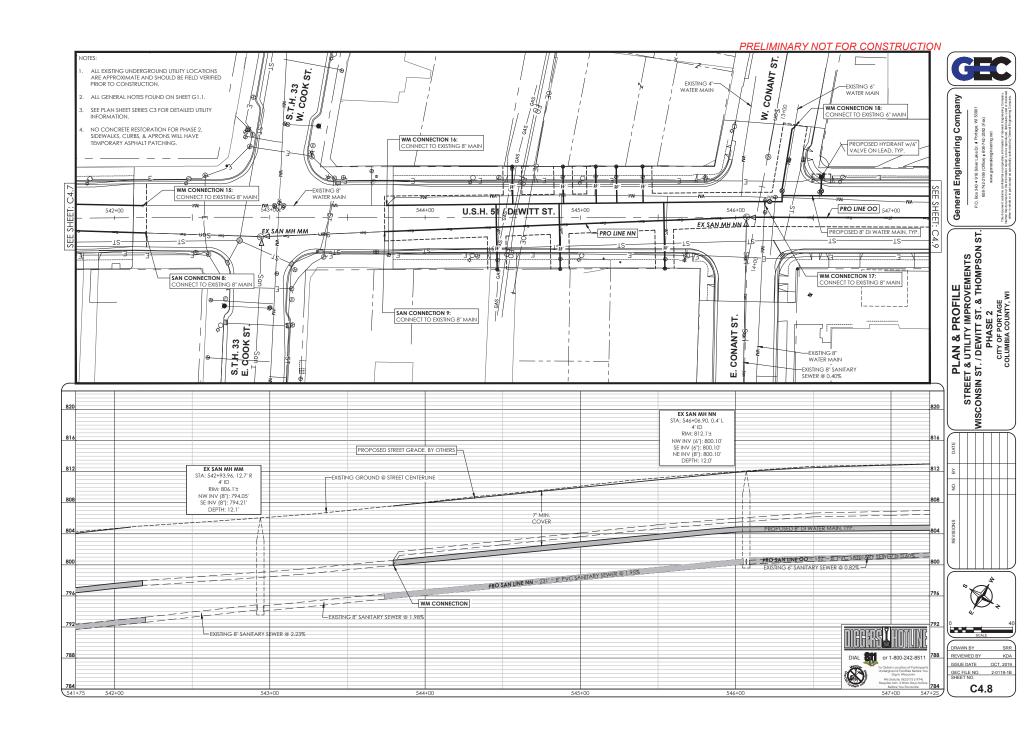


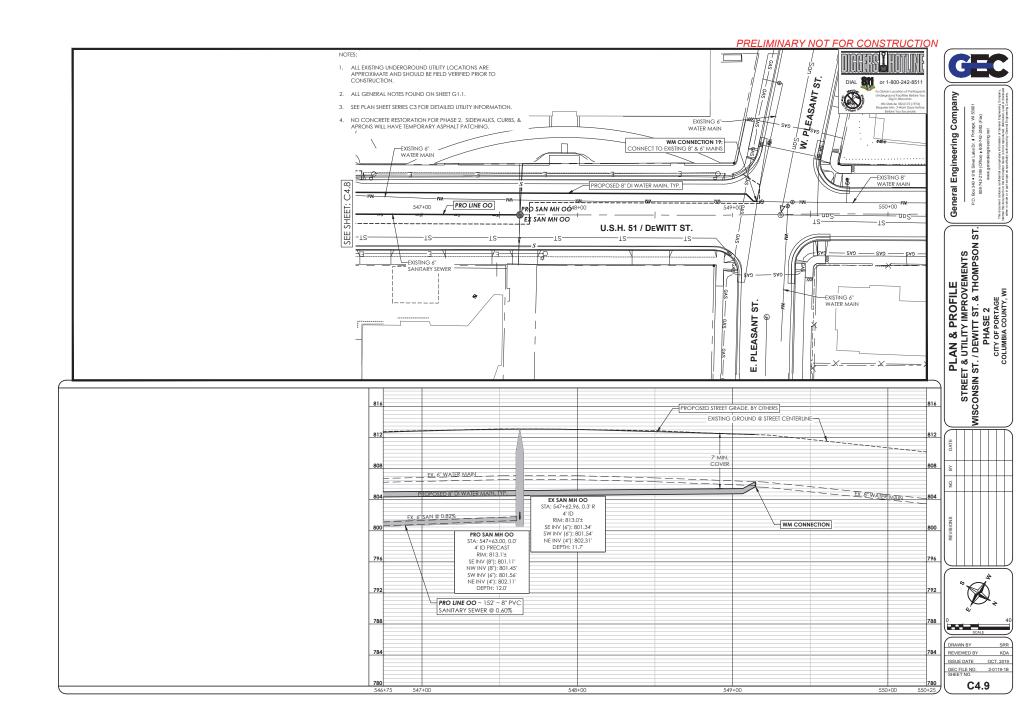




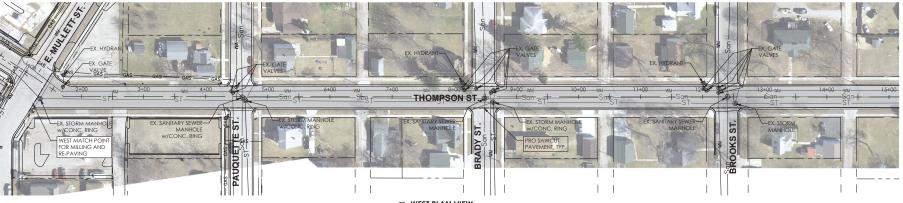




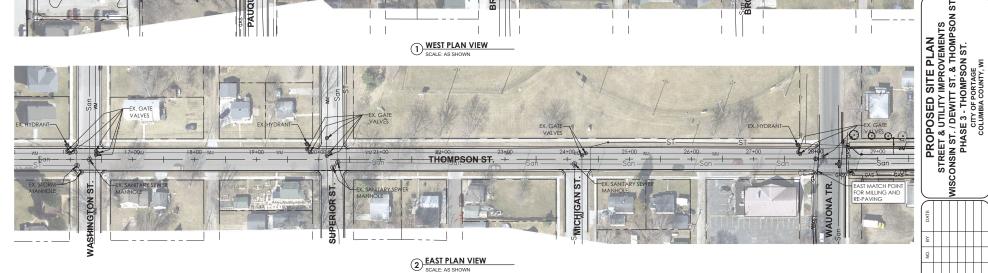


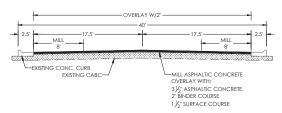


PRELIMINARY NOT FOR CONSTRUCTION



1 WEST PLAN VIEW
SCALE: AS SHOWN





TYPICAL THOMPSON STREET SECTION (MULLETT ST. TO WAUONA TRAIL)

A TYPICAL X-SECTION SCALE: NONE

NOTES:

- ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- ALL GENERAL NOTES
 FOUND ON SHEET G1.1.

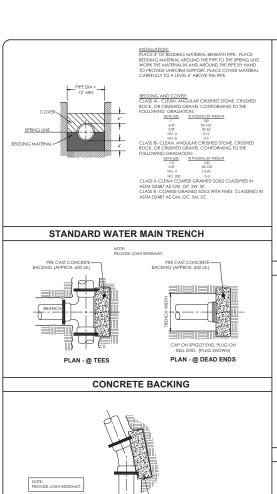




General Engineering Company

ST.

GEC FILE NO. SHEET NO. C5.0



PRE CAST CONG. BACKING

PLAN - 90° BEND

PRE CAST CONC. BACKING

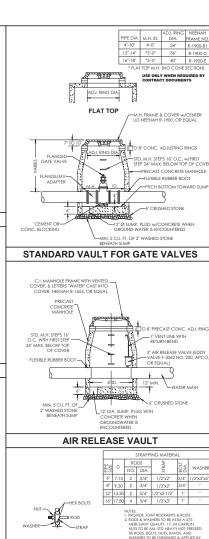
(APPROX. 600 LBS.)

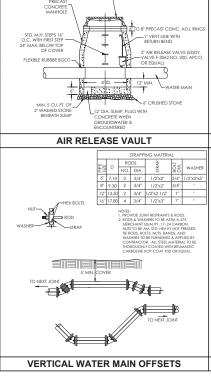
PLAN - 22.5° BEND

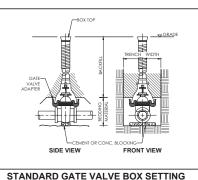
CONCRETE BACKING FOR BENDS

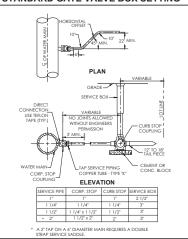
PRE CAST CONC. BACKING

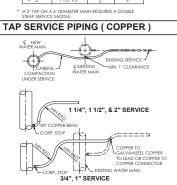
(APPROX, 600 LBS.)











WATER SERVICE MAY BE INSTALLED UNDER EXISTING WATER MAIN. IF 6' MIN. COVER IS NOT AVAILABLE, THE NEW INSTALLATION SHALL BE INSULATED. VNECTIONS SHALL BE TESTED FOR LEAKAGE PRIOR TO BACKFILL AFTER SUPPORT HAS BE

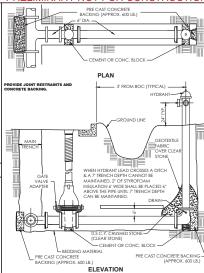
PIPE SIZE MIN RADII ARE AS FOLLOWS:

PIPE SIZE MINI, KADIJ ARE AS POLIOWS: ½", 1"=6", 1½"=6", 1½"=10", 2"=12"

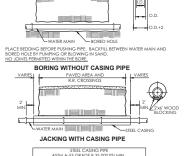
TAP AND SERVICE SHALL BE SAME SIZE AS EXISTING WIMIN, OF ¾"
TAP IS ORIENTED AT 10 O'CLOCK OR 2 O'CLOCK POSITION.
SET CURB STOP ON CEMENT OR CONCRETE BLOCK/BRICK.

TAP SERVICE PIPING

PRELIMINARY NOT FOR CONSTRUCTION







•										
	STEEL CASING PIPE ASTM A-53 GRADE B 35,000 PSI MIN.									
SIZE W.M.	CASING MIN, WALL		NOTE							
6" 8"	0.312	18" 18"	12" THICK CONCRETE OR BRICK BULKHEADS REQ'D							
12" 16"	0.375	24" 30"	ONLY IN R.R. CROSSING UNLESS OTHERWISE							
20" 24"	0.500	36" 48"	NOTED ON THE PLANS							

BORING OR JACKING W/CASING PIPE

- 1. SERVICE TAPS IN ALL WATER MAIN PIPE SHALL BE MADE WITH 2 WRAPS
- SERVICE LAYS IN ALL WAIER MAINT HE SMALL BE MANUE WHILD YMAR'S OF 3 MIL TERFLON TAPE ON CORPORATION STOP THREADS. WHEN MORE THAN ONE TAP IN THE MAIN IS NECESSARY TO DELIVER THE REQUIRED FLOW FOR SERVICE LINES, THEY SHOULD BE STAGGERED AROUND THE CIRCUMFERENCE A MINIMUM OR 8" APART.

