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September 24, 2018

Ms. Carrie Stoltz
Wisconsin Department of Natural Resources
511 Hanson Lake Road
Rhineland, WI 54501

Mr. John Hunt
Wisconsin Department of Natural Resources
1701 N 4th Street
Superior, WI 54880

Subject: Underground Storage Tank Abandonment Report
USH 2 – 902 – 904 Belknap St.
Superior, Douglas County, Wisconsin
WDNR BRRTS# 03-16-560358, WisDOT ID #8680-00-71

Dear Ms. Stoltz and Mr. Hunt:

Enclosed is the Underground Storage Tank (UST) Abandonment Report for the above-referenced site in Superior, Wisconsin. One UST was encountered in the USH 2 ROW along the south side of USH 2 at 902 – 904 Belknap Street. Concurrent with the USTs removal, 92.81 tons of petroleum-contaminated soil were excavated and treated/disposed at Vonco V Duluth, LLC Landfill. TRC's field observations and screening, as well as laboratory results of soil samples collected, indicate that petroleum contamination remains in the soil surrounding the UST excavation. TRC recommends that a groundwater investigation be completed at this site, including the installation of groundwater monitoring wells. This report is being submitted to the WDNR in accordance with current site assessment guidance.

Feel free to contact me at (608) 826-3628, with any questions or comments.

Sincerely,
TRC Environmental Corporation

Daniel Haak, P.E.
Project Manager

cc: WDNR UST Closure Assessments (hard copy and pdf on CD)
Todd Janigo – City of Superior (pdf via email)
Amy Adrihan – WisDOT (pdf via email)
Shar TeBeest – WisDOT (pdf via email)
Jeffery K. Anderson – MSA Professional Services, Inc.



Underground Storage Tank Abandonment Report

USH 2 – 902 – 904 Belknap Street
Superior, Douglas County, Wisconsin

WDNR BRRTS# 03-16-560358

WisDOT ID# 8680-00-71

September 2018



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Superior, Douglas County, Wisconsin

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WisDOT ID# 8680-00-71

September 2018

A handwritten signature in black ink, appearing to read "Tom Perkins", written above a horizontal line.

Tom Perkins
Project Engineer

A handwritten signature in blue ink, appearing to read "Daniel Haak", written above a horizontal line.

Daniel Haak, P.E.
Project Manager

A handwritten signature in blue ink, appearing to read "Stephen Sellwood", written above a horizontal line.

Stephen Sellwood, P.G.
TRC Quality Assurance

Table of Contents

Commonly Used Abbreviations and Acronyms	ii
Section 1 Introduction	1
1.1 Background	1
1.2 Purpose and Scope	2
Section 2 Description of Site Activities	3
Section 3 Findings, Conclusions, and Recommendations	5

List of Tables

Table 1	Summary of Soil Analytical Results
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List of Figures

Figure 1	Site Location Map
Figure 2	Site Map

List of Appendices

Appendix A	Photographs
Appendix B	Background Information
Appendix C	UST Disposal Documentation
Appendix D	UST Closure Checklist
Appendix E	UST Inventory Forms
Appendix F	Laboratory Analytical Results
Appendix G	Waste Inventory Forms

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

Section 1

Introduction

1.1 Background

On May 3, 2018, a 500-gallon capacity underground storage tank was removed from the USH 2 ROW at 902 – 904 Belknap Street, in Superior, Douglas County, Wisconsin. USH 2 is City of Superior-owned ROW. A site location map is presented as Figure 1. Evidence of the possible existence of an underground storage tank was observed at this location during a Phase 2.5 investigation conducted by TRC Environmental in July of 2012. The Wisconsin Department of Transportation (WisDOT) retained TRC Environmental Corporation (TRC) to coordinate the location and removal of the UST prior to highway reconstruction in this area. On May 3, 2018, TRC was on site to observe the removal of the UST and its contents. The soils above and surrounding the UST had evidence of petroleum contamination (elevated PID, petroleum odors, and staining). Photographs are shown in Appendix A. The UST was not listed in the DATCP Storage Tank Database. Historical records indicate that the site was a creamery and later a dry cleaner. A 1955 Sanborn map shows a gasoline UST at this location (Appendix B). Previous investigations identified petroleum-contaminated soil at this location (Appendix B). The City of Superior was named the Responsible Party for the petroleum contamination (BRRTS# 03-16-560358). At the same property, chlorinated solvent contamination (BRRTS #02-16-560359) has been investigated by the building owner.

TRC's subcontractor and site personnel for the UST removal were as follows:

Jake Schlueter
SGS Environmental Contracting, LLC
N2570 Daytona Drive
Merrill, WI 54452
WI LUST Remover/Cleaner Cert. #403633

Tom Perkins
TRC Environmental Corporation
708 Heartland Trail, Suite 3000
Madison, Wisconsin 53717
(608) 826-3672
WI LUST Site Assessor Cert. #468293

1.2 Purpose and Scope

This report documents the abandonment by removal of the UST located at 902 - 904 Belknap St. in Superior, Wisconsin. This report has been prepared in substantial conformance with Wisconsin Administrative Code, Chapter ATCP 93, "Flammable, Combustible and Hazardous Liquids."

Section 2

Description of Site Activities

On May 3, 2018, TRC and its tank remover/cleaner subcontractor, SGS Environmental Contracting, LLC (SGS), mobilized to the site to abandon the UST by removal in accordance with ATCP 93. The UST was approximately 500 gallons in size and was lying east/west parallel to USH 2 (see Figure 2). The UST contained water and is believed to have previously contained gasoline. Water from the tank was sampled for benzene, gasoline range organics, and lead for disposal purposes. Laboratory analysis showed concentrations of each of these parameters in the tank water. Approximately 500 gallons of water from the tank was containerized in ten 55-gallon drums for offsite disposal by Veolia Environmental Services. A total of 92.81 tons of surrounding soils were excavated, hauled, treated, and disposed of at Vonco V Duluth, LLC Landfill.

The tank was constructed of bare steel. Some holes were observed throughout the tank, likely due to corrosion. No piping was discovered within the area of the tank excavation. The UST was transported to Schulz's Recycling Inc. in Merrill, Wisconsin for disposal. UST disposal documentation is presented in Appendix C, and the UST closure checklist and UST inventory forms are presented in Appendices D and E, respectively.

During the abandonment of the UST, soil samples were collected from the UST excavation sidewalls and the base of the excavation, and field-screened (PID readings and odors) for petroleum contamination. No groundwater was encountered while excavating at this location. Groundwater was expected to be beyond the limits of excavation based on nearby investigations. All samples collected for field-screening analysis were laboratory analyzed for PVOCs and naphthalene. Following sample collection, the tank excavation was backfilled and compacted by the highway contractor.

On May 11, 17, 18, and 23 of 2018, additional soil samples were collected to the north, east, and west of the original UST excavation during water and storm water utility construction excavations. Additional soil samples were collected due to the proximity of utility excavations to the extents of the excavation for the UST removal. Soil sample locations are presented in Figure 2. Soil was field-screened by TRC personnel during excavations for utility construction on Belknap Street, near the UST removal location. Evidence of contaminated soil (PID > 10 ppm, petroleum odor, soil staining) was encountered during storm sewer construction along the south side of Belknap Street, from Station 173+40 to 173+70, 0-10 feet below ground surface. An additional 136.81 tons of contaminated soil were transported to the Vonco V landfill for disposal from this area. Evidence of low-level contaminated soil (PID < 10 ppm, petroleum

odor, soil staining) was encountered during storm sewer construction along Belknap Street, north of the UST location, from Station 173+30 to 173+60, 0-10 feet below ground surface. Soil from this area was reused on site in accordance with Special Provisions. No evidence of contamination was encountered during water main construction that occurred north of the UST location.

Laboratory analytical results for the soil are presented in Appendix F and are summarized and compared to NR 720 RCLs in Table 1. PID field-screening results are also presented in Table 1. The laboratory analytical results for the soil around the UST exceed NR720 RCLs. Two of the soil samples from the utility excavations had no detected contamination. Two of these soil samples had benzene concentrations exceeding the groundwater pathway NR720 RCL.

Section 3

Findings, Conclusions, and Recommendations

TRC's field observations and screening, as well as laboratory analytical results, indicate the following:

- The UST located in the USH 2 ROW at 902 – 904 Belknap Street in Superior, Wisconsin, was abandoned by removal in accordance with the requirements of ATCP 93. A closure assessment was performed on the UST and the UST closure checklist and UST inventory forms, as part of Wisconsin Tank-System Site Assessment (TSSA) have been submitted to WDATCP and WDNR.
- Ten 55-gallon drums containing an approximate total of 500 gallons of water was removed from the UST and containerized for off-site disposal by Veolia (Appendix G).
- 229.62 tons of petroleum-contaminated soil were treated/disposed at Vonco V Duluth, LLC Landfill.
- The UST excavation was backfilled with clean soil and compacted by the highway contractor.
- Petroleum contamination remains in the soil surrounding the UST at concentrations exceeding NR 720 RCLs.
- Groundwater was not encountered during the abandonment of the UST and therefore, groundwater quality was not evaluated.
- It is recommended that a groundwater investigation be completed at this site. The groundwater investigation should include the installation of groundwater monitoring wells both at and downgradient of the location of the former tank bed.

Table 1
 Summary of Soil Analytical Results
 USH 2 - 902 - 904 Belknap St., Superior, Douglas County, Wisconsin
 WisDOT ID # 8680-0-71

ANALYTES	Unit	NR 720 SOIL RCLs ⁽³⁾												
		SOIL TO GROUNDWATER PATHWAY ⁽¹⁾	DIRECT CONTACT PATHWAY		SWN	SWS	SWE	SWW	BE	BW	STA 173+30,10'R, 9' BGS	STA 173+35, 15'R, 8' BGS	STA 173+80, 30'R, 7' BGS ⁽⁵⁾	STA 173+35, 30'R, 4.5' BGS ⁽⁶⁾
			NON-INDUSTRIAL ⁽²⁾	INDUSTRIAL ⁽²⁾	7'	7'	7'	7'	15'	15'	9'	8'	7'	4.5'
PID (ppm)	ppm	-	-	-	840	1,430	518	265	180	101	<1	3	<1	<1
VOCs														
Benzene	(µg/kg)	5.1	1,600	7,070	9,060	14,100	1,410	8,110	643	286	<25	659	<25	<i>41.1J</i>
Ethylbenzene	(µg/kg)	1,570	8,020	35,400	13,100	10,400	458	190	62.3J	<25	<25	<25	<25	<25
Methyl tert-butyl ether	(µg/kg)	27	63,800	282,000	<312	<200	<25	<25	<25	<25	<25	<25	<25	<25
Naphthalene	(µg/kg)	658.2	5,520	24,100	5,970	5,310	137	<25	<25	<25	<25	<25	<25	66.4J
Toluene	(µg/kg)	1,107.2	818,000	818,000	<312	<200	<25	<25	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	(µg/kg)	1382.1 ⁽⁴⁾	219,000	219,000	43,600	35,000	246	552	155	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	(µg/kg)		182,000	182,000	21,400	17,200	110	185	59.5J	<25	<25	<25	<25	<25
Xylenes	(µg/kg)	3,960	260,000	260,000	42,400	37,480	1,285	1,950	305.0J	<75	<75	<75	<75	<75

Notes:

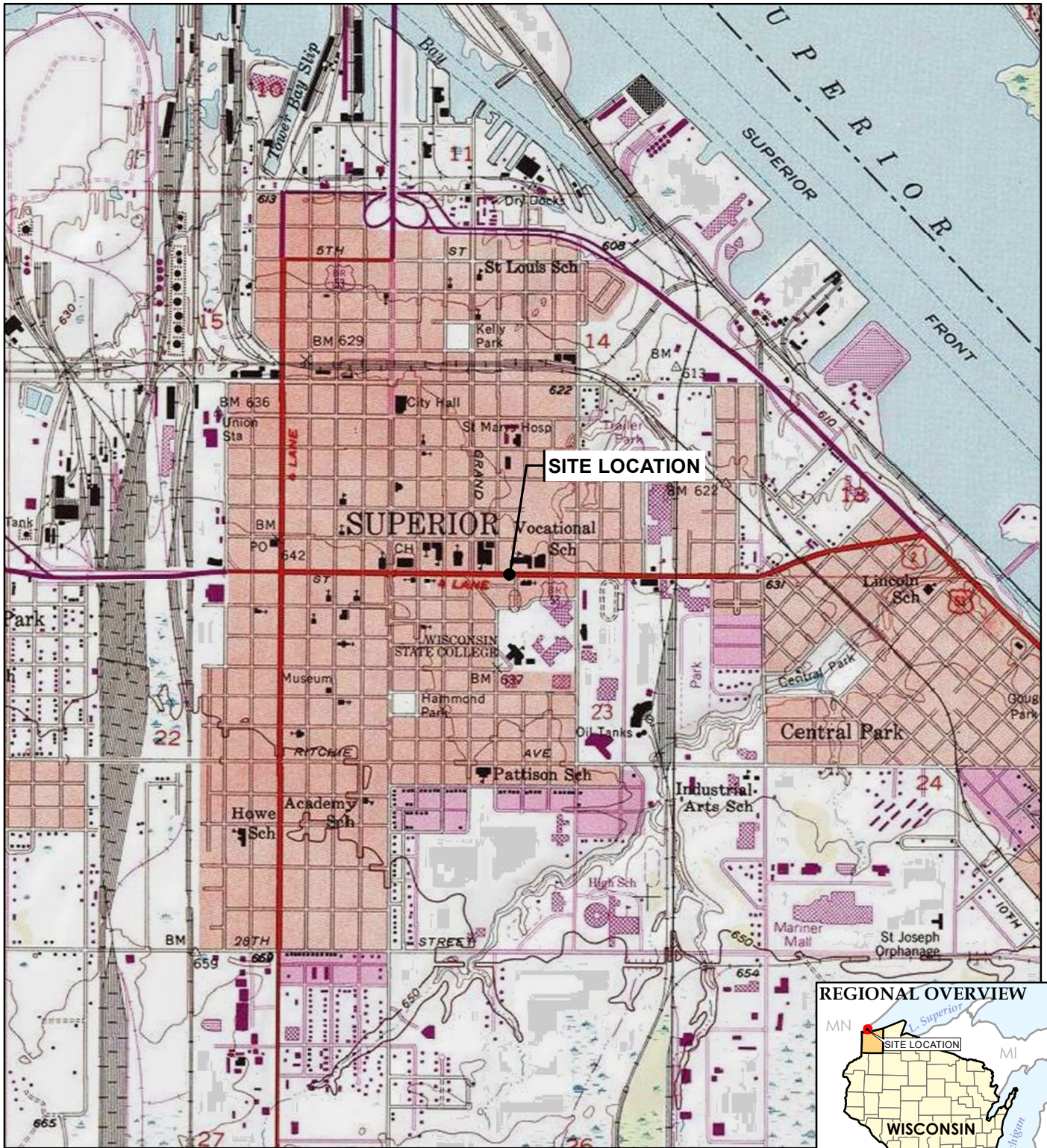
1. PID = Photoionization Detector
2. µg/kg = micrograms per kilogram (ppb)
3. VOCs = Volatile Organic Compounds analyzed using EPA Method 8260B
4. Samples were collected by TRC and analyzed by Pace Analytical (WDNR Cert. #405132750)
5. RCLs = Residual Contaminant Levels.
6. J = Estimated concentration at or above the Limit of Detection and below the Limit of Quantitation.
7. *Italics* = indicates that the analyte exceeds the groundwater pathway RCL.

Created by: T. Perkins 6/11/2018

Checked By: C. Olson 7/13/2018

Footnotes:

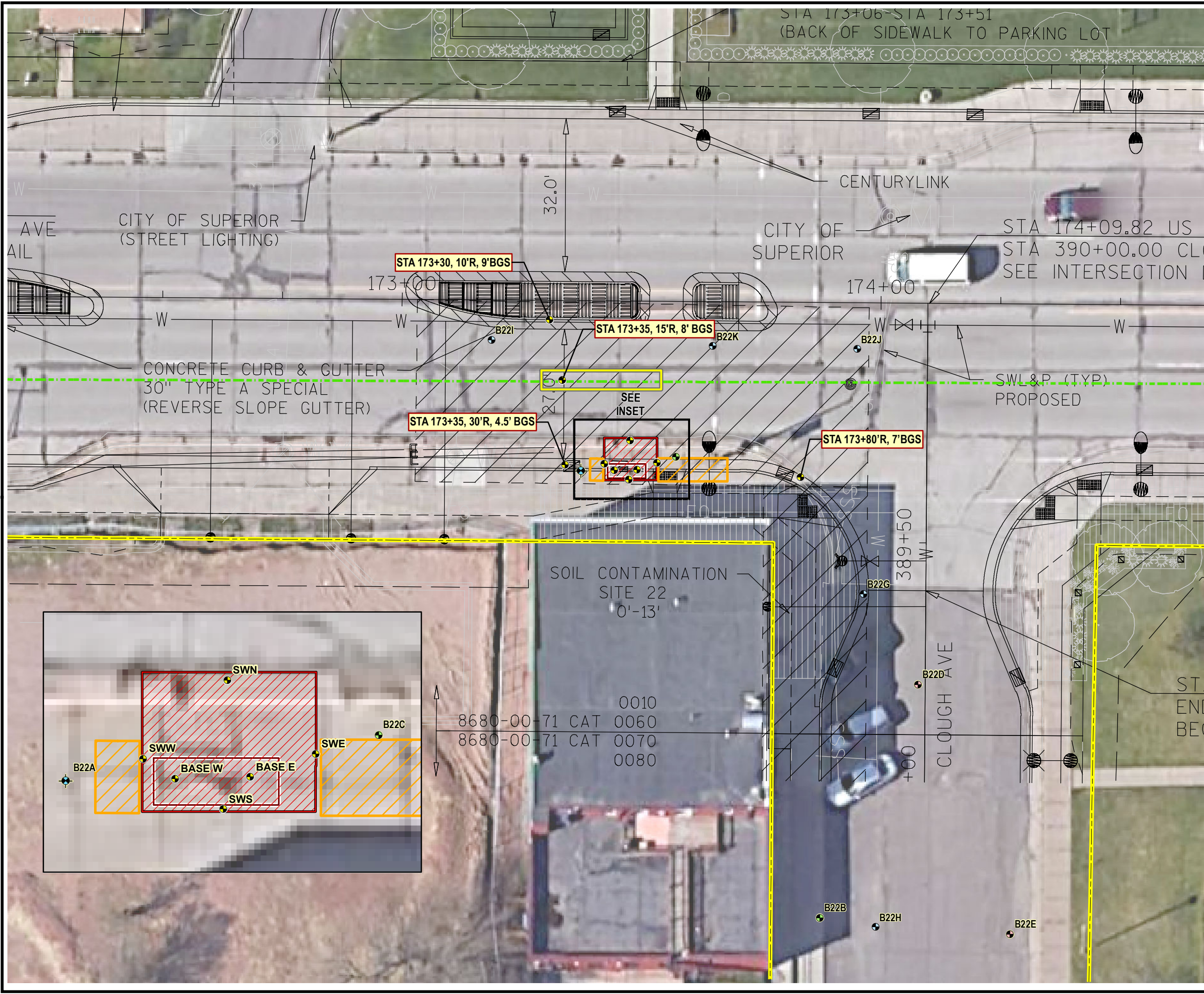
- ⁽¹⁾ Value is the generic RCL for the groundwater pathway.
- ⁽²⁾ Value is the generic RCL for exposure by direct contact.
- ⁽³⁾ Calculated from http://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search using default exposure assumptions listed in NR 720.12(3).
- ⁽⁴⁾ Standard is for combined 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.
- ⁽⁵⁾ Sample ID STA 173+60, 30'R, 7' BGS in lab analytical report.
- ⁽⁶⁾ Sample ID STA 173+25, 25'R, 4.5' BGS in lab analytical report.



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



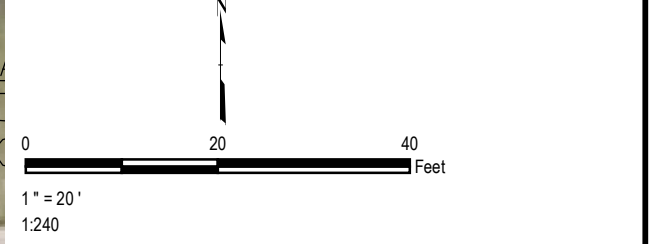
 <p>708 Heartland Trail Suite 3000 Madison, WI 53717 Phone: 608.826.3600</p> <p>TRC - GIS</p>	PROJECT:	902-904 Belknap Street (USH 2) WisDOT ID# 8680-00-71 SUPERIOR, WISCONSIN	DRAWN BY:	S. MAJOR
	TITLE:	SITE LOCATION MAP	CHECKED BY:	T. PERKINS
			APPROVED BY:	D. HAAK
			DATE:	JULY 2018
			PROJ. NO.:	274386
			FILE:	274386-001SLM.mxd
			FIGURE 1	



LEGEND

- UST EXCAVATION AREA (SEE NOTE 3)
- UST
- CONTAMINATED SOIL ENCOUNTERED DURING UTILITY CONSTRUCTION AND DISPOSED OF BY LANDFILL (SEE NOTE 4)
- LOW-LEVEL CONTAMINATED SOIL ENCOUNTERED DURING UTILITY CONSTRUCTION AND REUSED ONSITE (SEE NOTE 5)
- SOIL SAMPLE LOCATION
- SOIL BORING (JULY 2016)
- SOIL BORING (AUG 2015)
- SOIL BORING (JULY 2012)
- SOIL BORING / TEMP WELL (JULY 2012)
- STORM SEWER
- RIGHT-OF-WAY BOUNDARY

- NOTES**
1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO, 2016.
 2. SITE FEATURES ARE APPROXIMATE.
 3. EXTENTS OF SOIL EXCAVATED DURING UST REMOVAL ON 5/3/2018. EVIDENCE OF SOIL CONTAMINATION WAS OBSERVED (I.E., PID > 10 PPM, PETROLEUM ODORS, SOIL STAINING). SOIL WAS TREATED AND DISPOSED OF AT LANDFILL.
 4. EXTENTS OF SOIL EXCAVATED DURING UTILITY CONSTRUCTION ALONG USH 2 NEAR THE FORMER UST LOCATION. EVIDENCE OF SOIL CONTAMINATION WAS OBSERVED (I.E., PID > 10 PPM, PETROLEUM ODORS, SOIL STAINING). SOIL WAS TREATED AND DISPOSED OF AT LANDFILL.
 5. EXTENTS OF SOIL EXCAVATED DURING UTILITY CONSTRUCTION ALONG USH 2 NEAR THE FORMER UST LOCATION. EVIDENCE OF LOW-LEVEL SOIL CONTAMINATION WAS OBSERVED (I.E., PID < 10 PPM, PETROLEUM ODORS, SOIL STAINING). SOIL WAS REUSED ON SITE IN ACCORDANCE WITH SPECIAL PROVISIONS.



PROJECT:		902-904 BELKNAP STREET (USH 2) WISDOT ID# 8680-00-71 SUPERIOR, WISCONSIN	
TITLE:			
SITE MAP			
DRAWN BY:	S. MAJOR	PROJ. NO.:	274386
CHECKED BY:	T. PERKINS	FIGURE 2	
APPROVED BY:	D. HAAK		
DATE:	SEPTEMBER 2018		
		708 Heartland Trail Suite 3000 Madison, WI 53717 Phone: 608.826.3600	
FILE NO.:		272275-003.mxd	

Appendix A Photographs



Photographic Log



Client Name: Wisconsin Department of Transportation		Site Location: USH 2 – 902 – 904 Belknap Street Superior, Douglas County, Wisconsin	Project No.: TRC #274386 WisDOT ID #8680-00-71
Photo No. 1	Date 05/03/18		
Description Location of UST at 902 – 904 Belknap Street, removed during USH 2 reconstruction. Photo taken looking east.			

Photo No. 2	Date 05/03/2018	
Description Top of UST at 902 - 904 Belknap Street Photo taken looking northwest.		



Photographic Log


Client Name: Wisconsin Department of Transportation		Site Location: USH 2 – 902 – 904 Belknap Street Superior, Douglas County, Wisconsin	Project No.: TRC #274386 WisDOT ID #8680-00-71
Photo No. 3	Date 05/03/2018		
Description Tank contained water. Petroleum odors were observed. Photo taken looking north.			

Photo No. 4	Date 05/03/2018		
Description Contractor excavation for UST removal. Soils above and surrounding the UST showed evidence of contamination. Photo taken looking northeast.			



Photographic Log






Client Name: Wisconsin Department of Transportation		Site Location: USH 2 – 902 – 904 Belknap Street Superior, Douglas County, Wisconsin	Project No.: TRC #274386 WisDOT ID #8680-00-71
Photo No. 5	Date 05/03/2018		
Description Contractor removing tank. Photo taken looking east.			

Photo No. 6	Date 05/03/2018		
Description North and west sidewalls. Photo taken looking northwest.			



Photographic Log

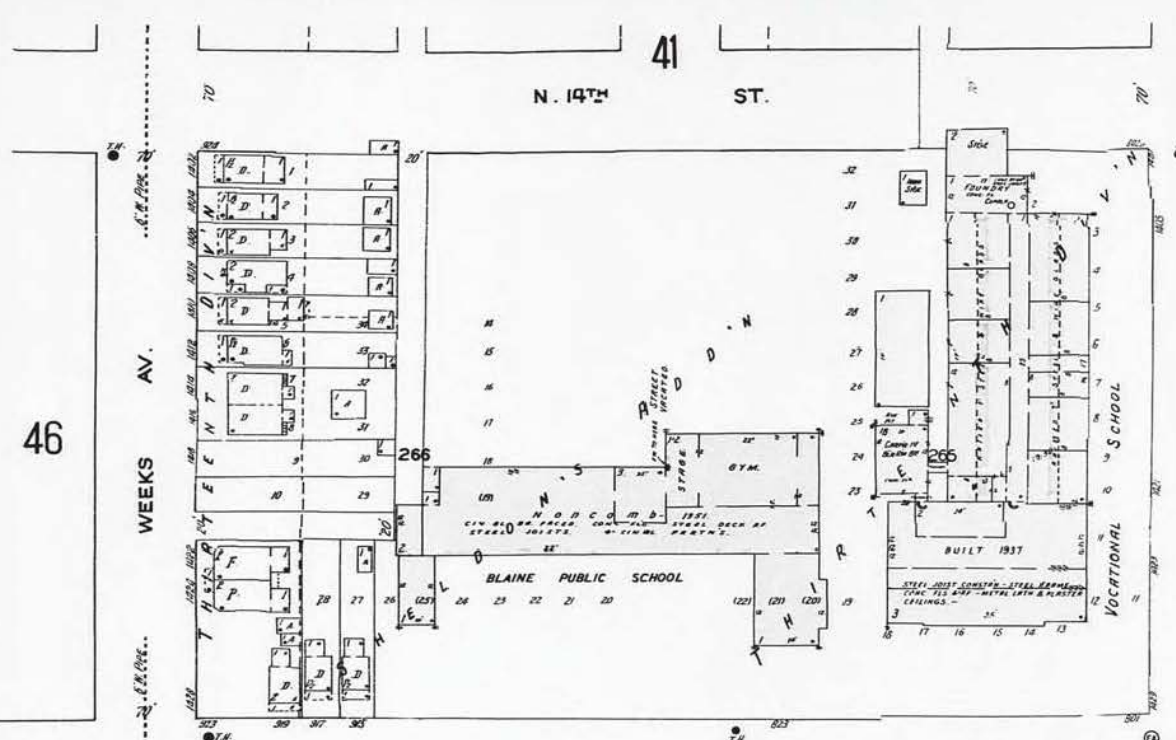
Client Name:		Site Location:	Project No.:
Wisconsin Department of Transportation		USH 2 – 902 – 904 Belknap Street Superior, Douglas County, Wisconsin	TRC #274386 WisDOT ID #8680-00-71
Photo No.	Date		
7	05/03/2018		
Description			
South and west sidewalls. Photo taken looking south.			
Photo No.	Date		
8	05/03/2018		
Description			
East sidewall. Photo taken looking east.			