GENERAL NOTES



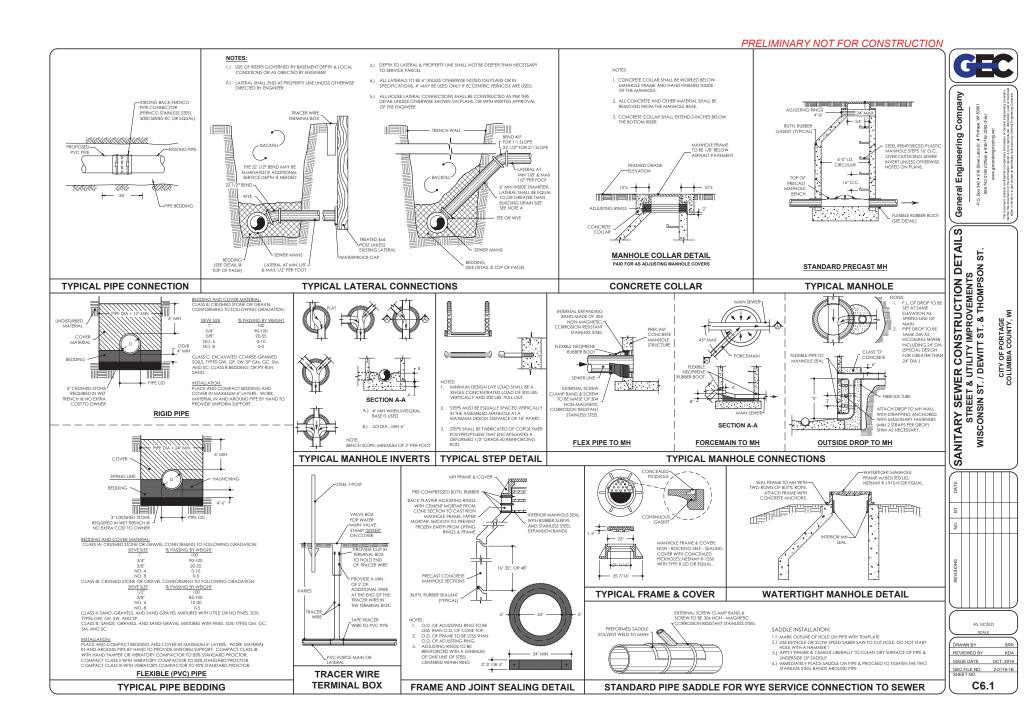
Company Engineering

General

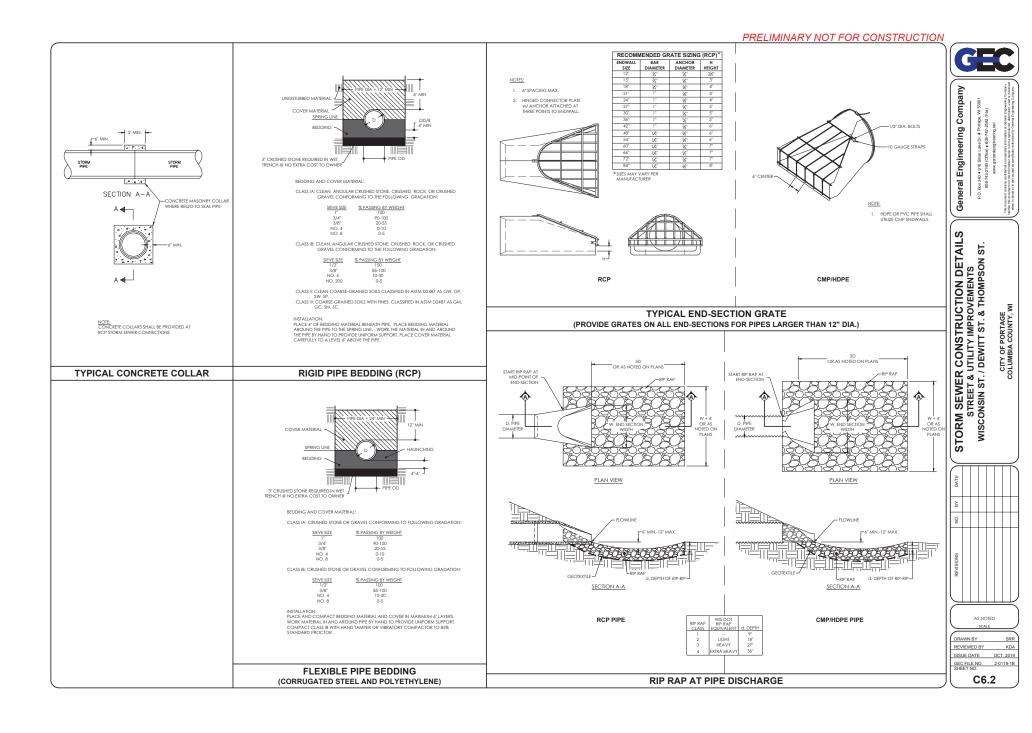
CONSTRUCTION DETAILS UTILITY IMPROVEMENTS CITY OF PORTAGE COLUMBIA COUNTY, WATER MAIN C STREET & U WISCONSIN ST.// WATER

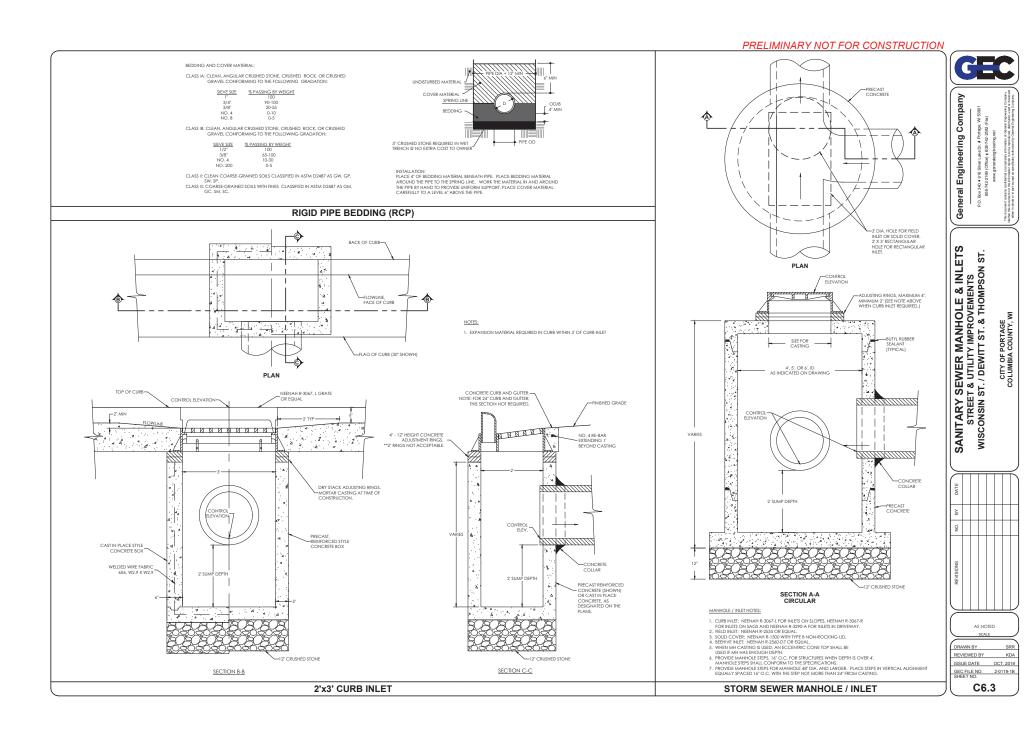
AS NOTED DRAWN BY SRR REVIEWED BY KDA ISSUE DATE OCT. 2019

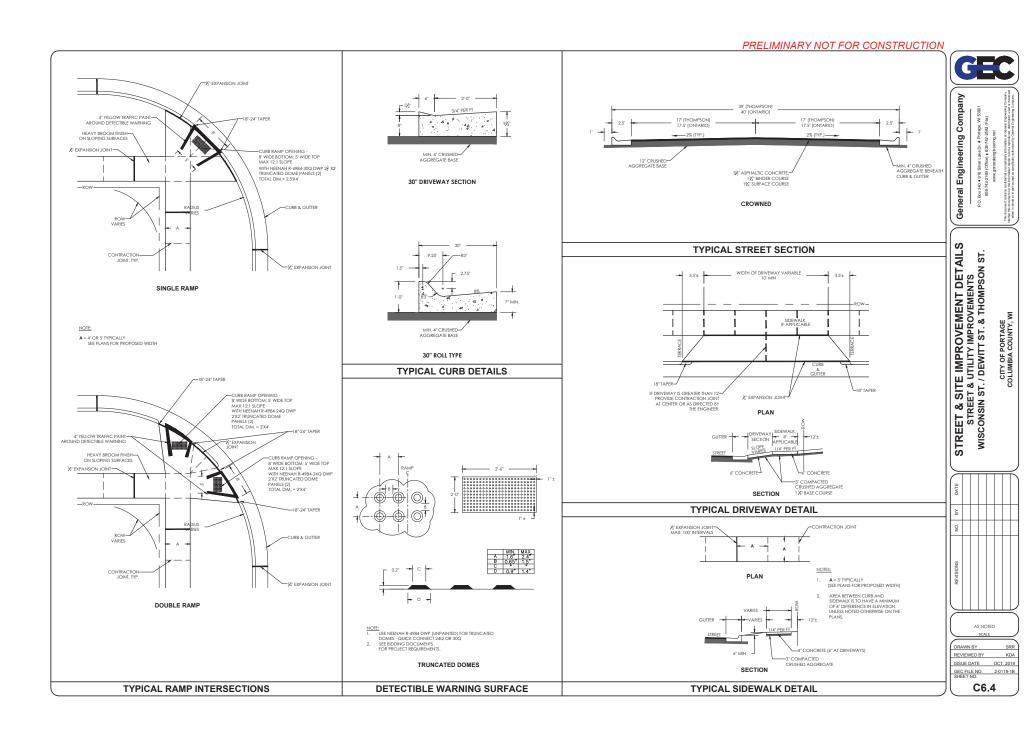
GEC FILE NO. SHEET NO. 2-0119-1B C6.0













Appendix B: Special Provisions/WDNR Concurrence Letter

1. Excavation, Hauling, and Disposal of Contaminated Soil

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of contaminated soil. Contaminated soil shall be disposed of at a WDNR-licensed facility. The closest WDNR-licensed facilities are:

Waste Management Madison Prairie Landfill 6002 Nelson Road Sun Prairie, WI 53590

Advanced Disposal Glacier Ridge Landfill N7296 Hwy V Horicon, WI 53032

Perform this work in accordance with section 205 of the standard specifications and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Locations

The department completed testing for soil, and groundwater contamination within this project where excavation is required. Previous investigations indicate that contamination is present at the following locations:

Petroleum Contamination

• Site 8 (Mael Estate – Triangle Property, 100 Edgewater St.) – The entire parcel described as Station 102+00WI to 103+50WI from reference line to limits on LT, and from 538+30DE to 539+10DE from limits on RT to limits on LT

Wisconsin St./USH 51

- Sites 5 & 7 Station 99+25WI to 100+75WI, from limits on RT to limits on LT
- Sites 8, 11, 12, 13, 14, & 24 Station 102+50WI to 107+75WI, from limits on RT to limits on LT
- n Site 15 Station 111+00WI to 111+75WI, from reference line to limits on LT
- Site 19 Station 116+00WI to 117+25WI, from reference line to limits on RT

Edgewater St.

Sites 4 & 5 - West limit to Wisconsin St./USH 51 intersection, from limits on RT to limits on LT

- n Sites 7 & 8 Current De Witt St. intersection to 100 feet west, from limits on RT to limits on LT
- · De Witt St.
 - Site 8 Current right-of-way along Site 8, from west limits to centerline

Chlorinated Compound Contamination

- Wisconsin St./USH 51
 - n Sites 11 & 24 Station 103+00WI to 107+75WI, from limits on RT to limits on LT

Metals Contamination

• Site 24 – Station 102+50WI to 103+00WI, from center to limits on RT, and all sediment within the Portage Canal

Contaminated soil and/or underground storage tanks (USTs) may be encountered at other locations within the construction limits. If contaminated soil and/or USTs are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. Contaminated at other locations shall be managed by the contractor under this contract. USTs will be removed by others.

For further information regarding previous investigation and remediation activities at these sites contact:

Name: Aaron Jahncke

Director of Public Works - City of Portage

Address: 115 W. Pleasant St.

Portage, WI 53901

Phone: 608-742-2176 ext 325

e-mail: <u>Aaron.jahncke@portagewi.gov</u>

A.3 Coordination

Coordinate work under this contract with the environment consultant retained by the City of Portage.