Appendix B

Background Information

1955 Certified Sanborn Map

SUPERIOR, WIS.
42



46

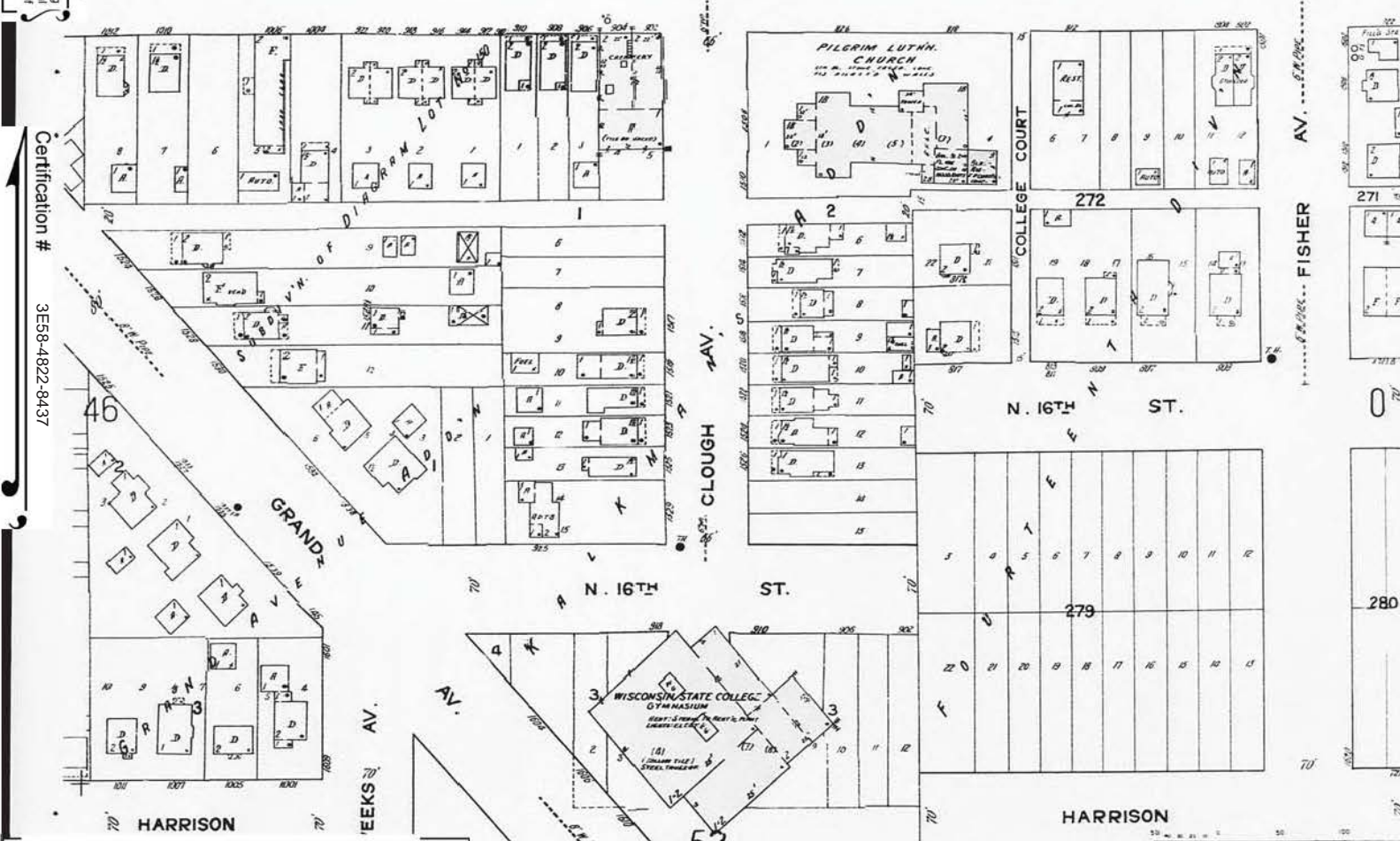
75

77

BELKNAP

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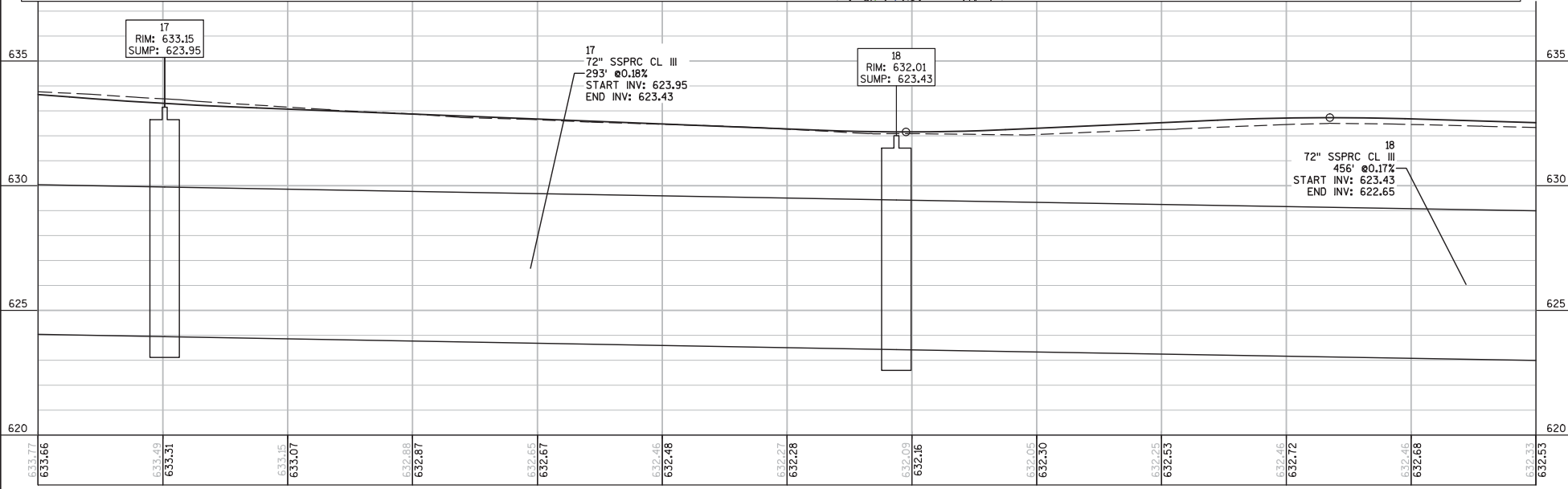
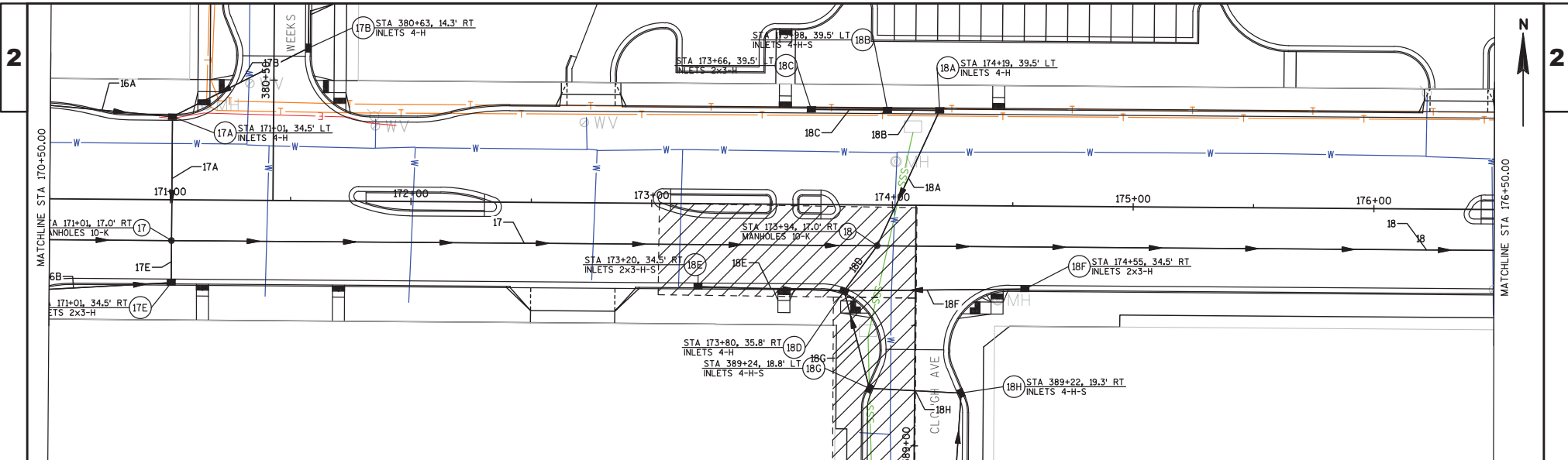


HARRISON

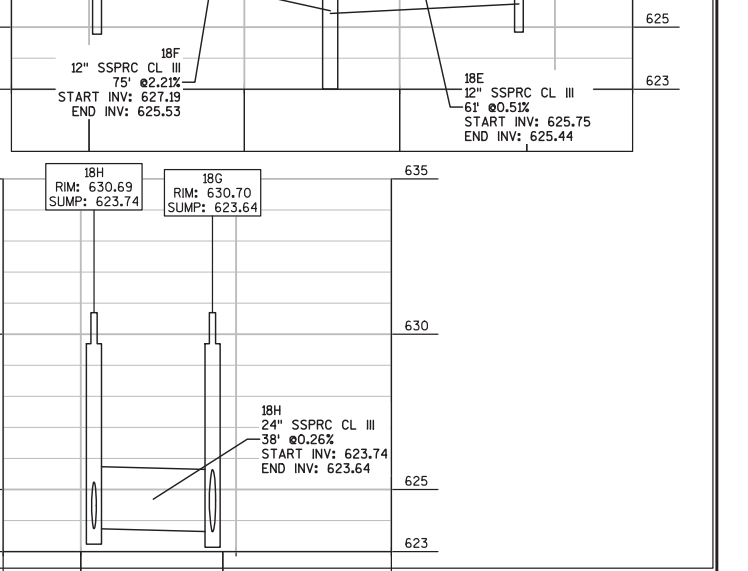
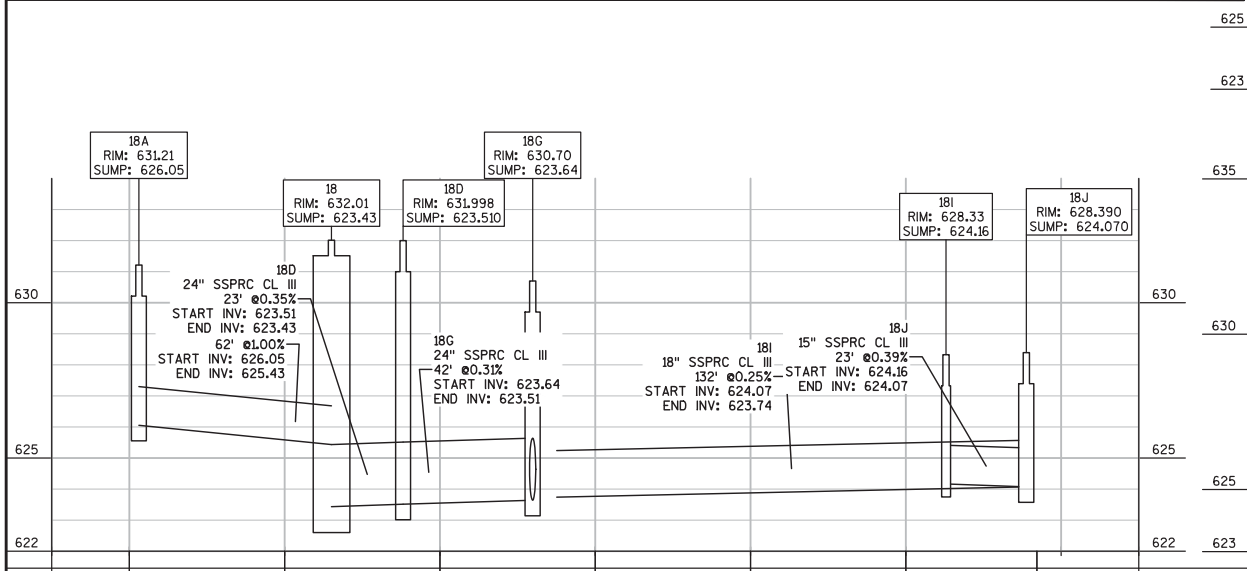
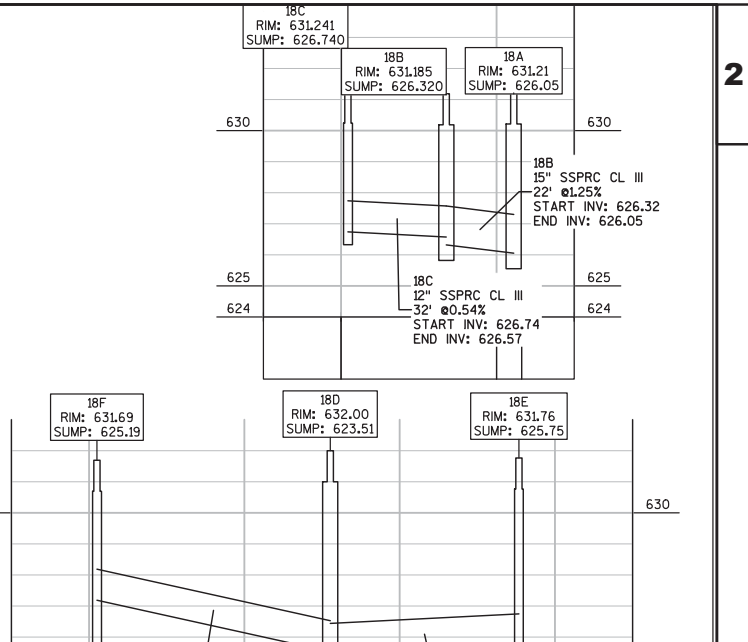
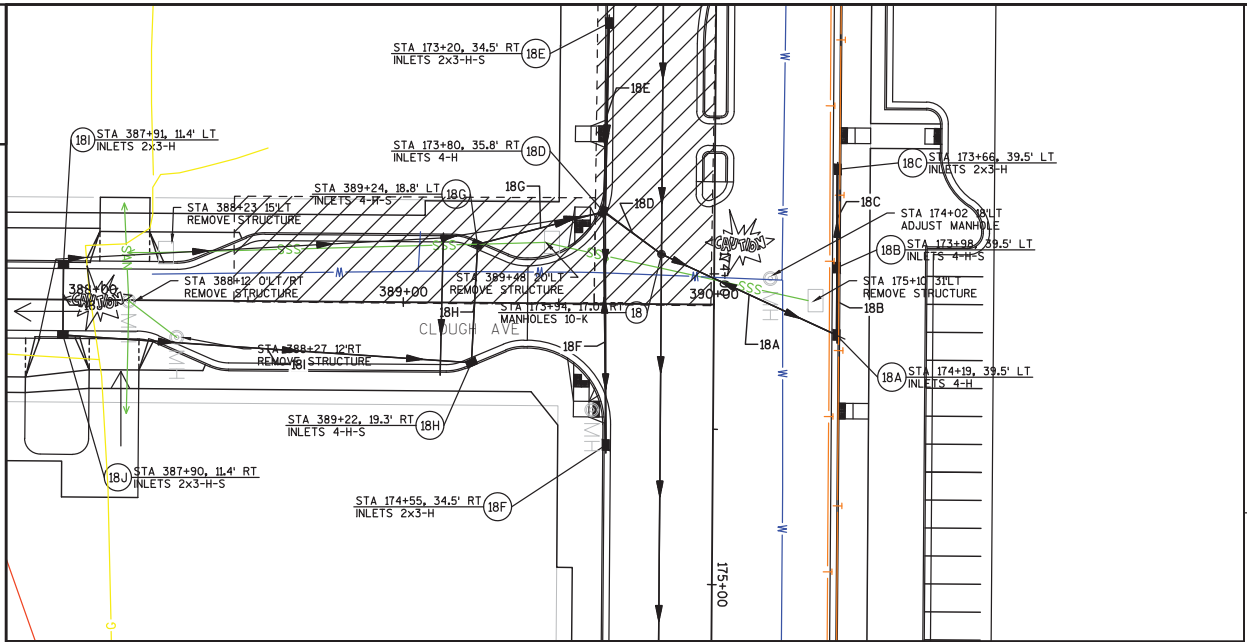
HARRISON