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on analytical results from previous investigations, visual observations, and field screening of soil that is excavated;

- 2. Identifying contaminated soils and to be hauled to the bioremediation and landfill facilities;
- 3. Documenting that activities associated with management of contaminated soil are in conformance with the contamination management methods for this project as specified herein; and
- 4. Obtaining the necessary approvals for disposal of contaminated soil from the bioremediation and disposal facilities.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also, notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Identify the WDNR-licensed bioremediation and disposal facilities that will be used for disposal of contaminated soil and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of contaminated soil from the bioremediation and disposal facilities.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed. Do not pump or haul contaminated groundwater offsite without specific approval from the environmental consultant. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.4 Protection of Groundwater Monitoring Wells

Groundwater monitoring wells may be present within the construction limits. Protect all groundwater monitoring wells to maintain their integrity. Adjust wells that do not conflict with utilities, structures, curb and gutter, etc.to be flush with the final grade. For wells that conflict with the previously mentioned items, notify the environmental consultant, and coordinate with the environmental consultant for the abandonment or adjustment of the wells by others. The environmental consultant will provide maps indicating the locations of all known monitoring wells, if requested by the contractor.

A.5 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR's concurrence letter is on file at the City of Portage. For further information regarding the investigations, including waste characterization within the project limits, contact Aaron Jahncke with the City of Portage, at 608-742-2176, ext. 325.

A.6 Health and Safety Requirements for Workers Remediating Contamination

Supplement subsection 107.1 of the standard specifications with the following:

During excavation activities, expect to encounter soil and groundwater contaminated with petroleum products; soil and groundwater contaminated with chlorinated compounds; and sediment contaminated with metals. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

Disposal of contaminated soil at the bioremediation and landfill facilities is subject to the facilities' safety policies.

B (Vacant)

C Construction

Supplement subsection 205.3 of the standard specification with the following:

Control operations in the contaminated areas to minimize the quantity of contaminated soil and excavated.

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite disposal. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated for disposal as follows:

- Excavation Common consisting of clean soil and/or clean construction and demolition fill (such as clean soil, boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, and unpainted or untreated wood), which under NR 500.08 are exempt materials, or
- Low-level contaminated material (for petroleum-contaminated, PID readings less than 10 ppm for and no observation of staining or odor; for chlorinated compound-

contaminated, identified based on laboratory detection) for reuse as fill within the construction limits as allowed, or

- Significant petroleum-contaminated soil (significant petroleum odor, staining, and/or PID readings greater than 10 ppm) for off-site bioremediation and disposal at the WDNR-licensed bioremediation facility, or
- Significant chlorinated compound-contaminated soil and metals-contaminated soil (identified based on laboratory detection) for off-site direct disposal at the WDNR-licensed disposal facility, or
- Potentially contaminated for temporary stockpiling and additional characterization prior to disposal.

Directly load and haul soil designated by the environmental consultant for offsite disposal to the WDNR-licensed facility. Verify that vehicles used to transport contaminated material are licensed for such activity in accordance with applicable state and federal regulations. Use loading and hauling practices that are appropriate to prevent any spills or releases of contaminated soils or residues. Prior to transport, sufficiently dewater soils so as not to contain free liquids.

When material is encountered outside the above-identified limits of known contamination that appears to have been impacted with petroleum or other chemical products, or when other obvious potentially contaminated materials are encountered or material exhibits characteristics of industrial-type wastes, such as fly ash, foundry sand, and cinders, or when underground storage tanks are encountered, suspend excavation in that area and notify the engineer.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Contaminated Soil in tons of contaminated soil accepted by the bioremediation or disposal facility as documented by weight tickets generated by the facility. Load tickets must be delivered to the engineer within 10 business days of the date on which the soil was accepted by the facility.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM	DESCRIPTION	UNIT
NUMBER		
350	Excavation, Hauling, and Disposal of Contaminated Soil	Ton

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation of petroleum-contaminated soil; excavating, segregating, loading, hauling, and disposal of chlorinated compound-contaminated soil; tipping fees; obtaining solid waste collection and transportation service operating licenses; assisting in the collection of soil samples for field evaluation; dewatering of soils prior to transport, if necessary; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Niesen, Melanie

From: Mason, John M - DNR < John.Mason@wisconsin.gov>

Sent: Monday, March 16, 2020 12:10 PM

To: Haak, Daniel

Cc: Aaron Jahncke; Taylor, Brian F - DOT; TeBeest, Sharlene - DOT

Subject: RE: [EXTERNAL] Excavation Management Plan - City of Portage, USH 51 (Wisconsin St. & Dewitt St.)

& Thompson St., Portage, WI

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hello Dan,

Please attach a copy of our question and answer email (below) as an addendum to the Excavation Management Plan for the City of Portage street and utility improvements along USH 51 (Wisconsin St. & DeWitt St.) & Thompson St., in Portage, Wisconsin, dated February 25, 2020. With that addendum, I approve of the plan and associated Special Provisions regarding the management of contaminated soil and groundwater by the City and associated contractors during the utility improvement work. Thanks.

-John

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

John Mason

Hydrogeologist, Remediation and Redevelopment Program, Environmental Management Division Wisconsin Department of Natural Resources 3911 Fish Hatchery Road, Fitchburg, WI 53711

Phone: (608) 275-3222 john.mason@wisconsin.gov



From: Haak, Daniel < DHaak@trccompanies.com>

Sent: Tuesday, March 10, 2020 11:20 AM

To: Mason, John M - DNR < John. Mason@wisconsin.gov> **Cc:** Aaron Jahncke < Aaron. Jahncke@portagewi.gov>

Subject: RE: [EXTERNAL] Excavation Management Plan - City of Portage, USH 51 (Wisconsin St. & Dewitt St.) &

Thompson St., Portage, WI

Thanks John for your quick review. Please see my comments below in red.

Dan

From: Mason, John M - DNR < John. Mason@wisconsin.gov >

Sent: Monday, March 9, 2020 3:39 PM

To: Haak, Daniel < DHaak@trccompanies.com>

Subject: [EXTERNAL] Excavation Management Plan - City of Portage, USH 51 (Wisconsin St. & Dewitt St.) & Thompson St., Portage, WI

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hello Dan,

I received the Excavation Management Plan for the City of Partage street and utility (water line and sanitary sewer) improvements for USH 51 (Wisconsin St. & DeWitt St.) & Thompson St., Portage, WI, dated February 25, 2020. The improvements are proposed for 2020.

The plan submitted on behalf of the City is a modified and reduced version of the plan that was submitted for excavation management during road and storm sewer improvements to be done by the WisDOT in 2021 (WisDOT project I.D. #6918-01-02). The Special Provisions for the WisDOT plan were approved on July 30, 2018.

The following are my comments regarding the Special Provisions in the City of Portage Excavation Management Plan:

In the Special Provisions at the end of Section 1.A.2, there is a paragraph that refers to procedures to follow regarding the encountering of contaminated soil and underground storage tanks (USTs). There should be some mention that the contractor may also encounter groundwater contaminated with petroleum and chlorinated compounds exceeding NR 140 Enforcement Standards (ES). There will likely be ES exceedances in groundwater encountered north and east of Site #11 (Portage Cleaners), near Site #19 (Crawford 66), and possibly near Site #7 (Mael Estate Property).

We will emphasize areas with contaminated groundwater. The City plans to accept dewatering into the sanitary sewer.

In the Special Provisions in Section 1.A.3. in the listing of the role of the environmental consultant, there should be reference to the consultant needing to identify contaminated groundwater to be pumped into the sanitary sewer and documenting that such activities are in conformance with contaminant management methods.

The City plans to retain an environmental consultant and will communicate with the contractor.

As compared to the plan approved for the WisDOT, the Special Provisions for the City no longer refers to management of potentially hazardous chlorinated compound-contaminated soil or groundwater. The Site Plan (map) Figure 2B indicates that a proposed water main is to be installed in the rectangular area designated as "Potentially Hazardous Contamination Area," on the north side of Site 11 (Portage Cleaners site) where chlorinated VOCs have been detected in soil and groundwater. Please indicate how the contaminated soil and groundwater encountered in this area are to be managed.

The City plans to directional bore the water main under the canal and past the area identified with potential hazardous chlorinated compound-contaminated soil. Soil will only be generated at the entrance and exit pits beyond that location.

Thank you for the submittal and let me know if you have any questions. -John

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

John Mason

Hydrogeologist, Remediation and Redevelopment Program, Environmental Management Division Wisconsin Department of Natural Resources

3911 Fish Hatchery Road, Fitchburg, WI 53711

Phone: (608) 275-3222 john.mason@wisconsin.gov





Appendix C: Photographic Log



Client Name:

City of Portage

Date

Site Location: USH 51

Project No.:

TRC: 317018.0000.0000

Photo No.

7/20/2020

Description

Excavation for water utility at Site 19. Evidence of petroleum contaminated soil observed.

Photo taken looking north.



Photo No.

Date

2

7/22/2020

Description

Excavation for watermain along USH 51 at Site 11

Photo taken looking northwest.





Client Name:

City of Portage

Site Location:

USH 51

Portage, Columbia County, WI

TRC: 317018.0000.0000

 Photo No.
 Date

 3
 7/27/2020

 Description

Excavation for water lateral at Site 15.

Photo taken looking south.



 Photo No.
 Date

 4
 7/29/2020

 Description

Installation of watermain at Site 11.

Photo taken look looking north.





Client Name:

City of Portage

Site Location: USH 51

Portage, Columbia County, WI

Project No.:

TRC: 317018.0000.0000

 Photo No.
 Date

 5
 7/30/2020

Description

Excavation for water utility at the intersection of Wisconsin Street and W. Mullett St.

Photo taken looking southwest.



Photo No. Date
6 11/18/2020

Description

Site 24 cap, post construction.

Photo taken looking west.





Client Name:

City of Portage

Site Location: USH 51

Portage, Columbia County, WI

Project No.:

TRC: 317018.0000.0000

Photo No.

7

Date 11/18/2020

Description

Portage Canal cap, post construction.

Photo taken looking southeast.



Photo No. Date 8 11/18/2020

Description

Cap at Site 19, post construction.

Photo taken looking southwest.





Appendix D: Disposal Documentation

Date	Manifest/Additional Documents	Ticket #	Material	Facility	Carrier	Vehicle	Tons/Tonnes	Material Quantity	Material Unit	
7/29/2020	133542WI	114-01	385286	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	22.56	22.56	TON
7/29/2020	133542WI	114-2	385292	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	22.65	22.65	TON
7/29/2020	133542WI	114-3	385299	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	23.28	23.28	TON
7/31/2020	133542WI	114-01	385411	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	19.38	19.38	TON
7/31/2020	133542WI	23-01	385416	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	TEDS PLACE TRUCKING	23	18.43	18.43	TON
7/31/2020	133542WI	114-02	385443	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	23.72	23.72	TON
7/31/2020	133542WI	23-02	385460	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	TEDS PLACE TRUCKING	23	22.76	22.76	TON
7/31/2020	133542WI	114-03	385469	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	19.08	19.08	TON
8/5/2020	133542WI	114-01	385598	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	24.18	24.18	TON
8/5/2020	133542WI	0	385608	Unspecified Contaminated Soil, PMT Sp. W.	WI Madison Prairie	A1 EXPRESS TRUCKING LLC	114	23.16	23.16	TON
							Total	219.2		