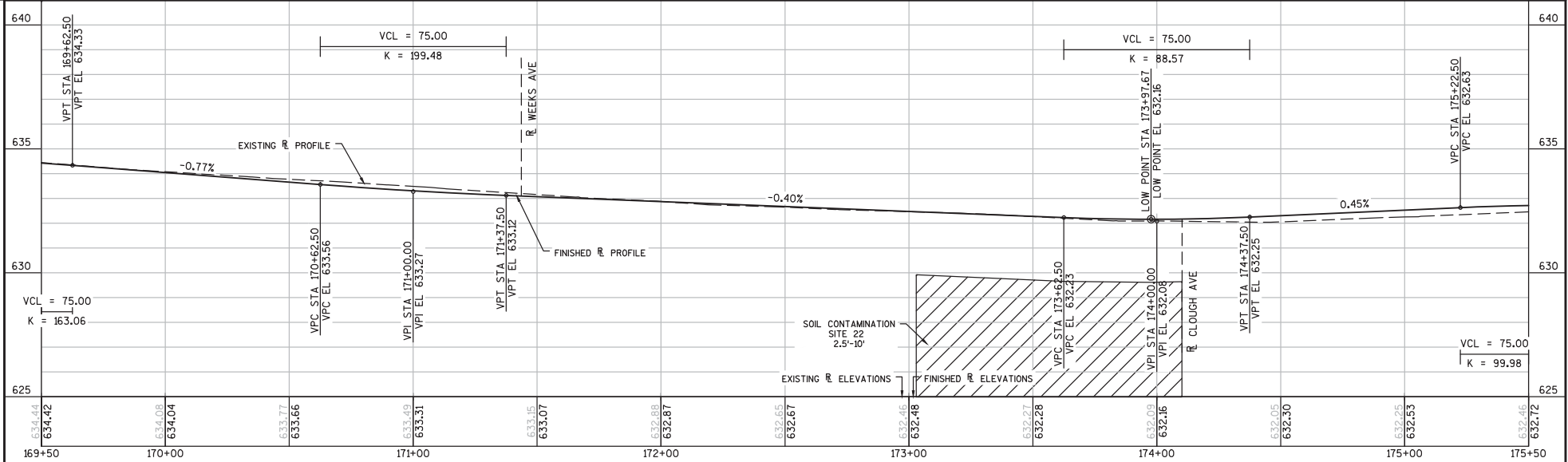
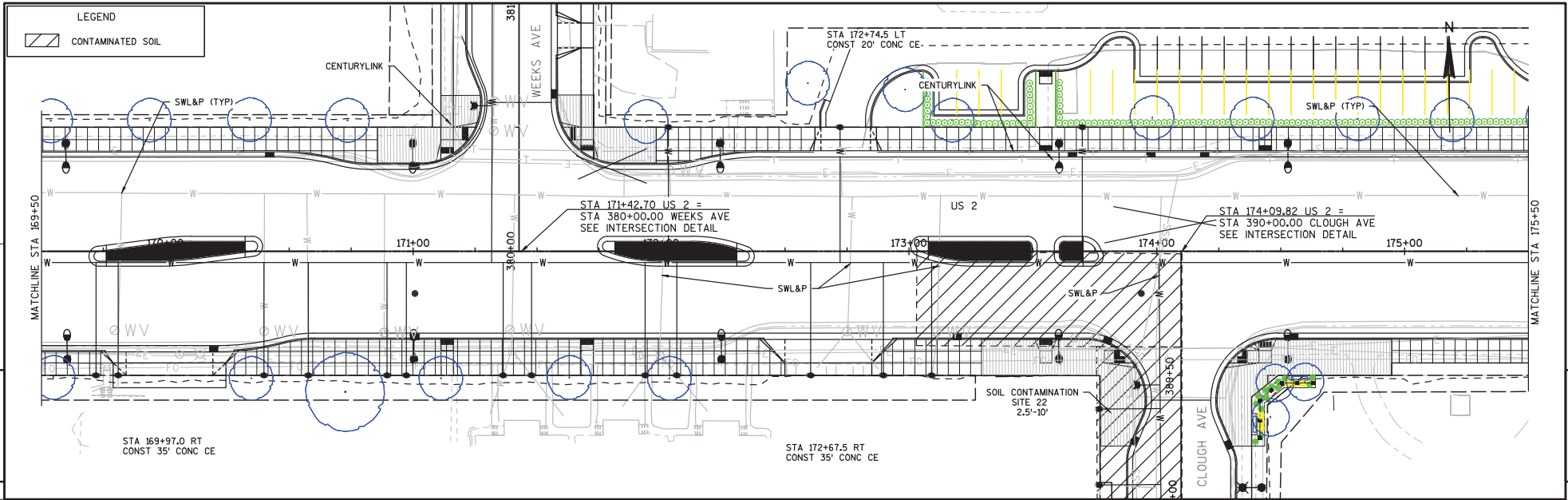
Site Name: Douglas County
 Address: Douglas County
 City, ST, ZIP: Superior WI 54880
 Client: TRC
 EDR Inquiry: 3301776.1
 Order Date: 4/12/2012 1:16:51 PM
 Certification # 3E58-4822-8437
 Copyright: 1955



PROJECT NO: 8680-00-01/71	HWY: USH 2	COUNTY: DOUGLAS	STORM SEWER
			SHEET E



PROJECT NO: 8680-00-71 HWY: US 2 COUNTY: DOUGLAS STORM SEWER SHEET E



PROJECT NO: 8680-00-71 | HWY: US 2-BELKNAP STREET | COUNTY: DOUGLAS | PLAN AND PROFILE: US 2 - BELKNAP STREET | SHEET | E



January 10, 2017

Phil Richard
Department of Natural Resources
875 S. 4th Ave
Park Falls, WI 54552

Re: Summary Letter Report and Work Plan, Letsos Property - Belknap Street
902-904 Belknap Street, Superior, WI 54880
BRRTS# 02-16-560359

Dear Mr. Richard:

This letter report presents the results of soil and groundwater sampling activities performed at the 902-904 Belknap Street property in March and April 2016, in addition to providing a baseline work plan for ongoing corrective action and related sampling efforts.

In March 2016, MSA Professional Services, Inc. (MSA) and Ms. Maria Letsos signed an Environmental Consulting Services Agreement intended to address identified soil contamination at the property.

Sampling activities performed at the site by prior consultants identified soil contamination within a room at the southwest corner of the basement and immediately south of the outside basement door. Data suggested that there is contamination related to dry cleaning solvents in these areas. Further work was completed by MSA at the site to identify the extent of the contamination, evaluate potential risk factors such as the potential for indoor air quality impacts, characterize contaminated soil/debris for handling and disposal during upcoming building modifications, and to evaluate alternatives for managing the discharge of sump water originating from the site.

Summary of Work

On March 14, 2016, MSA personnel collected a soil sample from the exposed basement soils in the southwest room of the basement and a water sample from the basement sump to be analyzed for volatile organic compounds (VOCs). Soils from the basement were also analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) to provide preliminary evaluation of soils for planned treatment/disposal options and future corrective action. The location of the sump and the contaminated media sample location are indicated on **Figure 2**, attached.

MSA personnel oversaw the advancement of five soil borings (GP-1, GP-2, GP-3, GP-4, and GP-5) at the site on April 18, 2016. Soils from the borings were characterized and ten soil samples were collected and submitted for laboratory analysis. A summary of soil analytical results is included in **Table A.2**, which also includes analytical data for two hand auger borings advanced at the site by Environmental Troubleshooters during previous site assessment. Soil boring locations are indicated on **Figure 2**. Three groundwater samples were collected from three of the soil borings advanced at the site (GP-1, GP-4, and GP-5). The laboratory analytical results have been compiled in **Table A.1**. Groundwater did not accumulate in sufficient quantities within GP-2 and GP-3 to facilitate sample collection.

Discussion of Results

Based upon data collected from soil borings advanced by MSA and hand auger borings advanced by Environmental Troubleshooters, soil contamination exceeding DNR direct contact residual contaminant levels (RCLs) existed within four

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(218) 722-3915 • (800) 777-7380 • FAX: (218) 722-4548
www.msa-ps.com

902-904 Belknap Street
January 11, 2017

feet of the ground surface beneath the footprint of the 902-904 Belknap Street building. Soil contamination within the building footprint is expected to be from spills of dry cleaning solvents in the basement associated with the building's former use as a dry cleaning facility. It also appears that petroleum soil and groundwater contamination exists in the immediate area of GP-1. This contamination appears to be the likely result of a release from a former underground storage tank (UST) located in that approximate area and referenced on the attached Sanborn Fire Insurance Map (**Attachment 3**).

MSA has recommended that contaminated soils within the earthen portion of the basement of the building be excavated to remove impacted soils identified on the property. Based upon analytical data collected at the site, exposed soils in the basement of the building present a soil direct contact and vapor intrusion hazard into the remainder of the building.

Corrective Action and Sampling Plan

MSA has initiated the excavation of the earthen floor in the room on the southwest corner of the basement on December 2, 2016 and will complete soil sampling at points within the base of the excavation to confirm contamination has been removed and what residual contamination remains. A lined roll-off was mobilized to the property for stockpiling of the contaminated media removed from the basement earthen floor. This process is expected to be completed by the end of January 2017. Following excavation activities, a passive sub slab depressurization (SSD) system and concrete floor will be installed in the basement of the building to prevent remnant volatile organic vapors in the soil from seeping through the basement slab and accumulating in the building. For the interim, a COPPUS® portable ventilator is being used at the site to vent basement air to the outside to prevent soil vapors from entering occupied areas of the building. An activated carbon treatment unit will be installed to address any sump discharge.

Upon completion of the excavation work in the basement and installation of the concrete floor, MSA will provide a formal, written update to the WDNR with a work plan for subsequent sampling and indoor air quality evaluation.

Please contact me with any questions. I may be reached by phone at (218) 499-3175 or by email at jkanderson@msa-ps.com.

Sincerely,

MSA Professional Services, Inc.



Jeffrey K. Anderson, P.E.
Senior Project Manager

Cc: Maria Letsos, Owner

Attachments:	Table A.1	Groundwater Analytical Results
	Table A.2	Soil Analytical Results
	Figure 1	Site Location
	Figure 2	Detailed Site Map
	Attachment 1	March 2016 Photo Log
	Attachment 2	December 2016 Photo Log
	Attachment 3	Sanborn Fire Insurance Map (1955)

Attachment A.2. Soil Analytical Table
 902-904 Belknap Street, Superior, WI
 BRRTS# 02-16-560359

SAMPLE/BORING #	HA-1 ¹	HA-2 ¹	Basement Soil	GP-1 ²		GP-2 ²		GP-3 ²		GP-4 ²		GP-5 ²		Soil RCLs (mg/kg)		
	DEPTH to Water Table (ft BGS)	6/18/2013	6/18/2013	3/14/2016	7.55	7.55				11.41	11.41	4.63	4.63			
Date Collected	6/18/2013	6/18/2013	3/14/2016	4/12/2016		4/12/2016		4/12/2016		4/12/2016		4/12/2016				
DEPTH (ft BGS)	2-3	1		7.5-10	12.5-15	7.5-10	12.5-15	7.5-10	12.5-15	5-7.5	7.5-10	5-7.5	7.5-10			
SATURATED OR UNSATURATED				sat	sat					unsat	unsat	sat	sat			
SOIL TYPE																
Soil Concentrations in mg/kg (or ppm)														July 2015 DNR Table	Background	
														Non-Industrial Direct Contact	Soil to GW	Surficial BTV
VOC ANALYTES																
Benzene	<0.0289	<0.135	<0.0932	7.83	<i>0.418</i>	<i>0.359</i>	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	1.49	0.0051	
n-Butylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	108	NS	
sec-Butylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	145	NS	
1,2-Dichlorobenzene	<0.0723	<0.338	<i>0.788</i>	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	376	1.168	
1,4-Dichlorobenzene	<0.0723	<0.338	<i>0.105</i>	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	3.48	0.144	
1,1-Dichloroethene	<0.0723	<0.338	<i>0.168</i>	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	4.72	0.005	
cis-1,2-Dichloroethene	<i>0.587</i>	<i>35.7</i>	301	<0.0654	<0.0693	<0.0616	<i>0.141</i>	<0.0655	<0.0748	<i>0.468</i>	<i>0.184</i>	<0.0767	<0.0666	156	0.0412	
trans-1,2-Dichloroethene	<0.0723	<i>1.76</i>	<i>2.5</i>	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	1,560	0.0626	
Ethylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	7.47	1.57	
p-Isopropylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	NS	NS	
Methyl tert butyl ether	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	59.4	0.027	
Naphthalene	<0.289	<1.350	<0.466	<0.327	<0.347	<0.308	<0.530	<0.327	<0.374	<0.345	<0.331	<0.384	<0.333	0.854	0.6587	
n-Propylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	264	NS	
Tetrachloroethene	<i>11.6</i>	<i>1.96</i>	2620	<0.0654	<0.0693	<i>2.01</i>	<0.106	<i>0.176</i>	<0.0748	<i>0.749</i>	<i>0.0803</i>	<0.0767	<0.0666	30.7	0.0045	
Toluene	<0.0723	<0.338	<0.466	<0.327	<0.347	<0.308	<0.530	<0.327	<0.374	<0.345	<0.331	<0.384	<0.333	818	1.1072	
1,2,3-Trichlorobenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	48.9	NS	
Trichloroethene	<i>0.832</i>	<i>0.845</i>	259	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<i>0.292</i>	<0.0663	<0.0767	<0.0666	1.26	0.0036	
1,2,4-Trimethylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	89.8	1.3793*	
1,3,5-Trimethylbenzene	<0.0723	<0.338	<0.0932	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	182	1.3793*	
Vinyl chloride	0.123	7.36	2.65	<0.0654	<0.0693	<0.0616	<0.106	<0.0655	<0.0748	<0.0690	<0.0663	<0.0767	<0.0666	0.067	0.0001	
Xylene (Total)	<0.217	<1.01	<0.280	<0.196	<0.208	<0.185	<0.318	<0.196	<0.224	<0.207	<0.199	<0.230	<0.200	258*	3.94*	
No. of Individual Exceedances (DC)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cumulative Hazard Index (DC)	0.2435	0.4656	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cumulative Cancer Risk (DC)	2.90E-06	1.10E-04	0	0	0	0	0	0	0.0	0	0	0	0	0	0	

Exceedance Highlights:

BOLD font indicates DC RCL exceedance, and BTV exceedance for metals.

Italic font indicates GW RCL Exceedance. Groundwater quality (> NR 140 ES) may be affected when GW RCLs are exceeded.

Blanks indicate parameter was not analyzed.

NS: No published standard.

Table Notes:

J: Indicates the analyte was detected between the Laboratory Limit of Detection and Laboratory Limit of Quantitation.

<: Indicates the analyte was not detected above the Laboratory Limit of Quantitation.

*: Indicates total xylenes (m-,o-,p- combined) and total trimethylbenzenes (1,2,4- and 1,3,5- combined).

1: Hand auger borings completed by Environmental Troubleshooters

2: Soil boring advanced by MSA Professional Services, Inc.

Attachment A.1. Groundwater Analytical Table
 902-904 Belknap Street, Superior, WI
 BRRTS# 02-16-560359

	Acetone	Benzene	2-Butanone (MEK)	Chloroform	Chloromethane	Dichlorodifluoromethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Naphthalene	Tetrachloroethene	Toluene	Trichloroethene	Vinyl Chloride	Groundwater Elevation (feet bgs)
NR 140 ES	9000	5	4000	6	30	1000	5	850	70	100	100	5	800	5	0.2	
NR 140 PAL	1800	0.5	800	0.6	3	200	0.5	85	7	20	10	0.5	160	0.5	0.02	
Groundwater Concentrations in ug/l (or ppb)																
GP-1																
4/12/2016	<50.0	986	<10.0	<5.00	<2.50	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<5.00	<1.00	<1.00	7.55
GP-4																
4/12/2016	<50.0	<100	<10.0	<5.00	<2.50	<5.00	<1.00	26.3	4330	16.3	<5.00	1600	<5.00	1730	874	11.41
GP-5																
4/12/2016	<50.0	<1.00	<10.0	<5.00	<2.50	<5.00	<1.00	<1.00	5.62	<1.00	<5.00	<1.00	<5.00	<1.00	15.6	4.63
Basement Sump																
3/14/2016	<1250	<25.0	<250	<125	<62.5	<125	<25.0	61.8	87300	288	<125	51600	<125	22600	11500	

Exceedance Highlights:

BOLD font indicates NR 140 Enforcement Standard (ES) exceedance.

Italic font indicates NR 140 Preventative Action Limit (PAL) exceedance.

BTEX and other VOC compounds detected in at least one sample are included in table. See laboratory report for all results.

NS: No published standard.

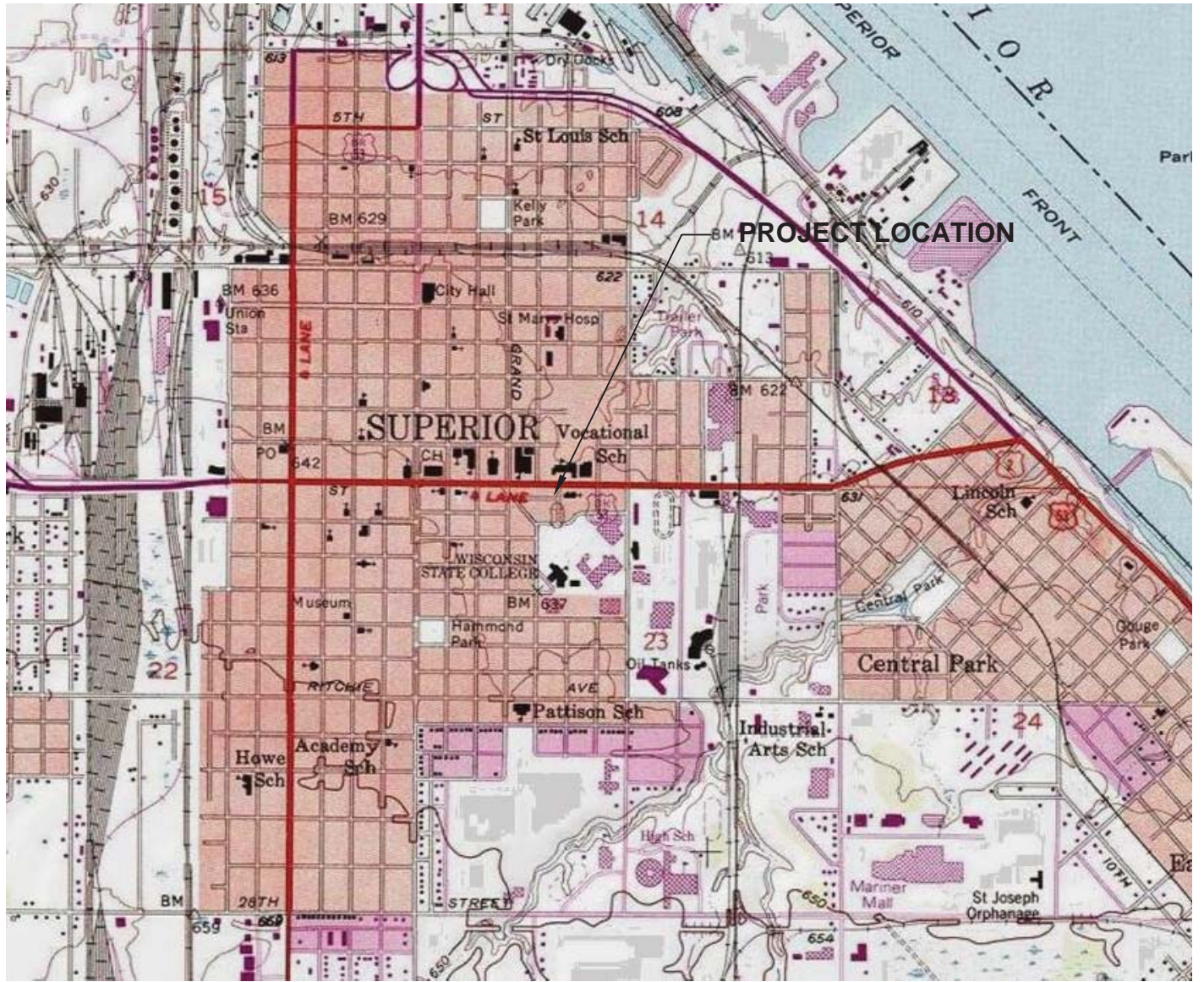
Table Notes:

<: Indicates the analyte was not detected above the Laboratory Limit of Quantitation.

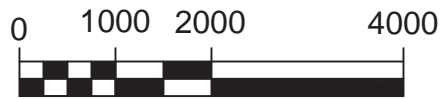
*: Indicates total xylenes (m-,o-,p- combined) and total trimethylbenzenes (1,2,4- and 1,3,5- combined).

NA: Indicates constituent was not analyzed.

J: Laboratory qualifier indicating the estimated concentration at or above the Limit of Detection and below the Limit of Quantitation.

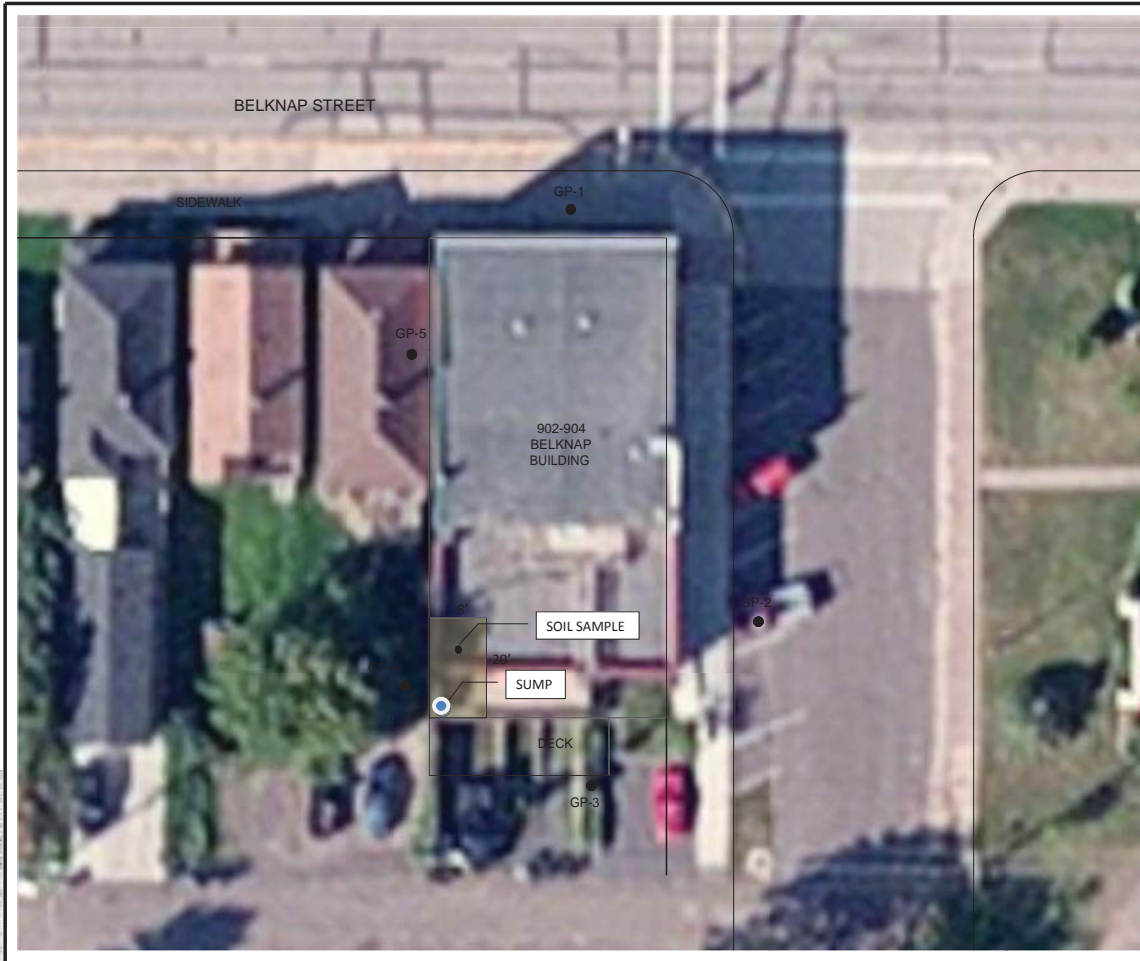


PROJECT LOCATION



Superior Quadrangle
Wisconsin - Douglass County
7.5 Minute Series (Topographic)

Contour Interval 10 Feet
1954
Revised 1993



LEGEND
 GP-1 ● GEOPROBE BORING LOCATION
 (ADVANCED UNDER DIRECTION OF MSA)



FIGURE 2			
SITE LAYOUT MAP			
902-904 BELKNAP STREET SUPERIOR, WI			
MSA		<small>TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL</small>	
<small>321 W. Superior Street, Superior, WI 54980 218.722.3515 1.800.777.7360 Fax: 218.722.4548 Web Address: www.msa-gi.com</small>		<small>©2011 MSA SHEET NO.</small>	
<small>DRAWN BY: KSM</small>	<small>DATE: 8/10/16</small>	<small>SHEET NO. 2</small>	<small>FILE NO. 1771000</small>
<small>CHECKED BY: GRS</small>	<small>SCALE: AS SHOWN</small>		

- Site 36 – on Belknap Street at Station 207+75 to 208+20 from approximately 15 feet right of the reference line to the project limits on the left, and on Hill Avenue at Station 499+75 to 500+75 from the reference line to the project limits on the left. (various depths)

In addition, results indicate that solvent-contaminated soil and groundwater is present at the following location as shown on the plans:

- Clough Avenue at Station 388+15 to 389+75 from approximately 15 feet right of the reference line to the project limits to the left. (from 3-10 feet bgs)
- Potential underground storage tanks (USTs) may be present at the following locations:
- At Site 22, extending from Station 173+25 to 173+50, located in the sidewalk adjacent from 902-904 Belknap Street.

Assist the environmental consultant in determining if USTs are present at these locations, by performing backhoe pit investigations as directed by the environmental consultant. The backhoe pit investigation should be performed as soon as practical after sidewalks, curb and gutter, and pavement are removed and prior to utility construction beginning in those areas. The backhoe pit investigation shall be limited to areas of potential USTs and shall include up to 3 test pits per location, to a maximum depth of 6 feet bgs. The test pit investigations shall be incidental to this pay item.

There is a potential that 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 at other locations, terminate excavations in this area and notify the engineer. Contaminated soil at other locations will be managed by contractor under this contract and USTs will be removed by others.

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer.

The excavation management plan for this project has been designed to minimize the offsite disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding previous investigation and remediation activities at these sites contact:

Name: Mr. Dan Haak or Mr. Ted O'Connell
 Address: 708 Heartland Trail, Madison, WI 53717
 Phone: (608) 826-3628 or (608) 826-3648
 Fax: (608) 826-3941
 E-mail: dhaak@trcsolutions.com or toconnell@trcsolutions.com

Table 1
 Summary of Soil Analytical Results
 Belknap Street (USH 2) Phase 2.5
 WisDOT ID #8680-00-01 (71)
 July 2012, December 2014, August 2015, and July 2016

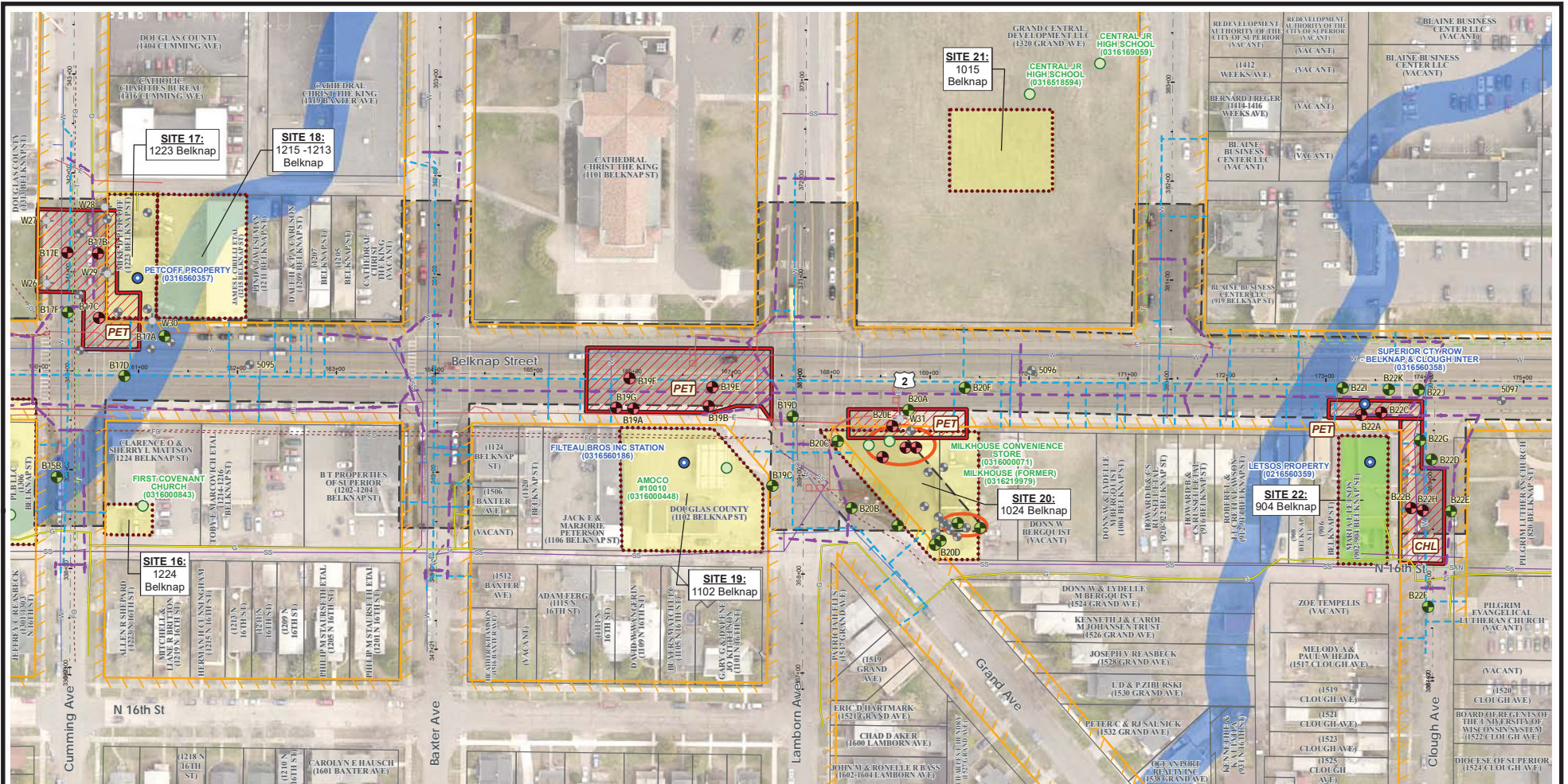
ANALYTE	UNITS	NR 720 RCLs FOR SOIL				B19F	B19G	B20A	B20B	B20C	B20D	B20E	B20F	B22A	B22B	B22C	B22D	B22E	B22F	B22G	B22H	B22I	B22J	B22K	B25
		GW PATH ⁽¹⁾	NON-INDUSTRIAL DIRECT CONTACT ⁽²⁾	INDUSTRIAL DIRECT CONTACT ⁽²⁾	BACKGROUND SURFICIAL BTV	8.0-10.0	8.0-10.0	3.0-5.0	3.0-5.0	2.5-5.0	7.5-10	2.5-5.0	8.0-10.0	3.0-5.0	3.0-5.0	7.5-10.0	7.5-10	9-7.5	2.5-5.0	8.0-10.0	8.0-10.0	8.0-10.0	8.0-10.0	8.0-10.0	3.0-5.0
DATE	ppm	--	--	--	--	20.0	<1.0	5.5	3	4	14.9	1,049	<1.0	576.5	5.5	59.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.4	
PID	mg/kg	--	--	--	--	--	--	<3.2	<3.3	<3.3	<2.9	2,270	--	621	--	7.8	<3.4	--	--	--	--	--	--	<3.3	
GRO	mg/kg	--	--	--	--	--	--	1.5J	1.3J	<1.1	7.7	287	--	181 T4	--	5.0 T4	2.9	--	--	--	--	--	--	29.6 T4	
DRO	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VOCs/PVOCs⁽⁵⁾																									
1,2,4-Trimethylbenzene	µg/kg	1,382 ⁽⁵⁾	89,800	219,000	--	<25.0	<25.0	<25.0	<25.0	<25.0	158,000	<25.0	288	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
1,3,5-Trimethylbenzene	µg/kg	1,382 ⁽⁵⁾	182,000	182,000	--	<25.0	<25.0	<25.0	<25.0	<25.0	51,200	<25.0	86.1J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Benzene	µg/kg	5.1	1,490	7,410	--	2,200	36.9J	<25.0	<25.0	<25.0	1,970	<25.0	5,370	<25.0	6,140	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
cis-1,2-Dichloroethene	µg/kg	41.2	156,000	2,040,000	--	--	--	--	--	--	--	--	<25.0	920	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	56.8J	<25.0	<25.0	
Ethylbenzene	µg/kg	1,570	7,470	37,000	--	<25.0	<25.0	<25.0	<25.0	<25.0	52,500	<25.0	1,600	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Isopropylbenzene (cumene)	µg/kg	--	268,000	268,000	--	--	--	--	--	--	--	--	61.2J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
m&p-Xylene	µg/kg	3,960 ⁽⁴⁾	260,000 ⁽⁴⁾	260,000 ⁽⁴⁾	--	<50.0	<50.0	<50.0	<50.0	<50.0	202,000	<50.0	1,200	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	
Methylene chloride	µg/kg	2.6	60,700	1,070,000	--	--	--	--	--	--	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Methyl-tert-butyl ether (MTBE)	µg/kg	27	59,400	293,000	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Naphthalene	µg/kg	658.2	5,150	26,000	--	<25.0	<25.0	<25.0	<25.0	<25.0	<40.0	<25.0	102	<25.0	<25.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<25.0	
n-Butylbenzene	µg/kg	--	108,000	108,000	--	--	--	--	--	--	--	--	52.7J	<40.4	<40.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
n-Propylbenzene	µg/kg	--	264,000	264,000	--	--	--	--	--	--	--	--	64.0J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
o-Xylene	µg/kg	3,960 ⁽⁴⁾	260,000 ⁽⁴⁾	260,000 ⁽⁴⁾	--	<25.0	<25.0	<25.0	<25.0	<25.0	42,200	<25.0	810	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
p-Isopropyltoluene	µg/kg	--	162,000	162,000	--	--	--	--	--	--	--	--	82.5	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
sec-Butylbenzene	µg/kg	--	145,000	145,000	--	--	--	--	--	--	--	--	<25.1	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Tetrachloroethene	µg/kg	4.5	30,700	153,000	--	--	--	--	--	--	--	--	<25.0	1,880	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Trichloroethene	µg/kg	3.6	1,260	8,810	--	--	--	--	--	--	--	--	<25.0	621	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Toluene	µg/kg	1,107.20	818,000	818,000	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	260	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Total Metals																									
Arsenic	mg/kg	0.584	0.613	2.39	8	--	--	--	--	--	--	--	3.9	--	3.9	--	--	--	--	--	--	--	--	--	
Barium	mg/kg	164.8	15,300	100,000	364	--	--	--	--	--	--	--	121	--	218	--	--	--	--	--	--	--	--	--	
Cadmium	mg/kg	0.752	70	799	1	--	--	--	--	--	--	--	<0.037	--	<0.037	--	--	--	--	--	--	--	--	--	
Chromium	mg/kg	360,000	--	--	--	--	--	--	--	--	--	--	31.9	--	59.6	--	--	--	--	--	--	--	--	--	
Lead	mg/kg	27	400	800	52	--	--	9	--	--	--	--	14.3	--	11.4	--	--	--	--	--	--	--	--	11.2	
Mercury	mg/kg	0.208	3.13	3.13	--	--	--	--	--	--	--	--	0.041	--	0.019	--	--	--	--	--	--	--	--	--	
Selenium	mg/kg	0.52	391	5,110	--	--	--	--	--	--	--	--	<0.58	--	<0.58	--	--	--	--	--	--	--	--	--	
Silver	mg/kg	0.85	391	5,110	--	--	--	--	--	--	--	--	0.47J	--	0.60J	--	--	--	--	--	--	--	--	--	