Date	Manifest/Additional Documents	Ticket #	Material	Facility	Carrier	Vehicle	Tons/Tonnes	Material Quantity	Material Unit	
7/20/2020	BIO133527WI	35	574860	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	KELLEY TRUCKING	35	21.7	21.7	TON
7/20/2020	BIO133527WI	A122	574844	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	A-1 EXPRESS	A122	23.74	23.74	TON
7/20/2020	BIO133527WI	23	574877	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	TEDS PLACE	23	15.25	15.25	TON
7/20/2020	BIO133527WI	32	574886	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	KELLEY TRUCKING	32	22.96	22.96	TON
7/20/2020	BIO133527WI	35	574919	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	KELLEY TRUCKING	35	24.07	24.07	TON
7/20/2020	BIO133527WI	23	574924	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	TEDS PLACE	23	18.72	18.72	TON
7/21/2020	BIO133527WI	35	574926	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	KELLEY TRUCKING	35	21.06	21.06	TON
7/21/2020	BIO133527WI	32	574929	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	KELLEY TRUCKING	32	18.85	18.85	TON
7/21/2020	BIO133527WI	23	574941	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	TEDS PLACE	23	24.72	24.72	TON
7/27/2020	BIO133527WI	0	575340	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	A-1 EXPRESS	114	19.41	19.41	TON
7/27/2020	BIO133527WI	0	575383	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	A-1 EXPRESS	114	23.61	23.61	TON
7/27/2020	BIO133527WI	0	575423	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	A-1 EXPRESS	114	19.97	19.97	TON
7/28/2020	BIO133527WI	0	575439	Unspecified material, bioremediated, daily cover, PMT RGC	WI Deer Track Park LF	A-1 EXPRESS	114	23.28	23.28	TON
							Total	277.34		



Appendix E: Laboratory Analytical Reports





July 29, 2020

DAN HAAK TRC - MADISON 708 HEARTLAND TRAIL Madison, WI 53717

RE: Project: 317018 USH51

Pace Project No.: 40211609

Dear DAN HAAK:

Enclosed are the analytical results for sample(s) received by the laboratory on July 23, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Green Bay

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

Sincerely,

Tod Noltemeyer tod.noltemeyer@pacelabs.com (920)469-2436

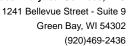
Tod noltemeyor

Project Manager

Enclosures

cc: Tom Dushek, TRC Environmental Peggy Popp, TRC - Madison Steve Sellwood, TRC







CERTIFICATIONS

Project: 317018 USH51
Pace Project No.: 40211609

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

REPORT OF LABORATORY ANALYSIS



(920)469-2436

SAMPLE SUMMARY

Project: 317018 USH51
Pace Project No.: 40211609

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40211609001	WM-A	Solid	07/22/20 10:30	07/23/20 12:10
40211609002	WM-B	Solid	07/22/20 11:00	07/23/20 12:10
40211609003	WM-C	Solid	07/22/20 12:45	07/23/20 12:10

REPORT OF LABORATORY ANALYSIS

(920)469-2436



SAMPLE ANALYTE COUNT

Project: 317018 USH51
Pace Project No.: 40211609

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40211609001	WM-A	EPA 8260	ALD	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40211609002	WM-B	EPA 8260	ALD	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40211609003	WM-C	EPA 8260	ALD	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

(920)469-2436



SUMMARY OF DETECTION

Project: 317018 USH51
Pace Project No.: 40211609

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
- Inctriod	- arameters		Office	- Roport Limit	- Analyzed	- Qualificis
40211609001	WM-A					
ASTM D2974-87	Percent Moisture	8.5	%	0.10	07/28/20 14:13	
40211609002	WM-B					
ASTM D2974-87	Percent Moisture	12.4	%	0.10	07/28/20 14:13	
40211609003	WM-C					
EPA 8260	Tetrachloroethene	216	ug/kg	149	07/24/20 19:41	
ASTM D2974-87	Percent Moisture	13.4	%	0.10	07/28/20 14:13	

REPORT OF LABORATORY ANALYSIS



Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 317018 USH51
Pace Project No.: 40211609

Method: EPA 8260

Description: 8260 MSV Med Level Normal List

Client: TRC - MADISON

Date: July 29, 2020

General Information:

3 samples were analyzed for EPA 8260 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



ANALYTICAL RESULTS

Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Sample: WM-A Lab ID: 40211609001 Collected: 07/22/20 10:30 Received: 07/23/20 12:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Med Level Normal List	Analytical	Method: EPA	A 8260 Prepar	ation Meth	od: EP/	A 5035/5030B				
	Pace Analytical Services - Green Bay									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	630-20-6	W	
1.1.1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,2,3-Trichlorobenzene	<47.3	ug/kg	158	47.3	1	07/24/20 08:00	07/24/20 18:55		W	
1,2,3-Trichloropropane	<37.4	ug/kg	125	37.4	1	07/24/20 08:00	07/24/20 18:55		W	
1,2,4-Trichlorobenzene	<41.7	ug/kg	250	41.7	1	07/24/20 08:00	07/24/20 18:55		W	
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,2-Dibromo-3-chloropropane	<237	ug/kg	789	237	1	07/24/20 08:00	07/24/20 18:55		W	
1,2-Dibromoethane (EDB)	<25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1.2-Dichlorobenzene	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,2-Dichloroethane	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,2-Dichloropropane	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,3,5-Trimethylbenzene	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,3-Dichlorobenzene	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,3-Dichloropropane	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	-	W	
• •	<25.0 <25.0		60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
1,4-Dichlorobenzene 2,2-Dichloropropane	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
2-Chlorotoluene	<25.0 <25.0		64.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
4-Chlorotoluene	<25.0 <25.0	ug/kg	64.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
	<25.0 <25.0	ug/kg	60.0	25.0 25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Benzene	<25.0 <25.0	ug/kg		25.0 25.0	1				W	
Bromobenzene Bromochloromethane	<25.0 <25.0	ug/kg	62.0	25.0 25.0	1	07/24/20 08:00	07/24/20 18:55 07/24/20 18:55		W	
		ug/kg	70.0			07/24/20 08:00				
Bromodichloromethane	<25.0 <25.0	ug/kg	60.0	25.0 25.0	1	07/24/20 08:00	07/24/20 18:55		W W	
Bromoform		ug/kg	72.0		1	07/24/20 08:00	07/24/20 18:55			
Bromomethane	<63.8	ug/kg	250	63.8	1	07/24/20 08:00	07/24/20 18:55		W	
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Chloropenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Chloroform	<46.4	ug/kg	250	46.4	1	07/24/20 08:00	07/24/20 18:55		W	
Chloroform	<47.5	ug/kg	250	47.5	1	07/24/20 08:00	07/24/20 18:55		W	
Chloromethane	<25.0	ug/kg	80.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Dibromochloromethane	<229	ug/kg	763	229	1	07/24/20 08:00	07/24/20 18:55	_	W	
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Dichlorodifluoromethane	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55		W	
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00			W	
Hexachloro-1,3-butadiene	<68.7	ug/kg	229	68.7	1	07/24/20 08:00			W	
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1		07/24/20 18:55		W	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00			W	
Methylene Chloride	<26.3	ug/kg	88.0	26.3	1	07/24/20 08:00	07/24/20 18:55		W	
Naphthalene	<27.3	ug/kg	91.0	27.3	1	07/24/20 08:00	07/24/20 18:55	91-20-3	W	

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Sample: WM-A Lab ID: 40211609001 Collected: 07/22/20 10:30 Received: 07/23/20 12:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	•		8260 Prepara		od: EP/	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Bay						
Styrene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	100-42-5	W
Tetrachloroethene	<38.7	ug/kg	129	38.7	1	07/24/20 08:00	07/24/20 18:55	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	65.0	25.0	1	07/24/20 08:00	07/24/20 18:55	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	156-59-2	W
cis-1,3-Dichloropropene	<42.3	ug/kg	141	42.3	1	07/24/20 08:00	07/24/20 18:55	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/24/20 08:00	07/24/20 18:55	179601-23-1	W
n-Butylbenzene	<30.0	ug/kg	100	30.0	1	07/24/20 08:00	07/24/20 18:55	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 18:55	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 18:55	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 18:55	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	62.0	25.0	1	07/24/20 08:00	07/24/20 18:55	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	67.0	25.0	1	07/24/20 08:00	07/24/20 18:55	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	74.0	25.0	1	07/24/20 08:00	07/24/20 18:55	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	120	%	58-145		1	07/24/20 08:00	07/24/20 18:55	1868-53-7	
Toluene-d8 (S)	99	%	56-140		1	07/24/20 08:00	07/24/20 18:55	2037-26-5	
4-Bromofluorobenzene (S)	90	%	52-137		1	07/24/20 08:00	07/24/20 18:55	460-00-4	
Percent Moisture	Analytical	Method: AST	M D2974-87						
	Pace Anal	ytical Service	es - Green Bay						
Percent Moisture	8.5	%	0.10	0.10	1		07/28/20 14:13		

REPORT OF LABORATORY ANALYSIS



Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Sample: WM-B Lab ID: 40211609002 Collected: 07/22/20 11:00 Received: 07/23/20 12:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical	Method: EPA	8260 Prepar	ation Metho	od: EP/	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Bay	/					
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	630-20-6	W
1.1.1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,2,3-Trichlorobenzene	<47.3	ug/kg	158	47.3	1	07/24/20 08:00	07/24/20 19:18		W
1,2,3-Trichloropropane	<37.4	ug/kg	125	37.4	1	07/24/20 08:00	07/24/20 19:18		W
1,2,4-Trichlorobenzene	<41.7	ug/kg	250	41.7	1	07/24/20 08:00	07/24/20 19:18		W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,2-Dibromo-3-chloropropane	<237	ug/kg	789	237	1	07/24/20 08:00	07/24/20 19:18		W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1.2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,2-Dichloroethane	<25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,2-Dichloropropane	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,3-Dichlorobenzene	<25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,3-Dichloropropane	<25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
1,4-Dichlorobenzene	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
2,2-Dichloropropane	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
2-Chlorotoluene	<25.0 <25.0	ug/kg ug/kg	64.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
4-Chlorotoluene	<25.0 <25.0	ug/kg ug/kg	64.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Benzene	<25.0 <25.0	ug/kg ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Bromobenzene	<25.0 <25.0	ug/kg ug/kg	62.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Bromochloromethane	<25.0 <25.0	ug/kg ug/kg	70.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Bromodichloromethane	<25.0 <25.0		60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Bromoform	<25.0 <25.0	ug/kg ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Bromomethane	<63.8		250	63.8	1	07/24/20 08:00	07/24/20 19:18		W
	<03.0 <25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Carbon tetrachloride Chlorobenzene	<25.0 <25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Chloroethane	<46.4	ug/kg	250	46.4	1	07/24/20 08:00	07/24/20 19:18		W
Chloroform	<40.4 <47.5	ug/kg	250 250	40.4 47.5	1	07/24/20 08:00	07/24/20 19:18		W
Chloromethane	<47.5 <25.0	ug/kg			1				W
Dibromochloromethane	<23.0 <229	ug/kg	80.0	25.0 229	1	07/24/20 08:00 07/24/20 08:00	07/24/20 19:18 07/24/20 19:18		W
	<229 <25.0	ug/kg	763 60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	_	W
Dibromomethane		ug/kg			-				
Dichlorodifluoromethane	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18		W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00			W
Hexachloro-1,3-butadiene	<68.7	ug/kg	229	68.7	1	07/24/20 08:00			W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1		07/24/20 19:18		W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00			W
Methylene Chloride	<26.3	ug/kg	88.0	26.3	1	07/24/20 08:00	07/24/20 19:18		W
Naphthalene	<27.3	ug/kg	91.0	27.3	1	07/24/20 08:00	07/24/20 19:18	91-20-3	W



Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Sample: WM-B Lab ID: 40211609002 Collected: 07/22/20 11:00 Received: 07/23/20 12:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	•		8260 Prepara		od: EP	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Bay	,					
Styrene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	100-42-5	W
Tetrachloroethene	<38.7	ug/kg	129	38.7	1	07/24/20 08:00	07/24/20 19:18	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	65.0	25.0	1	07/24/20 08:00	07/24/20 19:18	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	156-59-2	W
cis-1,3-Dichloropropene	<42.3	ug/kg	141	42.3	1	07/24/20 08:00	07/24/20 19:18	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/24/20 08:00	07/24/20 19:18	179601-23-1	W
n-Butylbenzene	<30.0	ug/kg	100	30.0	1	07/24/20 08:00	07/24/20 19:18	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:18	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:18	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:18	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	62.0	25.0	1	07/24/20 08:00	07/24/20 19:18	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	67.0	25.0	1	07/24/20 08:00	07/24/20 19:18	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	74.0	25.0	1	07/24/20 08:00	07/24/20 19:18	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	115	%	58-145		1	07/24/20 08:00	07/24/20 19:18	1868-53-7	
Toluene-d8 (S)	96	%	56-140		1	07/24/20 08:00	07/24/20 19:18	2037-26-5	
4-Bromofluorobenzene (S)	87	%	52-137		1	07/24/20 08:00	07/24/20 19:18	460-00-4	
Percent Moisture	Analytical	Method: AST	TM D2974-87						
	Pace Anal	ytical Service	es - Green Bay	,					
Percent Moisture	12.4	%	0.10	0.10	1		07/28/20 14:13		



Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Sample: WM-C Lab ID: 40211609003 Collected: 07/22/20 12:45 Received: 07/23/20 12:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical	Method: EPA	8260 Prepa	ration Metho	od: EP/	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Ba	y					
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	563-58-6	W
1,2,3-Trichlorobenzene	<47.3	ug/kg	158	47.3	1	07/24/20 08:00	07/24/20 19:41	87-61-6	W
1,2,3-Trichloropropane	<37.4	ug/kg	125	37.4	1	07/24/20 08:00	07/24/20 19:41	96-18-4	W
1,2,4-Trichlorobenzene	<41.7	ug/kg	250	41.7	1	07/24/20 08:00	07/24/20 19:41	120-82-1	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,2-Dibromo-3-chloropropane	<237	ug/kg	789	237	1	07/24/20 08:00	07/24/20 19:41		W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
2-Chlorotoluene	<25.0	ug/kg	64.0	25.0	1	07/24/20 08:00	07/24/20 19:41	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	64.0	25.0	1	07/24/20 08:00	07/24/20 19:41	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	71-43-2	W
Bromobenzene	<25.0	ug/kg	62.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
Bromochloromethane	<25.0	ug/kg	70.0	25.0	1	07/24/20 08:00	07/24/20 19:41	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41		W
Bromoform	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:41	75-25-2	W
Bromomethane	<63.8	ug/kg	250	63.8	1	07/24/20 08:00	07/24/20 19:41	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	108-90-7	W
Chloroethane	<46.4	ug/kg	250	46.4	1	07/24/20 08:00	07/24/20 19:41	75-00-3	W
Chloroform	<47.5	ug/kg	250	47.5	1	07/24/20 08:00	07/24/20 19:41	67-66-3	W
Chloromethane	<25.0	ug/kg	80.0	25.0	1	07/24/20 08:00	07/24/20 19:41	74-87-3	W
Dibromochloromethane	<229	ug/kg	763	229	1	07/24/20 08:00	07/24/20 19:41	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00			W
Dichlorodifluoromethane	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:41	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1		07/24/20 19:41		W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	100-41-4	W
Hexachloro-1,3-butadiene	<68.7	ug/kg	229	68.7	1	07/24/20 08:00			W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00			W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	1634-04-4	W
Methylene Chloride	<26.3	ug/kg	88.0	26.3	1	07/24/20 08:00			W
Naphthalene	<27.3	ug/kg	91.0	27.3	1	07/24/20 08:00	07/24/20 19:41	91-20-3	W



Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Sample: WM-C Lab ID: 40211609003 Collected: 07/22/20 12:45 Received: 07/23/20 12:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	•		8260 Prepara		od: EP/	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Bay						
Styrene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	100-42-5	W
Tetrachloroethene	216	ug/kg	149	44.7	1	07/24/20 08:00	07/24/20 19:41	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	65.0	25.0	1	07/24/20 08:00	07/24/20 19:41	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	156-59-2	W
cis-1,3-Dichloropropene	<42.3	ug/kg	141	42.3	1	07/24/20 08:00	07/24/20 19:41	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/24/20 08:00	07/24/20 19:41	179601-23-1	W
n-Butylbenzene	<30.0	ug/kg	100	30.0	1	07/24/20 08:00	07/24/20 19:41	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/24/20 08:00	07/24/20 19:41	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:41	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	72.0	25.0	1	07/24/20 08:00	07/24/20 19:41	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	62.0	25.0	1	07/24/20 08:00	07/24/20 19:41	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	67.0	25.0	1	07/24/20 08:00	07/24/20 19:41	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	74.0	25.0	1	07/24/20 08:00	07/24/20 19:41	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	58-145		1	07/24/20 08:00	07/24/20 19:41	1868-53-7	
Toluene-d8 (S)	98	%	56-140		1	07/24/20 08:00	07/24/20 19:41	2037-26-5	
4-Bromofluorobenzene (S)	88	%	52-137		1	07/24/20 08:00	07/24/20 19:41	460-00-4	
Percent Moisture	Analytical	Method: AST	M D2974-87						
	Pace Anal	ytical Service	es - Green Bay						
Percent Moisture	13.4	%	0.10	0.10	1		07/28/20 14:13		

(920)469-2436



Date: 07/29/2020 08:03 AM

QUALITY CONTROL DATA

Project: 317018 USH51
Pace Project No.: 40211609

QC Batch: 361128 Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40211609001, 40211609002, 40211609003

METHOD BLANK: 2087694 Matrix: Solid

Associated Lab Samples: 40211609001, 40211609002, 40211609003

	Blank		Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<7.8	50.0	07/24/20 09:30	
1,1,1-Trichloroethane	ug/kg	<13.5	50.0	07/24/20 09:30	
1,1,2,2-Tetrachloroethane	ug/kg	<15.7	52.0	07/24/20 09:30	
1,1,2-Trichloroethane	ug/kg	<15.7	52.0	07/24/20 09:30	
1,1-Dichloroethane	ug/kg	<13.5	50.0	07/24/20 09:30	
1,1-Dichloroethene	ug/kg	<11.8	50.0	07/24/20 09:30	
1,1-Dichloropropene	ug/kg	<10.7	50.0	07/24/20 09:30	
1,2,3-Trichlorobenzene	ug/kg	<47.3	158	07/24/20 09:30	
1,2,3-Trichloropropane	ug/kg	<37.4	125	07/24/20 09:30	
1,2,4-Trichlorobenzene	ug/kg	<41.7	250	07/24/20 09:30	
1,2,4-Trimethylbenzene	ug/kg	<18.1	60.0	07/24/20 09:30	
1,2-Dibromo-3-chloropropane	ug/kg	<237	789	07/24/20 09:30	
1,2-Dibromoethane (EDB)	ug/kg	<17.0	57.0	07/24/20 09:30	
1,2-Dichlorobenzene	ug/kg	<13.1	50.0	07/24/20 09:30	
1,2-Dichloroethane	ug/kg	<13.8	50.0	07/24/20 09:30	
1,2-Dichloropropane	ug/kg	<13.5	50.0	07/24/20 09:30	
1,3,5-Trimethylbenzene	ug/kg	<16.0	53.0	07/24/20 09:30	
1,3-Dichlorobenzene	ug/kg	<13.0	50.0	07/24/20 09:30	
1,3-Dichloropropane	ug/kg	<11.0	50.0	07/24/20 09:30	
1,4-Dichlorobenzene	ug/kg	<12.0	50.0	07/24/20 09:30	
2,2-Dichloropropane	ug/kg	<15.7	52.0	07/24/20 09:30	
2-Chlorotoluene	ug/kg	<19.3	64.0	07/24/20 09:30	
4-Chlorotoluene	ug/kg	<19.3	64.0	07/24/20 09:30	
Benzene	ug/kg	<12.5	42.0	07/24/20 09:30	
Bromobenzene	ug/kg	<18.5	62.0	07/24/20 09:30	
Bromochloromethane	ug/kg	<20.9	70.0	07/24/20 09:30	
Bromodichloromethane	ug/kg	<10.0	50.0	07/24/20 09:30	
Bromoform	ug/kg	<21.6	72.0	07/24/20 09:30	
Bromomethane	ug/kg	<63.8	250	07/24/20 09:30	
Carbon tetrachloride	ug/kg	<7.5	50.0	07/24/20 09:30	
Chlorobenzene	ug/kg	<16.8	56.0	07/24/20 09:30	
Chloroethane	ug/kg	<46.4	250	07/24/20 09:30	
Chloroform	ug/kg	<47.5	250	07/24/20 09:30	
Chloromethane	ug/kg	<24.0	80.0	07/24/20 09:30	
cis-1,2-Dichloroethene	ug/kg	<14.8	50.0	07/24/20 09:30	
cis-1,3-Dichloropropene	ug/kg	<42.3	141	07/24/20 09:30	
Dibromochloromethane	ug/kg	<229	763	07/24/20 09:30	
Dibromomethane	ug/kg	<17.7	59.0	07/24/20 09:30	
Dichlorodifluoromethane	ug/kg	<21.7	72.0	07/24/20 09:30	
Diisopropyl ether	ug/kg	<14.0	50.0	07/24/20 09:30	

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.



Date: 07/29/2020 08:03 AM

QUALITY CONTROL DATA

Project: 317018 USH51 Pace Project No.: 40211609

METHOD BLANK: 2087694 Matrix: Solid

Associated Lab Samples: 40211609001, 40211609002, 40211609003

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	<14.5	50.0	07/24/20 09:30	
Hexachloro-1,3-butadiene	ug/kg	<68.7	229	07/24/20 09:30	
Isopropylbenzene (Cumene)	ug/kg	<17.7	59.0	07/24/20 09:30	
m&p-Xylene	ug/kg	<32.4	108	07/24/20 09:30	
Methyl-tert-butyl ether	ug/kg	<16.2	54.0	07/24/20 09:30	
Methylene Chloride	ug/kg	<26.3	88.0	07/24/20 09:30	
n-Butylbenzene	ug/kg	<30.0	100	07/24/20 09:30	
n-Propylbenzene	ug/kg	<17.8	59.0	07/24/20 09:30	
Naphthalene	ug/kg	<27.3	91.0	07/24/20 09:30	
o-Xylene	ug/kg	<18.1	60.0	07/24/20 09:30	
p-Isopropyltoluene	ug/kg	<21.7	72.0	07/24/20 09:30	
sec-Butylbenzene	ug/kg	<21.5	72.0	07/24/20 09:30	
Styrene	ug/kg	<12.3	50.0	07/24/20 09:30	
tert-Butylbenzene	ug/kg	<18.7	62.0	07/24/20 09:30	
Tetrachloroethene	ug/kg	<38.7	129	07/24/20 09:30	
Toluene	ug/kg	<13.1	50.0	07/24/20 09:30	
trans-1,2-Dichloroethene	ug/kg	<20.2	67.0	07/24/20 09:30	
trans-1,3-Dichloropropene	ug/kg	<22.2	74.0	07/24/20 09:30	
Trichloroethene	ug/kg	<12.8	50.0	07/24/20 09:30	
Trichlorofluoromethane	ug/kg	<19.6	65.0	07/24/20 09:30	
Vinyl chloride	ug/kg	<14.5	50.0	07/24/20 09:30	
4-Bromofluorobenzene (S)	%	86	52-137	07/24/20 09:30	
Dibromofluoromethane (S)	%	117	58-145	07/24/20 09:30	
Toluene-d8 (S)	%	98	56-140	07/24/20 09:30	

LABORATORY CONTROL SAMPLE:	2087695					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2780	111	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2780	111	70-130	
1,1,2-Trichloroethane	ug/kg	2500	2410	96	70-130	
1,1-Dichloroethane	ug/kg	2500	2670	107	69-143	
1,1-Dichloroethene	ug/kg	2500	2270	91	73-118	
1,2,4-Trichlorobenzene	ug/kg	2500	2340	94	60-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2830	113	66-130	
1,2-Dibromoethane (EDB)	ug/kg	2500	2450	98	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2430	97	70-130	
1,2-Dichloroethane	ug/kg	2500	2610	104	70-130	
1,2-Dichloropropane	ug/kg	2500	2470	99	78-126	
1,3-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2280	91	70-130	
Benzene	ug/kg	2500	2320	93	70-130	
Bromodichloromethane	ug/kg	2500	2470	99	70-130	
Bromoform	ug/kg	2500	2300	92	67-130	

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REPORT OF LABORATORY ANALYSIS