- Notes:
- PID = Photoionization Detector
 - J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
 - = Not analyzed
 - RCLs = Residual Contaminant Levels
 - = Suggested RCL has not been established for this analyte
 - bold** = indicates that the analyte and/or sample exceeds the NR 720 RCL for direct contact (non-industrial or industrial), or standards for hazard index or cancer risk unless value is less than BTV.
 - italics* = indicates that the sample exceeds the groundwater pathway RCL.

Footnotes:

- Value is the generic RCL for the groundwater pathway.
- Value is the generic RCL for exposure by direct contact.
- Soil samples collected were analyzed for either PVOCs or the WI LUST 8260 list for VOCs.
- Only those analytes that were detected are listed. Non-detect results are reported on a wet weight basis.
- RCL is for total Xylenes
- RCL is for total Trimethylbenzenes.
- Result reported for hydrocarbons within the method-specific range that do not match pattern of laboratory standard.
- Analyte was detected in the associated blank.

Created By: Wesley Braga 8/15/12
 Updated By: Ted O'Connell 9/1/15, Z. Boutaghou 7/12/2016
 Checked By: Ted O'Connell 8/29/12
 Checked By: A. Schroeder 1/13/16
 Checked By: A. Schroeder 7/14/16

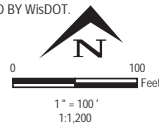


LEGEND

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> MONITORING WELL LOCATION-NO VOC/PVOC DETECTION MONITORING WELL LOCATION-VOC/PVOC DETECTION SOIL BORING LOCATION-NO VOC/PVOC DETECTION SOIL BORING LOCATION-VOC/PVOC DETECTION MONITORING WELL LOCATION-(NO DATA) SOIL BORING LOCATION-(NO DATA) CLOSED BRRTS SITE OPEN BRRTS SITE | <p>PHASE 1 SITES</p> <ul style="list-style-type: none"> PETROLEUM DRY CLEANER WOODWORKING APPROXIMATE EXTENT OF IMPACTS IN SOIL IDENTIFIED BY OTHERS (CURRENT AND REMOVED) ESTIMATED EXTENTS OF SOIL CONTAMINATION IN CONSTRUCTION AREAS APPROXIMATE HISTORIC STREAM APPROXIMATE PROJECT LIMITS PROPERTY BOUNDARY | <p>PROPOSED UTILITIES</p> <ul style="list-style-type: none"> PROPOSED STORM SEWER PROPOSED WATER LINES <p>EXISTING UTILITIES</p> <ul style="list-style-type: none"> STORM SEWER SANITARY SEWER UNDERGROUND ELECTRIC UNDERGROUND FIBER OPTIC UNDERGROUND GAS UNDERGROUND TELECOM UNDERGROUND WATER RIGHT-OF-WAY BOUNDARY |
|--|--|---|

NOTES

1. BASE MAP IMAGERY FROM WisDOT.
2. PARCEL BOUNDARIES, RIGHT-OF-WAY BOUNDARIES, STORM SEWER LINES, AND SANITARY SEWER LINES PROVIDED BY CITY OF SUPERIOR GIS DEPARTMENT.
3. OTHER UTILITIES AND EDGE OF PAVEMENT LINES SUPPLIED BY WisDOT.
4. SITE ID DETAILS SUMMARIZED IN TABLE 1.
5. SOIL IMPACT CODES:
 - *PET = PETROLEUM IMPACT
 - *LL PET = LOW LEVEL PETROLEUM IMPACT
 - *CHL = CHLORINATED IMPACT



PROJECT		USH 2 (BELKNAP STREET) WISDOT ID# 8680-00-01 SUPERIOR, WISCONSIN	
SHEET TITLE:			
FIGURE 1 SITE LAYOUT AND AREAS OF VOC/PVOC CONTAMINATION			
DRAWN BY:	RHODE B	SCALE:	PROJ. NO. 238003
CHECKED BY:	BOUTAGHOU Z	1:1,200	FILE NO. 238003-009_mbd.mxd
APPROVED BY:	HAAK D	DATE PRINTED:	
DATE:	JULY 2016		MAP PAGE 3 OF 6
		708 Heartland Trail, Suite 3000 Madison, WI 53717 Phone: 608.826.3600 www.trcsolutions.com	

Appendix C

UST Disposal Documentation



Vonco V Waste Management Campus
1100 West Gary Street
Duluth, MN 55808
Permit: SW 536

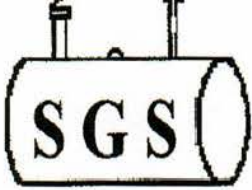
A-1 Excavating USH 2 Superior, WI Contaminated Soil Tonnage

Date	Ticket	Customer	Truck	Material	Tons
05/03/2018	298222	17-065-I City of Superior USH 2 Site 22	RB26852	Contaminated Soil Tons	16.68
05/03/2018	298236	17-065-I City of Superior USH 2 Site 22	RB28220	Contaminated Soil Tons	16.24
05/03/2018	298260	17-065-I City of Superior USH 2 Site 22	55665x	Contaminated Soil Tons	13.33
05/03/2018	298262	17-065-I City of Superior USH 2 Site 22	RB26852	Contaminated Soil Tons	13.64
05/03/2018	298270	17-065-I City of Superior USH 2 Site 22	55665x	Contaminated Soil Tons	16.41
05/03/2018	298275	17-065-I City of Superior USH 2 Site 22	RB26852	Contaminated Soil Tons	16.51
				<i>Total Tons</i>	<i>92.81</i>
				<i>Total Loads</i>	<i>6.00</i>



Vonco V Waste Management Campus
1100 West Gary Street
Duluth, MN 55808
Permit: SW 536

USH 2 Superior, WI Contaminated Soil Tonnage					
Date	Ticket	Profile	Truck	Material	Tons
05/23/2018	299064	17-057-I City of Superior USH 2 (71)(CAT0060)	R55552X	Contaminated Soil Tons	16.16
05/23/2018	299065	17-057-I City of Superior USH 2 (71)(CAT0060)	RB26853	Contaminated Soil Tons	18.11
05/23/2018	299069	17-057-I City of Superior USH 2 (71)(CAT0060)	R55552X	Contaminated Soil Tons	17.98
05/23/2018	299070	17-057-I City of Superior USH 2 (71)(CAT0060)	RB26853	Contaminated Soil Tons	17.84
05/23/2018	299072	17-057-I City of Superior USH 2 (71)(CAT0060)	RB25320	Contaminated Soil Tons	15.23
05/23/2018	299073	17-057-I City of Superior USH 2 (71)(CAT0060)	R55552X	Contaminated Soil Tons	18.94
05/23/2018	299075	17-057-I City of Superior USH 2 (71)(CAT0060)	RB26853	Contaminated Soil Tons	17.65
05/23/2018	299078	17-057-I City of Superior USH 2 (71)(CAT0060)	RB25320	Contaminated Soil Tons	14.90
				Total Tons	136.81
				Total Loads	8



UST / AST Removal

N2570 Daytona Drive
MERRILL, WI 54452
1-800-261-2803
715-539-2803
Fax 715-539-2661
Jay A. Schlueter
CELL (715) 218-1001
jay@sgs-env.com



REMEDIAION SYSTEM
CONSTRUCTION



CONTAMINATED SOIL
EXCAVATIONS



GEOPROBE SOIL BORING

CERTIFICATE OF UNDERGROUND STORAGE TANK DISPOSAL

On May 3rd, 2018 SGS Environmental Contracting LLC, completed the removal of (1) - Underground Storage Tank: (1) – 1,000 gallon Leaded Gas UST for:

*WDOT Hwy 2 Project (8680-07-71)
904 Belknap St.
Superior WI 54880*

Sludge generated at the job site was barreled and left on site for others to handle.

Tank was taken to:

*Schulz's Recycling Inc.
W6059 Heldt St.
Merrill WI 54452*



Bobbie Jo Hoffman

Office Manager

SGS Environmental Contracting LLC, N2570 Daytona Drive, Merrill, WI 54452
715.539.2803 Fax 715.539.2661 jay@sgs-env.com

Appendix D

UST Closure Checklist



Wisconsin Department of Agriculture, Trade and Consumer Protection
Bureau of Weights and Measures, Permits and Licensing
P.O. Box 7837
Madison, WI 53707-7837
(608) 224-4942

FOR OFFICE USE ONLY

Wis. Admin. Code §ATCP 93.560

TANK SYSTEM SERVICE AND CLOSURE ASSESSMENT REPORT

CHECK ONE: UNDERGROUND ABOVEGROUND

FOR PORTIONS OF THE FORM THAT DO NOT APPLY, CHECK THE 'N/A' BOX

Complete One Form for Each System Service Event

The information you provide may be used for purposes other than for which it was originally intended (s.15.04 (1) (m), Wis. Stats.).

Part A – To be completed by contractor performing repair or closure

A. TYPE OF SERVICE CLOSURE REPAIR/UPGRADE CHANGE-IN-SERVICE
Indicate portion of system being serviced if a repair, upgrade or change-in-service is being performed
 Remote fill Tank Piping Transition/containment sump Spill bucket Dispenser

B. IDENTIFICATION (Please Print)

1. Facility Name WDOT- Hwy 2 Project #		2. Owner Name City of Superior	
Facility Street Address (not P.O. Box) 904 Belknap St.		3. Contact Name Todd Janigo	
Municipality Superior		Job Title Director of Public Works	
<input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Town of:		Mailing Address 1316 N 14th St.	
Zip Code 54880		Post Office Superior WI 54880	
County Douglas		State WI	
County Douglas		Zip Code 54880	
4. Primary Service Contractor Section A above SGS Environmental Contracting LLC		Service Contractor Street Address N2570 Daytona Dr.	
Service Contractor Telephone No. (include area code) (715) 539-2803		Service Contractor City, State, Zip Code Merrill WI 54452	

C. TANK SYSTEM DETAIL (Complete for all service activities)

a Tank ID #	b Type of Closure ¹	c Tank Material of Construction	d Piping Material of Construction	e Tank Capacity (gallons)	f Contents ²	g Release - System Integrity Compromised (e.g. holes, cracks, loose connection, etc)?		h If "Yes" to "g", Then Specify Source & Cause of Release ⁵	
						Y	N	Source of Release ³	Cause of Release ⁴
	P	Steel	N/A	500	LG	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	UNK	UNK
						<input type="checkbox"/> Y	<input type="checkbox"/> N		
						<input type="checkbox"/> Y	<input type="checkbox"/> N		
						<input type="checkbox"/> Y	<input type="checkbox"/> N		
						<input type="checkbox"/> Y	<input type="checkbox"/> N		

1. Indicate type of closure: P = Permanent, TOS = Temporarily Out-of-Service, CIP = Closure In-Place

2. Indicate type of product: DL = Diesel, LG = Leaded Gasoline, UG = Unleaded Gasoline, FO = Fuel Oil, GH = Gasohol, AF = Aviation Fuel, K = Kerosene, PX = Premix, WO = Waste/Used Motor Oil, FCHZW = Flammable/Combustible Hazardous Waste, OC = Other Chemical (indicate the chemical name(s))

CAS number(s): _____

3. Source of release: T = tank, P = piping, D = dispenser, STP = submersible turbine pump, DP = delivery problem, O = other, UNK = Unknown

4. Cause of release: S = spill, O = overflow, POMD = physical or mechanical damage, C = corrosion, IP = installation problem, O = other, UNK = Unknown

5. Has release been reported to the Department of Natural Resources? Yes No Release not evident at this time

D. CLOSURES (Check applicable box at right in response to all statements in section D)

Written notification was provided to the local agent 5 days in advance of closure date.

All local permits were obtained before beginning closure.

MUST Form TR-WM-137 or AST Form TR-WM-118 filed by owner with the DATCP indicating closure.