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Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

LABORATORY CONTROL SAMPLE:	2087695	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Bromomethane	ug/kg	2500	2380	95	45-134	
Carbon tetrachloride	ug/kg	2500	2630	105	70-130	
Chlorobenzene	ug/kg	2500	2350	94	70-130	
nloroethane	ug/kg	2500	2550	102	58-143	
nloroform	ug/kg	2500	2640	106	76-122	
nloromethane	ug/kg	2500	1870	75	45-120	
s-1,2-Dichloroethene	ug/kg	2500	2600	104	69-130	
s-1,3-Dichloropropene	ug/kg	2500	2280	91	70-130	
oromochloromethane	ug/kg	2500	2210	88	70-130	
chlorodifluoromethane	ug/kg	2500	1450	58	26-99	
ylbenzene	ug/kg	2500	2400	96	80-120	
propylbenzene (Cumene)	ug/kg	2500	2350	94	70-130	
p-Xylene	ug/kg	5000	4740	95	70-130	
thyl-tert-butyl ether	ug/kg	2500	2470	99	70-130	
thylene Chloride	ug/kg	2500	2150	86	70-130	
(ylene	ug/kg	2500	2340	93	70-130	
rene	ug/kg	2500	2390	96	70-130	
trachloroethene	ug/kg	2500	2290	92	70-130	
luene	ug/kg	2500	2370	95	80-120	
ns-1,2-Dichloroethene	ug/kg	2500	2890	115	70-130	
ns-1,3-Dichloropropene	ug/kg	2500	2280	91	70-130	
chloroethene	ug/kg	2500	2420	97	70-130	
chlorofluoromethane	ug/kg	2500	2450	98	70-128	
yl chloride	ug/kg	2500	2140	86	53-110	
romofluorobenzene (S)	%			93	52-137	
promofluoromethane (S)	%			104	58-145	
uene-d8 (S)	%			91	56-140	

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.



1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

QUALITY CONTROL DATA

Project: 317018 USH51
Pace Project No.: 40211609

QC Batch: 361454 Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40211609001, 40211609002, 40211609003

SAMPLE DUPLICATE: 2089719

Date: 07/29/2020 08:03 AM

ParameterUnits40211609003 ResultDup ResultMax ResultRPDQualifiersPercent Moisture%13.413.5110

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: 317018 USH51
Pace Project No.: 40211609

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: 07/29/2020 08:03 AM

W Non-detect results are reported on a wet weight basis.

(920)469-2436



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 317018 USH51
Pace Project No.: 40211609

Date: 07/29/2020 08:03 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40211609001	WM-A	EPA 5035/5030B	361128	EPA 8260	361137
40211609002	WM-B	EPA 5035/5030B	361128	EPA 8260	361137
40211609003	WM-C	EPA 5035/5030B	361128	EPA 8260	361137
40211609001	WM-A	ASTM D2974-87	361454		
40211609002	WM-B	ASTM D2974-87	361454		
40211609003	WM-C	ASTM D2974-87	361454		

Email #1: mail #2: PACE LAB# Sampled By (Sign): Sampled By (Print): elephone: Project State: Project Name: Project Number Company Name: Data Package Options (billable) Phone: Project Contact: Branch/Location: Transmit Prelim Rush Results by (complete what you want): 00 003 Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) ☐ EPA Level IV ☐ EPA Level III special pricing and release of liability Samples on HOLD are subject to dharke tracompane, why WM-B Date Needed: WM-A M 22 - C CLIENT FIELD ID ばべ madisin USH 51 AN HOURS 82.92-928 800 Jone How 317018 Dan Mara On your sample NOT needed on MS/MSD your sample (billable) A = Air B = Biota C = Charcoal O = Oil S = Soil Regulatory Program: 22/20 10:20 DATE Relinquished By: Relinquished By Religioushed By the t COLLECTION elinquished By **Matrix Codes** DW = Drinking Water
GW = Ground Water
SW = Surface Water
WW = Waste Water
WP = Wipe 25:02 11:00 TIME PRESERVATION (CODE)* FILTERED? (YES/NO) H=Sodlum Bisulfate Solution A≖None B≖HCL C=H2SO4 D≠HNO3 E=DIWater F=Methanol G=NaOH MATRIX CHAIN OF CUSTODY ace Analytical* **Y/ Analyses Requested** 7/23/20 Z Π I=Sodium Thiosulfate で Date/Time: Date/Time Date/Time 12/10 Received By Received By: Received By: MN: 612-607-1700 WI: 920-469-2436 Invoice To Address: Invoice To Company: Invoice To Contact: Invoice To Phone: Mail To Company: COMMENTS Mail To Address: Mail To Contact: CLIENT 1/23/20 Date/Time Quote #: Date/Time: Date/Time: 012 TOB HEAFTCANTY.
THE 3000 MET 53.11) LAB COMMENTS (Lab Use Only) 40211609 Jankaak Receipt Temp = D Present / Net Present Cooler Custody Seal Intact / Not Intact Sample Receipt pH PACE Project No. OK / Adjusted

Profile #

(Please Print Clearly)

UPPER MIDWEST REGION

ige 19 of 21

C019a(27Jun2006)

ORIGINAL

AG4U AG4S AG1H BG1U AG1U BG3U 250 mL clear glass unpres AG2S 500 mL amber glass H2SO4 AG5U 100 mL amber glass unpres 019 017 Pace Lab# 018 916 015 214 013 012 |<u>9</u> 010 009 006 005 020 800 904 003 002 001 Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other, 120 mL amber glass unpres 125 mL amber glass H2SO4 AG1U 1 liter amber glass HCL 1 liter clear glass liter amber glass BG1U AG1H AG4S Glass AG4U AG5U AG2S BP3N **BP3B** BP3U BP1U BG3U BP1U 250 mL plastic unpres 1 liter plastic unpres 250 mL plastic H2SO4 250 mL plastic HNO3 250 mL plastic NaOH Lab Lot# of pH paper: BP3U **Plastic** BP3B BP3N BP3S VG9A DG9T VG9M **VG9H** VG9U DG9T VG9U VG9A Vials VG9D VG9H Lab Std #ID of preservation (if pH adjusted): 40 mL clear vial HCL 40 mL clear vial unpres 40 mL amber Na Thio 40 mL clear vial DI 40 mL clear vial MeOH 40 mL clear ascorbic VG9M VG9D Headspace in VOA Vials (>6mm) : □Yes □No ¬NVA *If yes look in headspace column **JGFU** JG9U Jars WGFU **WPFU** WGFU SP5T WPFU JG9U **ZPLC** SP5T JGFU General **ZPLC** 4 oz plastic jar unpres 4 oz clear jar unpres 9 oz amber jar unpres 4 oz amber jar unpres ziploc bag GN

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

Sample Preservation Receipt Form

Project # 4(

Page 1 of _____

20 mL plastic Na Thiosulfate

2.5/5/10

2.5 / 5 / 10 2.5 / 5 / 10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5 / 5 / 10 2.5/5/10 2.5/5/10 2.5 / 5 / 10 2.5 / 5 / 10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5 / 5 / 10 2.5 / 5 / 10

F-GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

Page 20 of 21

completed: Initial when

Date/

VOA Vials (>6mm)

NaOH+Zn Act pH ≥9

H2SO4 pH ≤2

NaOH pH ≥12

-INO3 pH ≤2

pH after adjusted

Volume

Client Name:

All containers needing preservation have been checked and noted below: a Yes a No

ace Analytical® 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

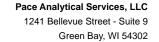
Author:

Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name:	7 → edee □ UPS □	Project	And the second s	0211609
Tracking #: Custody Seal on Cooler/Box Present:	♥ no Seals inta	ct ves I no	40211609	
Custody Seal on Samples Present:	S T T	ct: Tyes Tno		
Packing Material: Bubble Wrap DE		one Other		
Thermometer Used SR - N/A		D Blue Dry None	Samples	on ice, cooling process has begun
Cooler Temperature Uncorr: ROT /Corr:				Person examining contents:
Temp Blank Present: 10300	Biologica	l Tissue is Frozen	: TyesTno	7/23/30 Initials: SKW
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:	ØYes □No □N	/A 1.		
Chain of Custody Filled Out:	⊠ Yes □No □N	/A 2.		
Chain of Custody Relinquished:	ØYes □No □N	/A 3.		
Sampler Name & Signature on COC:	⊿ Yes □No □N	/A 4.		
Samples Arrived within Hold Time:	Ø[Yes □No	5.		
- VOA Samples frozen upon receipt	, □Yes □No	Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes ØNo	6.		
Rush Turn Around Time Requested:	□Yes Z No	7.		
Sufficient Volume:		8.		
For Analysis: 🗹 Yes □No MS/MS	SD: □Yes ØNo □N	/A		
Correct Containers Used:	Ø/Yes □No	9.		
-Pace Containers Used:	ZYes □No □N	/A		
-Pace IR Containers Used:	□Yes □No ☑N	/A		
Containers Intact:	ØYes □No	10.		
Filtered volume received for Dissolved tests	□Yes □No ☑N	/A 11.		
Sample Labels match COC:	□Yes ØNo □N	1A 12. No da	te 4 tin	ne on all wpfu:
-Includes date/time/ID/Analysis Matrix:	5			7/23/2
Trip Blank Present:	□Yes ØNo □N	/A 13.		So
Trip Blank Custody Seals Present	□Yes □No ☑N	/A		
Pace Trip Blank Lot # (if purchased):				
Client Notification/ Resolution:			If checked, see atta	ched form for additional comments
Person Contacted: Comments/ Resolution:		e/Time:		
			an arang kalang kal Kalang kalang kalan	

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



(920)469-2436



August 12, 2020

DAN HAAK TRC - MADISON 708 HEARTLAND TRAIL Madison, WI 53717

RE: Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Dear DAN HAAK:

Enclosed are the analytical results for sample(s) received by the laboratory on August 03, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Green Bay

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

Sincerely,

Tod Noltemeyer tod.noltemeyer@pacelabs.com (920)469-2436

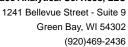
Tod noltemeyor

Project Manager

Enclosures

cc: Tom Perkins, TRC Madison Peggy Popp, TRC - Madison







CERTIFICATIONS

Project: 317018 USH 51 PORTAGE

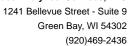
Pace Project No.: 40212161

Pace Analytical Services Green Bay

North Dakota Certification #: R-150

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 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





SAMPLE SUMMARY

Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40212161001	WM-D	Solid	07/30/20 09:30	08/03/20 07:30





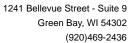
SAMPLE ANALYTE COUNT

Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40212161001	WM-D	EPA 8260	ALD	64	PASI-G
		ASTM D2974-87	MLR	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay





SUMMARY OF DETECTION

Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40212161001	WM-D					
EPA 8260 ASTM D2974-87	Tetrachloroethene Percent Moisture	379 18.9	ug/kg %	159 0.10	08/11/20 20:01 08/11/20 14:27	



1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Method: EPA 8260

Description: 8260 MSV Med Level Normal List

Client: TRC - MADISON

Date: August 12, 2020

General Information:

1 sample was analyzed for EPA 8260 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

Sample: WM-D Lab ID: 40212161001 Collected: 07/30/20 09:30 Received: 08/03/20 07:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical	Method: EPA	N 8260 Prepa	ration Meth	od: EP/	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Ba	у					
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	563-58-6	W
1,2,3-Trichlorobenzene	<47.3	ug/kg	158	47.3	1	08/06/20 08:30	08/11/20 20:01	87-61-6	W
1,2,3-Trichloropropane	<37.4	ug/kg	125	37.4	1	08/06/20 08:30	08/11/20 20:01	96-18-4	W
1,2,4-Trichlorobenzene	<41.7	ug/kg	250	41.7	1	08/06/20 08:30	08/11/20 20:01		W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	95-63-6	W
1,2-Dibromo-3-chloropropane	<237	ug/kg	789	237	1	08/06/20 08:30	08/11/20 20:01		W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
2-Chlorotoluene	<25.0	ug/kg	64.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
4-Chlorotoluene	<25.0	ug/kg	64.0	25.0	1	08/06/20 08:30	08/11/20 20:01	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Bromobenzene	<25.0	ug/kg	62.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Bromochloromethane	<25.0	ug/kg	70.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Bromoform	<25.0	ug/kg	72.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Bromomethane	<63.8	ug/kg	250	63.8	1	08/06/20 08:30	08/11/20 20:01		W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	108-90-7	W
Chloroethane	<46.4	ug/kg	250	46.4	1	08/06/20 08:30	08/11/20 20:01		W
Chloroform	<47.5	ug/kg	250	47.5	1	08/06/20 08:30	08/11/20 20:01		W
Chloromethane	<25.0	ug/kg	80.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Dibromochloromethane	<229	ug/kg	763	229	1	08/06/20 08:30	08/11/20 20:01		W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Dichlorodifluoromethane	<25.0	ug/kg	72.0	25.0	1		08/11/20 20:01		W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	100-41-4	W
Hexachloro-1,3-butadiene	<68.7	ug/kg ug/kg	229	68.7	1	08/06/20 08:30	08/11/20 20:01		W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Methyl-tert-butyl ether	<25.0	ug/kg ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01		W
Methylene Chloride	<26.3	ug/kg	88.0	26.3	1	08/06/20 08:30	08/11/20 20:01		W
Naphthalene	<27.3	ug/kg ug/kg	91.0	27.3	1	08/06/20 08:30	08/11/20 20:01		W
reapriliaiene	×21.3	ug/kg	91.0	21.3	1	00/00/20 00.30	00/11/20 20.01	31-20-3	v v



Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

Sample: WM-D Lab ID: 40212161001 Collected: 07/30/20 09:30 Received: 08/03/20 07:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	•		8260 Prepara		od: EP/	A 5035/5030B			
	Pace Anal	ytical Service	es - Green Bay						
Styrene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	100-42-5	W
Tetrachloroethene	379	ug/kg	159	47.7	1	08/06/20 08:30	08/11/20 20:01	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	65.0	25.0	1	08/06/20 08:30	08/11/20 20:01	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	156-59-2	W
cis-1,3-Dichloropropene	<42.3	ug/kg	141	42.3	1	08/06/20 08:30	08/11/20 20:01	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	08/06/20 08:30	08/11/20 20:01	179601-23-1	W
n-Butylbenzene	<30.0	ug/kg	100	30.0	1	08/06/20 08:30	08/11/20 20:01	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	08/06/20 08:30	08/11/20 20:01	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	72.0	25.0	1	08/06/20 08:30	08/11/20 20:01	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	72.0	25.0	1	08/06/20 08:30	08/11/20 20:01	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	62.0	25.0	1	08/06/20 08:30	08/11/20 20:01	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	67.0	25.0	1	08/06/20 08:30	08/11/20 20:01	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	74.0	25.0	1	08/06/20 08:30	08/11/20 20:01	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	107	%	58-145		1	08/06/20 08:30	08/11/20 20:01	1868-53-7	
Toluene-d8 (S)	110	%	56-140		1	08/06/20 08:30	08/11/20 20:01	2037-26-5	
4-Bromofluorobenzene (S)	96	%	52-137		1	08/06/20 08:30	08/11/20 20:01	460-00-4	
Percent Moisture	Analytical	Method: AST	M D2974-87						
	Pace Anal	ytical Service	es - Green Bay						
Percent Moisture	18.9	%	0.10	0.10	1		08/11/20 14:27		



Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

QC Batch: 362253 Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40212161001

METHOD BLANK: 2093792 Matrix: Solid

Associated Lab Samples: 40212161001

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<7.8	50.0	08/11/20 14:00	
1,1,1-Trichloroethane	ug/kg	<13.5	50.0	08/11/20 14:00	
1,1,2,2-Tetrachloroethane	ug/kg	<15.7	52.0	08/11/20 14:00	
1,1,2-Trichloroethane	ug/kg	<15.7	52.0	08/11/20 14:00	
1,1-Dichloroethane	ug/kg	<13.5	50.0	08/11/20 14:00	
1,1-Dichloroethene	ug/kg	<11.8	50.0	08/11/20 14:00	
1,1-Dichloropropene	ug/kg	<10.7	50.0	08/11/20 14:00	
1,2,3-Trichlorobenzene	ug/kg	<47.3	158	08/11/20 14:00	
1,2,3-Trichloropropane	ug/kg	<37.4	125	08/11/20 14:00	
1,2,4-Trichlorobenzene	ug/kg	<41.7	250	08/11/20 14:00	
1,2,4-Trimethylbenzene	ug/kg	<18.1	60.0	08/11/20 14:00	
1,2-Dibromo-3-chloropropane	ug/kg	<237	789	08/11/20 14:00	
1,2-Dibromoethane (EDB)	ug/kg	<17.0	57.0	08/11/20 14:00	
1,2-Dichlorobenzene	ug/kg	<13.1	50.0	08/11/20 14:00	
1,2-Dichloroethane	ug/kg	<13.8	50.0	08/11/20 14:00	
1,2-Dichloropropane	ug/kg	<13.5	50.0	08/11/20 14:00	
1,3,5-Trimethylbenzene	ug/kg	<16.0	53.0	08/11/20 14:00	
1,3-Dichlorobenzene	ug/kg	<13.0	50.0	08/11/20 14:00	
1,3-Dichloropropane	ug/kg	<11.0	50.0	08/11/20 14:00	
1,4-Dichlorobenzene	ug/kg	<12.0	50.0	08/11/20 14:00	
2,2-Dichloropropane	ug/kg	<15.7	52.0	08/11/20 14:00	
2-Chlorotoluene	ug/kg	<19.3	64.0	08/11/20 14:00	
4-Chlorotoluene	ug/kg	<19.3	64.0	08/11/20 14:00	
Benzene	ug/kg	<12.5	42.0	08/11/20 14:00	
Bromobenzene	ug/kg	<18.5	62.0	08/11/20 14:00	
Bromochloromethane	ug/kg	<20.9	70.0	08/11/20 14:00	
Bromodichloromethane	ug/kg	<10.0	50.0	08/11/20 14:00	
Bromoform	ug/kg	<21.6	72.0	08/11/20 14:00	
Bromomethane	ug/kg	<63.8	250	08/11/20 14:00	
Carbon tetrachloride	ug/kg	<7.5	50.0	08/11/20 14:00	
Chlorobenzene	ug/kg	<16.8	56.0	08/11/20 14:00	
Chloroethane	ug/kg	<46.4	250	08/11/20 14:00	
Chloroform	ug/kg	<47.5	250	08/11/20 14:00	
Chloromethane	ug/kg	<24.0	80.0	08/11/20 14:00	
cis-1,2-Dichloroethene	ug/kg	<14.8	50.0	08/11/20 14:00	
cis-1,3-Dichloropropene	ug/kg	<42.3	141	08/11/20 14:00	
Dibromochloromethane	ug/kg	<229	763	08/11/20 14:00	
Dibromomethane	ug/kg	<17.7	59.0	08/11/20 14:00	
Dichlorodifluoromethane	ug/kg	<21.7	72.0	08/11/20 14:00	
Diisopropyl ether	ug/kg	<14.0	50.0	08/11/20 14:00	

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: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

METHOD BLANK: 2093792 Matrix: Solid

Associated Lab Samples: 40212161001

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	<14.5	50.0	08/11/20 14:00	
Hexachloro-1,3-butadiene	ug/kg	<68.7	229	08/11/20 14:00	
Isopropylbenzene (Cumene)	ug/kg	<17.7	59.0	08/11/20 14:00	
m&p-Xylene	ug/kg	<32.4	108	08/11/20 14:00	
Methyl-tert-butyl ether	ug/kg	<16.2	54.0	08/11/20 14:00	
Methylene Chloride	ug/kg	<26.3	88.0	08/11/20 14:00	
n-Butylbenzene	ug/kg	<30.0	100	08/11/20 14:00	
n-Propylbenzene	ug/kg	<17.8	59.0	08/11/20 14:00	
Naphthalene	ug/kg	<27.3	91.0	08/11/20 14:00	
o-Xylene	ug/kg	<18.1	60.0	08/11/20 14:00	
p-Isopropyltoluene	ug/kg	<21.7	72.0	08/11/20 14:00	
sec-Butylbenzene	ug/kg	<21.5	72.0	08/11/20 14:00	
Styrene	ug/kg	<12.3	50.0	08/11/20 14:00	
tert-Butylbenzene	ug/kg	<18.7	62.0	08/11/20 14:00	
Tetrachloroethene	ug/kg	<38.7	129	08/11/20 14:00	
Toluene	ug/kg	<13.1	50.0	08/11/20 14:00	
trans-1,2-Dichloroethene	ug/kg	<20.2	67.0	08/11/20 14:00	
trans-1,3-Dichloropropene	ug/kg	<22.2	74.0	08/11/20 14:00	
Trichloroethene	ug/kg	<12.8	50.0	08/11/20 14:00	
Trichlorofluoromethane	ug/kg	<19.6	65.0	08/11/20 14:00	
Vinyl chloride	ug/kg	<14.5	50.0	08/11/20 14:00	
4-Bromofluorobenzene (S)	%	86	52-137	08/11/20 14:00	
Dibromofluoromethane (S)	%	92	58-145	08/11/20 14:00	
Toluene-d8 (S)	%	100	56-140	08/11/20 14:00	

LABORATORY CONTROL SAMPLE:	2093793					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2550	102	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2530	101	70-130	
1,1,2-Trichloroethane	ug/kg	2500	2460	99	70-130	
1,1-Dichloroethane	ug/kg	2500	2570	103	69-143	
1,1-Dichloroethene	ug/kg	2500	2490	100	73-118	
1,2,4-Trichlorobenzene	ug/kg	2500	2410	96	60-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2070	83	66-130	
1,2-Dibromoethane (EDB)	ug/kg	2500	2490	100	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2490	100	70-130	
1,2-Dichloroethane	ug/kg	2500	2280	91	70-130	
1,2-Dichloropropane	ug/kg	2500	2740	110	78-126	
1,3-Dichlorobenzene	ug/kg	2500	2510	100	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2390	96	70-130	
Benzene	ug/kg	2500	2420	97	70-130	
Bromodichloromethane	ug/kg	2500	2430	97	70-130	
Bromoform	ug/kg	2500	2030	81	67-130	

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: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

LABORATORY CONTROL SAMPLE:	2093793					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Bromomethane	ug/kg	2500	2050	82	45-134	
arbon tetrachloride	ug/kg	2500	2510	100	70-130	
nlorobenzene	ug/kg	2500	2490	100	70-130	
loroethane	ug/kg	2500	2240	90	58-143	
loroform	ug/kg	2500	2460	98	76-122	
loromethane	ug/kg	2500	2590	104	45-120	
-1,2-Dichloroethene	ug/kg	2500	2250	90	69-130	
-1,3-Dichloropropene	ug/kg	2500	2210	88	70-130	
bromochloromethane	ug/kg	2500	2220	89	70-130	
chlorodifluoromethane	ug/kg	2500	1930	77	26-99	
ylbenzene	ug/kg	2500	2530	101	80-120	
propylbenzene (Cumene)	ug/kg	2500	2490	100	70-130	
p-Xylene	ug/kg	5000	4990	100	70-130	
thyl-tert-butyl ether	ug/kg	2500	2180	87	70-130	
thylene Chloride	ug/kg	2500	2380	95	70-130	
ylene	ug/kg	2500	2520	101	70-130	
rene	ug/kg	2500	2300	92	70-130	
achloroethene	ug/kg	2500	2720	109	70-130	
uene	ug/kg	2500	2510	101	80-120	
ns-1,2-Dichloroethene	ug/kg	2500	2700	108	70-130	
ns-1,3-Dichloropropene	ug/kg	2500	2210	88	70-130	
chloroethene	ug/kg	2500	2610	104	70-130	
chlorofluoromethane	ug/kg	2500	2200	88	70-128	
yl chloride	ug/kg	2500	2470	99	53-110	
Bromofluorobenzene (S)	%			95	52-137	
romofluoromethane (S)	%			98	58-145	
luene-d8 (S)	%			101	56-140	