NOTE: TANK INVENTORY FORM TR-WM-137 or TR-WM-118 SIGNED BY THE OWNER MUST BE SUBMITTED WITH EACH CLOSURE or CHANGE-IN-SERVICE CHECKLIST

D.1 TEMPORARILY OUT-OF-SERVICE

	Remover Verified	Inspector Verified	NA
1. Product removed.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
a. Product lines drained into tank (or other container) and liquid removed, and	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
b. All product removed to bottom of suction line, OR	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
c. All product removed to within 1" of bottom.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
4. Dispensers/pumps left in place but locked and power disconnected.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
5. Vent lines left open.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
6. Inventory form filed indicating temporarily out-of-service (TOS) closure.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA

D.2 CLOSURE BY REMOVAL OR IN-PLACE

1. General Requirements

a. Product from piping drained into tank (or other container).	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> NA
b. Piping disconnected from tank and removed.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> NA
c. All liquid and residue removed from tank using explosion-proof pumps or hand pumps.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
d. All pump motors and suction hoses bonded to tank or otherwise grounded.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
e. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
f. Vent lines left connected until tanks purged.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> NA
g. Tank openings temporarily plugged so vapors exit through vent.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> NA
h. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section E.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA

2. Specific Closure-by-Removal Requirements

a. Tank removed from excavation after PURGING/INERTING; placed on level ground and blocked to prevent movement.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
b. Tank cleaned before being removed from site.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
c. Tank labeled in 2" high letters after removal but before being moved from site.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.			
d. Tank vent hole (1/8" in uppermost part of tank) installed prior to moving the tank from site.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
e. Site security is provided while the excavation is open.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA

3. Specific Closure-In-Place Requirements

NOTE: CLOSURES IN-PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION (DATCP) OR LOCAL AGENT.

a. Tank properly cleaned to remove all sludge and residue.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
b. Solid inert material (sand, cyclone boiler slag, or pea gravel recommended) introduced and tank filled.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
c. Vent line disconnected or removed.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA
d. Inventory form filed by owner with the DATCP indicating closure in-place.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> NA

E. REPAIR, UPGRADE OR CHANGE-IN-SERVICE

Written notification was provided to the local agent 5 days in advance of service date.

All local permits were obtained before beginning service.

Form TR-WM-137 or TR-WM-118 filed by owner with the DATCP indicating change-in-service.

Y N NA
 Y N NA
 Y N NA

F. METHOD OF VAPOR FREEING OF TANK

Displacement of vapors by eductor or diffused air blower.

Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of 12 feet above ground.

Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.

Inert gas using dry ice or liquid carbon dioxide.

Inert gas using CO₂ or N₂ **NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHERE. LEL METERS MAY NOT FUNCTION ACCURATELY. THE TANK MAY NOT BE ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT.**

Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank opposite the vent.

Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing device grounded.

Readings of 10% or less of the lower flammable range (LEL) or 0% oxygen obtained before removing tank from ground.

Tank atmosphere monitored for flammable or combustible vapor levels prior to and during cleaning and cutting.

Calibrate combustible gas indicator and/or oxygen meter prior to use. Drop tube removed prior to checking atmosphere. Tank space monitored at bottom, middle and upper portion of tank.

G. REMOVER/CLEANER INFORMATION

Jake Schleiter

Remover/Cleaner Name (print)

J. Schleiter

Remover/Cleaner Signature

403633

Certification No.

5-3-18

Date Signed

I attest that the procedures and information which I have provided as the tank closure contractor are correct and comply with ATCP 93.

Company expected to perform soil contamination assessment

JHC

H. INSPECTOR INFORMATION

EDWARD J. SINDELAR

Inspector Name (print)

Edward J. Sindelar

Inspector Signature

403049

Inspector Cert #

LPO Agency #:

1601

FDID # For Location Where Inspection Performed

715.413.1833

Inspector Telephone Number

5/3/18

Date Signed

Part B – To be completed by environmental professional - Submit original Part B to the WDNR along with a copy of Part A

I. TANK-SYSTEM SITE ASSESSMENT (TSSA)

SITE NAME - *Note: SITE NAME and address MUST MATCH with Part A Section 1.*

WDOT Hwy 2 Project (8680-00-71, 8680-00-72, 8998-00-24)

SITE ADDRESS (Not PO Box)
904 Belknap St.

CITY TOWN VILLAGE

STATE	ZIP
WI	54880

To determine if a TSSA is required, see ATCP 93 and section II part B of *ASSESSMENT AND REPORTING OF SUSPECTED AND OBVIOUS RELEASES FROM UNDERGROUND AND ABOVEGROUND STORAGE TANK SYSTEMS*.

If a TSSA is required, then follow the procedures detailed in *ASSESSMENT AND REPORTING OF SUSPECTED AND OBVIOUS RELEASES FROM UNDERGROUND AND ABOVEGROUND STORAGE TANK SYSTEMS*

1. Site Information

a. Has there been a previously documented release at this site? Y N

If yes, provide the DATCP # _____ or DNR BRRT's # 02-16-560359

b. Number of active tanks at facility prior to completion of current services: USTs 0 ASTs 0

(NOTE 1: Do not include previously closed systems or system components.)

c. Excavation/trench dimensions (in feet). (Photos must be provided.)

EXCAVATION/TRENCH #	LENGTH	WIDTH	DEPTH
1	17	10	15

2. Visual Excavation/Trench Inspection (Photos must be provided for "Yes" responses, except item b.)

Do any of the following conditions exist in or about the excavation(s)?

- a. Stained soils: Yes No b. Petroleum odor: Yes No c. Water In excavation/trench: Yes No
 d. Free product in the excavation/trench: Yes No e. Sheen or free product on water: Yes No

3. Geology/Hydrogeology

a. Depth to groundwater >20 feet b. Indicate type of geology² C

4. Receptors

- a. Water supply well(s) within 250 feet of the facility? Yes No If yes, specify: _____
 b. Surface water(s) within 1000 feet of the facility? Yes No If yes, specify: _____

5. Sampling

- a. Follow the procedures detailed in *ASSESSMENT AND REPORTING OF SUSPECTED AND OBVIOUS RELEASES FROM UNDERGROUND AND ABOVEGROUND STORAGE TANK SYSTEMS*.
 b. Complete Tables 1 and 2 as appropriate. (Attach chain-of-custody and laboratory analytical reports.)
 c. Attach a detailed map of site features and sample locations.

J. NOTE RELEVANT OBSERVATIONS, SPECIFIC PROBLEMS OR CONCERNS BELOW

TABLE 1 SOIL FIELD SCREENING & GRO/DRO LABORATORY ANALYTICAL RESULTS-FOR PETROLEUM PRODUCTS

Sample ID #	Sample Location & Soil/Geologic Description	Sample Collection Method				Depth Below Tank/Piping (feet)	Field Screening Result (ppm)	GRO (mg/kg)	DRO (mg/kg)
		Grab	Shelby Tube	Direct Push	Split Spoon				
SWE	Sidewall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	518	NA	NA
SWW	Sidewall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	265	NA	NA
SWN	Sidewall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	840	NA	NA
SWS	Sidewall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	1430	NA	NA
BE	Base	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	180	NA	NA
BW	Base	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	101	NA	NA
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

TABLE 2 SOIL LABORATORY ANALYTICAL RESULTS-FOR PETROLEUM PRODUCTS

Sample ID #	BENZENE	TOLUENE	ETHYLBENZENE	MTBE	TRIMETHYL - BENZENES (TOTAL)	XYLENES (TOTAL)	NAPHTHALENE
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
SWE	1,410	<25	458	<25	356	1,285	137
SWW	8,110	<25	190	<25	737	1,950	<25
SWN	9,060	<312	13,100	<312	65,000	42,400	5,970
SWS	14,100	<200	10,400	<200	52,200	37,480	5,310
BE	643	<25	62.3	<25	214.5	305.0	<25
BW	286	<25	<25	<25	<50	<75	<25

K. TANK-SYSTEM SITE ASSESSMENT INFORMATION

- As a tank-system site assessor certified under Wis. Admin. Code section SPS 305.83, it is my opinion that there is no indication of a release of a regulated substance to the environment.
- Sampling at the site indicates there has been a release to the environment. Pursuant to Wis. Admin. Code section ATCP 93.585 (2) (a) and Wis. Stats. section 292.11 (2) (a), the owner or operator or contractor performing work under chapter ATCP 93 shall immediately report any release of a regulated substance to the Wisconsin Department of Natural Resources. Failure to do so may result in forfeitures of a minimum of \$10 and a maximum of \$5000 for each violation under Wis. Stats. Section 168.26 (5). Each day of continued violation and each tank are treated as separate offenses.

Tom Perkins  468293
 TANK-SYSTEM SITE ASSESSOR NAME (PRINT): TANK-SYSTEM SITE ASSESSOR SIGNATURE CERTIFICATION NO.

(609) 826- 3672 06/10/2018 TRC Environmental
 TANK-SYSTEM SITE ASSESSOR TELEPHONE NUMBER DATE SIGNED COMPANY NAME

Appendix E

UST Inventory Forms



Wisconsin Department of Agriculture, Trade and Consumer Protection
 Bureau of Weights and Measures
 PO Box 7837 Madison, WI 53707-7837
 (608) 224-4942

FOR OFFICE USE ONLY
 TDID#: _____
 Reg Obj #: _____
 Wis. Admin. Code §ATCP 93.140

UNDERGROUND FLAMMABLE/COMBUSTIBLE/HAZARDOUS LIQUID STORAGE TANK REGISTRATION

Personal information you provide may be used for purposes other than that for which it was originally collected (s. 15.04(1)(m) Wis. Stats.).

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. A separate form is needed for each tank. Send each completed form to the agency designated above. Have you previously registered this tank by submitting a form? Yes No

If yes, are you correcting/updating information only? Yes No

This registration applies to a tank status that is (check one):

- In Use Abandoned with Product (empty) Closed - Filled with Inert Materials
 Newly Installed Abandon with Water Ownership Change (Indicate new owner name in block 2 - attach deed)
 Abandoned with Product Closed - Tank Removed Temporarily Out of Service - Provide Date:

Fire Dept. providing fire coverage where tank is located: CITY TOWN VILLAGE Superior

IDENTIFICATION (Please Print)

1. TANK SITE NAME WDOT Hwy 2 Project (8680-00-71, 8680-00-72, 8998-00-24)		COUNTY Douglas	PHONE () -
SITE STREET ADDRESS 904 Belknap St.		<input checked="" type="checkbox"/> CITY <input type="checkbox"/> VILLAGE <input type="checkbox"/> TOWN OF: Superior	STATE WI
2. TANK OWNER LEGAL NAME City of Superior		COUNTY Douglas	PHONE: Check <input type="checkbox"/> CELL or <input type="checkbox"/> LAND () -
MAILING ADDRESS 1316 N 14 th St.		<input checked="" type="checkbox"/> CITY <input type="checkbox"/> VILLAGE <input type="checkbox"/> TOWN OF: Superior	STATE WI
3. PROPERTY OWNER NAME (if different from Tank Owner Legal Name #2)		COUNTY (if different from County #2)	
PROPERTY OWNER ADDRESS (if different from Site Street Address #1)		<input type="checkbox"/> CITY <input type="checkbox"/> VILLAGE <input type="checkbox"/> TOWN OF:	STATE WI
4. CLASS A NAME	DOB	CERTIFICATION: (Attach certificate)	
5. CLASS B NAME	DOB	CERTIFICATION: (Attach certificate)	

SITE ID: _____ FACILITY ID # _____ CUSTOMER ID # _____
 Tank Capacity (gallons): 500 Tank Age (age or date installed): UNK Vehicle fueling: Yes No

LAND OWNER TYPE (check one) Refer to back
 County State Federal Leased Federal Owned Tribal Nation Municipal Other Government Private

OCCUPANCY TYPE (check one) Refer to back
 Retail Fuel Sales Mercantile/Commercial Industrial Residential School Utility Government Fleet
 Agricultural (crop or livestock production) Backup or Emergency Generator Other (specify): _____

TANK CONSTRUCTION:
 Bare Steel Coated Steel Steel - Fiberglass Reinforced Plastic Composite
 Fiberglass Unknown Other (specify): _____ Lined (date): _____
 Overfill Protection? Yes No
 Spill Containment? Yes No
 Tank Double Walled? Yes No

TANK CATHODIC PROTECTION: Sacrificial Anodes Impressed Current N/A

PRIMARY TANK LEAK DETECTION METHOD: Automatic tank gauging Interstitial monitoring ⇒ Electronic Yes No Inventory control and tightness testing
 Manual tank gauging (only for tanks of 1,000 gallons or less) Statistical Inventory Reconciliation (SIR) Unknown

PIPING CONSTRUCTION: Single Wall Double Wall:
 Bare Steel Coated Steel Fiberglass Flexible Copper Unknown N/A Other:

PIPING CATHODIC PROTECTION: Sacrificial Anodes Impressed Current N/A

PRIMARY PIPING SYSTEM TYPE: - Pressurized piping with ⇒ A. Pump auto shutoff - ELLD B. Flow restrictor - MLLD Unknown
 Suction piping with check valve at tank Suction piping with check valve at pump and inspectable. Not needed if waste oil

PIPING LEAK DETECTION METHOD: Interstitial monitoring ⇒ Electronic Yes No ⇒ Sump or cable sensor Yes No
 Tightness testing Electronic line monitor - ELLD SIR Not required Unknown

TANK CONTENTS (Current, or previous product (if tank now empty)) Leaded Unleaded Gas-ethanol blend: ___ % Diesel
 Bio-Diesel: ___ % Aviation Premix Fuel Oil Kerosene New Oil New oil - Flash point less than 200°F
 Waste/Used Motor Oil ⇒ Used for Heating Hazardous Waste/Interface* Empty* Sand/Grave/Slurry* Unknown
 Other (specify): _____ Chemical* Name _____ CAS# _____

* NOT PECFA eligible. Geo Latitude: _____ Geo Longitude: _____

If Tank Closed, Abandoned or Out of Service: _____ Has a site assessment been completed? (see reverse side for details) Yes No

TANK OWNER LEGAL NAME (please print) City of Superior - Todd Janigo TANK OWNER E-MAIL janigo@ci.superior.wi.us

TANK OWNER SIGNATURE (Note: By signing, signer is accepting legal and financial responsibility for the storage tank system.) [Signature] DATE: 5/17/18

Note: Refer to comments on reverse side of form.