MATRIX SPIKE & MATRIX SF	PIKE DUPL	ICATE: 2093	794 MS	MSD	2093795							
		40212306007	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1560	1560	1370	1460	88	94	66-130		20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1560	1560	1560	1570	100	101	70-133	1	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1560	1560	1520	1580	97	101	70-130	4	20	
1,1-Dichloroethane	ug/kg	<25.0	1560	1560	1550	1570	99	101	69-143	2	20	
1,1-Dichloroethene	ug/kg	<25.0	1560	1560	1390	1510	89	97	58-120	8	20	
1,2,4-Trichlorobenzene	ug/kg	<41.7	1560	1560	1640	1570	105	101	60-130	4	20	
1,2-Dibromo-3- chloropropane	ug/kg	<237	1560	1560	1160	1230	74	79	59-136	6	20	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1560	1560	1470	1510	94	97	70-130	3	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1560	1560	1540	1540	99	99	70-130	0	20	
1,2-Dichloroethane	ug/kg	<25.0	1560	1560	1350	1430	87	91	70-136	5	20	
1,2-Dichloropropane	ug/kg	<25.0	1560	1560	1540	1660	99	106	78-128	8	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1560	1560	1550	1520	99	98	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

MATRIX SPIKE & MATRIX SF	PIKE DUPLI	CATE: 2093	794		2093795							
			MS	MSD								
	4	40212306007	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qua
1,4-Dichlorobenzene	ug/kg	<25.0	1560	1560	1470	1480	94	95	70-130	0	20	
Benzene	ug/kg	<25.0	1560	1560	1410	1490	90	95	70-130	5	20	
Bromodichloromethane	ug/kg	<25.0	1560	1560	1360	1440	87	92	70-130	5	20	
Bromoform	ug/kg	<25.0	1560	1560	1420	1370	91	88	63-130	4	20	
Bromomethane	ug/kg	<63.8	1560	1560	1260	1260	81	81	33-146	0	20	
Carbon tetrachloride	ug/kg	<25.0	1560	1560	1480	1480	95	95	65-130	0	20	
Chlorobenzene	ug/kg	<25.0	1560	1560	1490	1560	96	100	70-130	4	20	
Chloroethane	ug/kg	<46.4	1560	1560	1080	1080	69	69	46-156	0	20	
Chloroform	ug/kg	<47.5	1560	1560	1450	1490	93	96	75-130	3	20	
Chloromethane	ug/kg	<25.0	1560	1560	1400	1420	90	91	20-139	1	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1560	1560	1340	1360	86	87	69-130	1	20	
cis-1,3-Dichloropropene	ug/kg	<42.3	1560	1560	1330	1400	85	90	70-130	6	20	
Dibromochloromethane	ug/kg	<229	1560	1560	1440	1480	93	95	70-130	2	20	
Dichlorodifluoromethane	ug/kg	<25.0	1560	1560	1040	1090	66	70	10-99	5	22	
Ethylbenzene	ug/kg	<25.0	1560	1560	1490	1530	95	98	80-120	3	20	
sopropylbenzene (Cumene)	ug/kg	<25.0	1560	1560	1420	1500	91	96	70-130	5	20	
m&p-Xylene	ug/kg	<50.0	3120	3120	2850	3000	91	96	70-130	5	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1560	1560	1280	1380	82	89	70-130	7	20	
Methylene Chloride	ug/kg	<26.3	1560	1560	1500	1520	96	98	70-136	1	20	
o-Xylene	ug/kg	<25.0	1560	1560	1400	1510	90	97	70-130	8	20	
Styrene	ug/kg	<25.0	1560	1560	1380	1390	89	89	70-130	1	20	
Tetrachloroethene	ug/kg	<38.7	1560	1560	1640	1740	105	111	68-130	6	20	
Toluene	ug/kg	<25.0	1560	1560	1530	1560	98	100	80-120	2	20	
rans-1,2-Dichloroethene	ug/kg	<25.0	1560	1560	1600	1630	103	104	70-130	2	20	
rans-1,3-Dichloropropene	ug/kg	<25.0	1560	1560	1330	1390	85	89	70-130	5	20	
Trichloroethene	ug/kg	<25.0	1560	1560	1480	1610	95	103	70-130	8	20	
Trichlorofluoromethane	ug/kg	<25.0	1560	1560	1270	1450	81	93	53-128	13	20	
Vinyl chloride	ug/kg	<25.0	1560	1560	1440	1510	92	97	32-118	4	20	
1-Bromofluorobenzene (S)	%						94	91	52-137			
Dibromofluoromethane (S)	%						96	97	58-145			
Toluene-d8 (S)	%						100	100	56-140			

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(920)469-2436



QUALITY CONTROL DATA

Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

QC Batch: 362671 Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40212161001

SAMPLE DUPLICATE: 2096020

Date: 08/12/2020 02:26 PM

ParameterUnits40212648001 ResultDup ResultMax ResultRPDQualifiersPercent Moisture%18.518.0310

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: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

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: 08/12/2020 02:26 PM

W Non-detect results are reported on a wet weight basis.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 317018 USH 51 PORTAGE

Pace Project No.: 40212161

Date: 08/12/2020 02:26 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40212161001	WM-D	EPA 5035/5030B	362253	EPA 8260	362255
40212161001	WM-D	ASTM D2974-87	362671		

PO#: Emall #1: Sampled By (Sign): Sampled By (Print): Project Contact: Email #2: PACE LAB# Project State: Project Name: Project Number: Phone: Branch/Location: elephone: Data Package Options
(billable) Transmit Prelim Rush Results by (complete what you want): Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) EPA Level IV EPA Level III special pricing and release of liability Samples on HOLD are subject to DHOOK OTIC Somperies con Date Needed: と マ 1 CLIENT FIELD ID for r USH SI Madison 317018 3592-378 (300) On your sample NOT needed on MS/MSD your sample (billable) Portes Regulatory 7/30/20 OR 30 GW Relinquished By Relinquished By: **Matrix Codes** DW = Drinking Water
GW = Ground Water
SW = Surface Water
WW = Waste Water
WP = Wipe PRESERVATION FILTERED? (YES/NO) H=Sodium Bisulfate Solution (CODE)* MATRIX B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
Bisulfate Solution I=Sodium Thiosulfate J=Other CHAIN OF CUSTODY Pace Analytical® Fig. V | N/ **Analyses Requested** ۲) 8/3/20 7/31/20 5 ⊅ Date/Time: Date/Time: 072) Redived By: Received By Received By: Received By: Invoice To Company: Invoice To Address: **Invoice To Contact:** Invoice To Phone: Mail To Company: COMMENTS Mail To Address: Mail To Contact: Quote #: CLIENT Date/Time Date/Time: Date/Time 708 Hertland 100 prodizon, me LAB COMMENTS (Lab Use Only) Hask Receipt Temp = 45.5 Present /d/ot Present Cooler Custody Seal ORIGINAL Intact / Not Intact Sample Receipt pH PACE Project No OK / Adjusted 53717 Profile #

C019a/27.lun2006

UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Company Name:

はん

(Please Print Clearly)

From: Dan Milewsky

Sent: Monday, August 3, 2020 9:54 AM

To: Susan Wylie

Subject: RE: OVER TEMP COOLERS

Susan,

TRC can be logged per client.

Hold Kennedy for now. And they will want that cooler back so please secure it.

Dan

From: Susan Wylie <Susan.Wylie@pacelabs.com>

Sent: Monday, August 3, 2020 9:51 AM

To: Dan Milewsky < Dan. Milewsky@pacelabs.com>

Subject: RE: OVER TEMP COOLERS

TRC cooler temp 25.5 Project# 317018
Was a Saturday del. On label – received today.

Jeanne Kennedy cooler temp. 23.5. Check inclosed.

Shall I process?

Sent from Mail for Windows 10

AG4U AG1H **BG1U** AG1U AG2S AG5U AG4S Pace Lab# BG3U 250 mL clear glass unpres 019 017 015 012 010 020 018 016 014 013 011 009 800 006 004 005 002 003 001 Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other, 500 mL amber glass H2SO4 100 mL amber glass unpres 120 mL amber glass unpres 125 mL amber glass H2SO4 1 liter amber glass AG1U 1 liter amber glass HCL 1 liter clear glass All containers needing preservation have been checked and noted below:

Yes

No

No BG1U AG1H AG4S Glass AG4U AG5U AG2S BG3U BP3B BP3U BP1U BP1U 250 mL plastic unpres liter plastic unpres 250 mL plastic H2SO4 250 mL plastic HNO3 250 mL plastic NaOH BP3U Lab Lot# of pH paper: **Plastic** BP3B BP3N BP3S VG9A DG9T VG9M VG9H VG9U DG9T VG9U Vials VG9A VG9D VG9H Lab Std #ID of preservation (if pH adjusted): 40 mL clear vial unpres 40 mL amber Na Thio 40 mL clear vial DI 40 mL clear vial MeOH 40 mL clear vial HCL 40 mL clear ascorbic VG9M VG9D _Headspace in VOA Vials (>6mm) : ⊡Yes ⊡No p\\/\/\/If yes look in headspace column **JGFU** JG9U Jars WGFU **WPFU** WGFU SP5T WPFU Jegu **ZPLC** SP5T JGFU General **ZPLC** 4 oz plastic jar unpres 4 oz clear jar unpres 9 oz amber jar unpres ziploc bag 4 oz amber jar unpres GN 120 mL plastic Na Thiosulfate VOA Vials (>6mm) H2SO4 pH ≤2 Initial when completed: Œ NaOH+Zn Act pH ≥9 NaOH pH ≥12 HNO3 pH ≤2 Date/ Time: pH after adjusted 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5 / 5 / 10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10 2.5/5/10

Page 1 of

2.5 / 5 / 10 2.5/5/10 2.5/5/10

2.5/5/10 2.5 / 5 / 10 2.5/5/10

2.5 / 5 / 10

2.5/5/10

2.5/5/10

Volume (<u>1</u>

F-GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

Client Name:

Sample Preservation Receipt Form

Project #

Pace Analytical* 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)

Client Name: Courier: CS Logistics Fed Ex Speedee CUPS V Client Pace Other: Tracking #: 815377260736 Countedly Seel on Cooler/Rev Present: Cups Cape Seels inter-	40212161
Custody Seal on Cooler/Box Present: yes no Seals intac Custody Seal on Samples Present: yes no Seals intac	f I voc I no
Packing Material: Bubble Wrap Bubble Bags Nor SR - 83 Type of Ice: Wet Cooler Temperature Uncorr: 25 /Corr. 25.5	~~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.	Labeled By Initials: M17
Chain of Custody Present: ☑Yes ☐No ☐N//	<u>1 </u>
Chain of Custody Filled Out: ☐Yes ☐No ☐N//	1 2.
Chain of Custody Relinquished: ДYes □No □N/	A 3.
Sampler Name & Signature on COC: ✓ Yes ☐No ☐N/	4 4. da castaga (18 ang 18
Samples Arrived within Hold Time: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	5. (1) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
- VOA Samples frozen upon receipt □Yes □No	Date/Time:
Short Hold Time Analysis (<72hr): □Yes ☑No	6.
Rush Turn Around Time Requested: □Yes 万No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☐No ☐N/	8. A
Correct Containers Used:	9.
-Pace Containers Used: ✓ Yes □No □N/	
-Pace IR Containers Used: □Yes □No ☑N	A Laboratoria de la companya della companya della companya de la companya della c
Containers Intact:	10.
Filtered volume received for Dissolved tests	/A 11
Sample Labels match COC: Yes	/A 12.
Trip Blank Present: □Yes ☑No □N	/A 13.
Trip Blank Custody Seals Present □Yes □No □No	
Pace Trip Blank Lot # (if purchased):	
Client Notification/ Resolution: Person Contacted: Comments/ Resolution: Per Client Turn	If checked, see attached form for additional comments [e/Time: 83-20 \$\text{LW}

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