Appendix F

Laboratory Analytical Results

May 22, 2018

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

RE: Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

Dear DAN HAAK:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40168705001	BE	Solid	05/03/18 13:45	05/08/18 08:50
40168705002	BW	Solid	05/03/18 13:50	05/08/18 08:50
40168705003	SWE	Solid	05/03/18 13:55	05/08/18 08:50
40168705004	SWW	Solid	05/03/18 14:00	05/08/18 08:50
40168705005	SWN	Solid	05/03/18 14:05	05/08/18 08:50
40168705006	SWS	Solid	05/03/18 14:10	05/08/18 08:50
40168705007	DRUM-01	Water	05/03/18 09:25	05/08/18 08:50
40168705008	TB	Water	05/03/18 00:00	05/08/18 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40168705001	BE	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168705002	BW	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168705003	SWE	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705004	SWW	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705005	SWN	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705006	SWS	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705007	DRUM-01	WI MOD GRO	ALD	3	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 1010	DEY	1	PASI-G
40168705008	TB	WI MOD GRO	ALD	9	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40168705001	BE					
WI MOD GRO	Benzene	643	ug/kg	75.5	05/11/18 20:30	
WI MOD GRO	Ethylbenzene	62.3J	ug/kg	75.5	05/11/18 20:30	
WI MOD GRO	1,2,4-Trimethylbenzene	155	ug/kg	75.5	05/11/18 20:30	
WI MOD GRO	1,3,5-Trimethylbenzene	59.5J	ug/kg	75.5	05/11/18 20:30	
WI MOD GRO	m&p-Xylene	250	ug/kg	151	05/11/18 20:30	
WI MOD GRO	o-Xylene	55.0J	ug/kg	75.5	05/11/18 20:30	
ASTM D2974-87	Percent Moisture	20.5	%	0.10	05/14/18 15:49	
40168705002	BW					
WI MOD GRO	Benzene	286	ug/kg	82.0	05/11/18 20:55	
ASTM D2974-87	Percent Moisture	26.8	%	0.10	05/14/18 15:49	
40168705003	SWE					
WI MOD GRO	Benzene	1410	ug/kg	85.1	05/11/18 21:21	
WI MOD GRO	Ethylbenzene	458	ug/kg	85.1	05/11/18 21:21	
WI MOD GRO	Naphthalene	137	ug/kg	85.1	05/11/18 21:21	
WI MOD GRO	1,2,4-Trimethylbenzene	246	ug/kg	85.1	05/11/18 21:21	
WI MOD GRO	1,3,5-Trimethylbenzene	110	ug/kg	85.1	05/11/18 21:21	
WI MOD GRO	m&p-Xylene	1110	ug/kg	170	05/11/18 21:21	
WI MOD GRO	o-Xylene	175	ug/kg	85.1	05/11/18 21:21	
ASTM D2974-87	Percent Moisture	29.5	%	0.10	05/21/18 08:59	
40168705004	SWW					
WI MOD GRO	Benzene	8110	ug/kg	81.2	05/11/18 21:46	
WI MOD GRO	Ethylbenzene	190	ug/kg	81.2	05/11/18 21:46	
WI MOD GRO	1,2,4-Trimethylbenzene	552	ug/kg	81.2	05/11/18 21:46	
WI MOD GRO	1,3,5-Trimethylbenzene	185	ug/kg	81.2	05/11/18 21:46	
WI MOD GRO	m&p-Xylene	1370	ug/kg	162	05/11/18 21:46	
WI MOD GRO	o-Xylene	580	ug/kg	81.2	05/11/18 21:46	
ASTM D2974-87	Percent Moisture	26.2	%	0.10	05/21/18 08:59	
40168705005	SWN					
WI MOD GRO	Benzene	9060	ug/kg	974	05/11/18 17:56	
WI MOD GRO	Ethylbenzene	13100	ug/kg	974	05/11/18 17:56	
WI MOD GRO	Naphthalene	5970	ug/kg	974	05/11/18 17:56	
WI MOD GRO	1,2,4-Trimethylbenzene	43600	ug/kg	974	05/11/18 17:56	
WI MOD GRO	1,3,5-Trimethylbenzene	21400	ug/kg	974	05/11/18 17:56	
WI MOD GRO	m&p-Xylene	42400	ug/kg	1950	05/11/18 17:56	
ASTM D2974-87	Percent Moisture	23.0	%	0.10	05/21/18 08:59	
40168705006	SWS					
WI MOD GRO	Benzene	14100	ug/kg	636	05/14/18 17:48	
WI MOD GRO	Ethylbenzene	10400	ug/kg	636	05/14/18 17:48	
WI MOD GRO	Naphthalene	5310	ug/kg	636	05/14/18 17:48	
WI MOD GRO	1,2,4-Trimethylbenzene	35000	ug/kg	636	05/14/18 17:48	
WI MOD GRO	1,3,5-Trimethylbenzene	17200	ug/kg	636	05/14/18 17:48	
WI MOD GRO	m&p-Xylene	32800	ug/kg	1270	05/14/18 17:48	
WI MOD GRO	o-Xylene	4680	ug/kg	636	05/14/18 17:48	
ASTM D2974-87	Percent Moisture	24.6	%	0.10	05/21/18 08:59	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40168705007	DRUM-01					
WI MOD GRO	Benzene	13100	ug/L	40.8	05/11/18 18:16	
WI MOD GRO	Gasoline Range Organics	25800	ug/L	4840	05/11/18 18:16	G+
EPA 6010	Lead	137	ug/L	26.0	05/10/18 20:50	
EPA 1010	Flashpoint	>200	deg F		05/08/18 15:23	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

Method: WI MOD GRO
Description: WIGRO GCV
Client: TRC - MADISON
Date: May 22, 2018

General Information:

8 samples were analyzed for WI MOD GRO. 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 TPH GRO/PVOC WI ext. 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.

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.

QC Batch: 288548

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40168822003

R1: RPD value was outside control limits.

- MSD (Lab ID: 1689164)
- 1,2,4-Trimethylbenzene

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Method: EPA 6010

Description: 6010 MET ICP

Client: TRC - MADISON

Date: May 22, 2018

General Information:

1 sample was analyzed for EPA 6010. 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 3010 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Method: EPA 1010

Description: 1010 Flashpoint,Closed Cup

Client: TRC - MADISON

Date: May 22, 2018

General Information:

1 sample was analyzed for EPA 1010. 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.

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.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: BE **Lab ID: 40168705001** Collected: 05/03/18 13:45 Received: 05/08/18 08:50 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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	643	ug/kg	75.5	31.4	1	05/11/18 08:45	05/11/18 20:30	71-43-2	
Ethylbenzene	62.3J	ug/kg	75.5	31.4	1	05/11/18 08:45	05/11/18 20:30	100-41-4	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:30	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:30	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:30	108-88-3	W
1,2,4-Trimethylbenzene	155	ug/kg	75.5	31.4	1	05/11/18 08:45	05/11/18 20:30	95-63-6	
1,3,5-Trimethylbenzene	59.5J	ug/kg	75.5	31.4	1	05/11/18 08:45	05/11/18 20:30	108-67-8	
m&p-Xylene	250	ug/kg	151	62.9	1	05/11/18 08:45	05/11/18 20:30	179601-23-1	
o-Xylene	55.0J	ug/kg	75.5	31.4	1	05/11/18 08:45	05/11/18 20:30	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	05/11/18 08:45	05/11/18 20:30	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	20.5	%	0.10	0.10	1		05/14/18 15:49		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: BW **Lab ID: 40168705002** Collected: 05/03/18 13:50 Received: 05/08/18 08:50 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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	286	ug/kg	82.0	34.2	1	05/11/18 08:45	05/11/18 20:55	71-43-2	
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	108-67-8	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	05/11/18 08:45	05/11/18 20:55	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 20:55	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	05/11/18 08:45	05/11/18 20:55	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	26.8	%	0.10	0.10	1		05/14/18 15:49		

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: SWE **Lab ID: 40168705003** Collected: 05/03/18 13:55 Received: 05/08/18 08:50 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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	1410	ug/kg	85.1	35.5	1	05/11/18 08:45	05/11/18 21:21	71-43-2	
Ethylbenzene	458	ug/kg	85.1	35.5	1	05/11/18 08:45	05/11/18 21:21	100-41-4	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 21:21	1634-04-4	W
Naphthalene	137	ug/kg	85.1	35.5	1	05/11/18 08:45	05/11/18 21:21	91-20-3	
Toluene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 21:21	108-88-3	W
1,2,4-Trimethylbenzene	246	ug/kg	85.1	35.5	1	05/11/18 08:45	05/11/18 21:21	95-63-6	
1,3,5-Trimethylbenzene	110	ug/kg	85.1	35.5	1	05/11/18 08:45	05/11/18 21:21	108-67-8	
m&p-Xylene	1110	ug/kg	170	70.9	1	05/11/18 08:45	05/11/18 21:21	179601-23-1	
o-Xylene	175	ug/kg	85.1	35.5	1	05/11/18 08:45	05/11/18 21:21	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	05/11/18 08:45	05/11/18 21:21	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	29.5	%	0.10	0.10	1		05/21/18 08:59		

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: SWW **Lab ID: 40168705004** Collected: 05/03/18 14:00 Received: 05/08/18 08:50 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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	8110	ug/kg	81.2	33.9	1	05/11/18 08:45	05/11/18 21:46	71-43-2	
Ethylbenzene	190	ug/kg	81.2	33.9	1	05/11/18 08:45	05/11/18 21:46	100-41-4	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 21:46	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 21:46	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	05/11/18 08:45	05/11/18 21:46	108-88-3	W
1,2,4-Trimethylbenzene	552	ug/kg	81.2	33.9	1	05/11/18 08:45	05/11/18 21:46	95-63-6	
1,3,5-Trimethylbenzene	185	ug/kg	81.2	33.9	1	05/11/18 08:45	05/11/18 21:46	108-67-8	
m&p-Xylene	1370	ug/kg	162	67.7	1	05/11/18 08:45	05/11/18 21:46	179601-23-1	
o-Xylene	580	ug/kg	81.2	33.9	1	05/11/18 08:45	05/11/18 21:46	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	05/11/18 08:45	05/11/18 21:46	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	26.2	%	0.10	0.10	1		05/21/18 08:59		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: SWN **Lab ID: 40168705005** Collected: 05/03/18 14:05 Received: 05/08/18 08:50 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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	9060	ug/kg	974	406	12.5	05/11/18 08:45	05/11/18 17:56	71-43-2	
Ethylbenzene	13100	ug/kg	974	406	12.5	05/11/18 08:45	05/11/18 17:56	100-41-4	
Methyl-tert-butyl ether	<312	ug/kg	750	312	12.5	05/11/18 08:45	05/11/18 17:56	1634-04-4	W
Naphthalene	5970	ug/kg	974	406	12.5	05/11/18 08:45	05/11/18 17:56	91-20-3	
Toluene	<312	ug/kg	750	312	12.5	05/11/18 08:45	05/11/18 17:56	108-88-3	W
1,2,4-Trimethylbenzene	43600	ug/kg	974	406	12.5	05/11/18 08:45	05/11/18 17:56	95-63-6	
1,3,5-Trimethylbenzene	21400	ug/kg	974	406	12.5	05/11/18 08:45	05/11/18 17:56	108-67-8	
m&p-Xylene	42400	ug/kg	1950	812	12.5	05/11/18 08:45	05/11/18 17:56	179601-23-1	
o-Xylene	<312	ug/kg	750	312	12.5	05/11/18 08:45	05/11/18 17:56	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	106	%	80-120		12.5	05/11/18 08:45	05/11/18 17:56	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	23.0	%	0.10	0.10	1		05/21/18 08:59		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: SWS **Lab ID: 40168705006** Collected: 05/03/18 14:10 Received: 05/08/18 08:50 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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	14100	ug/kg	636	265	8	05/14/18 09:00	05/14/18 17:48	71-43-2	
Ethylbenzene	10400	ug/kg	636	265	8	05/14/18 09:00	05/14/18 17:48	100-41-4	
Methyl-tert-butyl ether	<200	ug/kg	480	200	8	05/14/18 09:00	05/14/18 17:48	1634-04-4	W
Naphthalene	5310	ug/kg	636	265	8	05/14/18 09:00	05/14/18 17:48	91-20-3	
Toluene	<200	ug/kg	480	200	8	05/14/18 09:00	05/14/18 17:48	108-88-3	W
1,2,4-Trimethylbenzene	35000	ug/kg	636	265	8	05/14/18 09:00	05/14/18 17:48	95-63-6	
1,3,5-Trimethylbenzene	17200	ug/kg	636	265	8	05/14/18 09:00	05/14/18 17:48	108-67-8	
m&p-Xylene	32800	ug/kg	1270	530	8	05/14/18 09:00	05/14/18 17:48	179601-23-1	
o-Xylene	4680	ug/kg	636	265	8	05/14/18 09:00	05/14/18 17:48	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	108	%	80-120		8	05/14/18 09:00	05/14/18 17:48	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	24.6	%	0.10	0.10	1		05/21/18 08:59		

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: DRUM-01 **Lab ID: 40168705007** Collected: 05/03/18 09:25 Received: 05/08/18 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV									
Analytical Method: WI MOD GRO									
Benzene	13100	ug/L	40.8	12.2	40		05/11/18 18:16	71-43-2	
Gasoline Range Organics	25800	ug/L	4840	1450	40		05/11/18 18:16		G+
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%	80-120		40		05/11/18 18:16	98-08-8	
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	137	ug/L	26.0	8.7	2	05/10/18 07:31	05/10/18 20:50	7439-92-1	
1010 Flashpoint,Closed Cup									
Analytical Method: EPA 1010									
Flashpoint	>200	deg F			1		05/08/18 15:23		

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: TB **Lab ID: 40168705008** Collected: 05/03/18 00:00 Received: 05/08/18 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	<0.31	ug/L	1.0	0.31	1		05/11/18 21:40	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/11/18 21:40	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/11/18 21:40	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/11/18 21:40	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/11/18 21:40	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/11/18 21:40	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/11/18 21:40	108-67-8	
Xylene (Total)	<0.97	ug/L	3.2	0.97	1		05/11/18 21:40	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%	80-120		1		05/11/18 21:40	98-08-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 288552 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40168705001, 40168705002, 40168705003, 40168705004, 40168705005

METHOD BLANK: 1688687 Matrix: Solid
Associated Lab Samples: 40168705001, 40168705002, 40168705003, 40168705004, 40168705005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/11/18 09:35	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/11/18 09:35	
Benzene	ug/kg	<25.0	50.0	05/11/18 09:35	
Ethylbenzene	ug/kg	<25.0	50.0	05/11/18 09:35	
m&p-Xylene	ug/kg	<50.0	100	05/11/18 09:35	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/11/18 09:35	
Naphthalene	ug/kg	<25.0	50.0	05/11/18 09:35	
o-Xylene	ug/kg	<25.0	50.0	05/11/18 09:35	
Toluene	ug/kg	<25.0	50.0	05/11/18 09:35	
a,a,a-Trifluorotoluene (S)	%	101	80-120	05/11/18 09:35	

LABORATORY CONTROL SAMPLE & LCSD: 1688688

1688689

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1060	1060	106	106	80-120	0	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
Benzene	ug/kg	1000	987	1000	99	100	80-120	2	20	
Ethylbenzene	ug/kg	1000	1040	1040	104	104	80-120	0	20	
m&p-Xylene	ug/kg	2000	2060	2040	103	102	80-120	1	20	
Methyl-tert-butyl ether	ug/kg	1000	945	947	95	95	80-120	0	20	
Naphthalene	ug/kg	1000	1040	1040	104	104	80-120	0	20	
o-Xylene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
Toluene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 288731 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40168705006

METHOD BLANK: 1690013 Matrix: Solid
Associated Lab Samples: 40168705006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/14/18 10:05	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/14/18 10:05	
Benzene	ug/kg	<25.0	50.0	05/14/18 10:05	
Ethylbenzene	ug/kg	<25.0	50.0	05/14/18 10:05	
m&p-Xylene	ug/kg	<50.0	100	05/14/18 10:05	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/14/18 10:05	
Naphthalene	ug/kg	<25.0	50.0	05/14/18 10:05	
o-Xylene	ug/kg	<25.0	50.0	05/14/18 10:05	
Toluene	ug/kg	<25.0	50.0	05/14/18 10:05	
a,a,a-Trifluorotoluene (S)	%	102	80-120	05/14/18 10:05	

LABORATORY CONTROL SAMPLE & LCSD: 1690014

1690015

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1040	1070	104	107	80-120	3	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1000	1030	100	103	80-120	2	20	
Benzene	ug/kg	1000	996	1020	100	102	80-120	3	20	
Ethylbenzene	ug/kg	1000	1040	1060	104	106	80-120	2	20	
m&p-Xylene	ug/kg	2000	2040	2090	102	105	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	906	986	91	99	80-120	8	20	
Naphthalene	ug/kg	1000	1010	1110	101	111	80-120	10	20	
o-Xylene	ug/kg	1000	1020	1050	102	105	80-120	3	20	
Toluene	ug/kg	1000	1010	1030	101	103	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

QC Batch: 288548 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40168705007, 40168705008

METHOD BLANK: 1688673 Matrix: Water

Associated Lab Samples: 40168705007, 40168705008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	05/11/18 09:45	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	05/11/18 09:45	
Benzene	ug/L	<0.31	1.0	05/11/18 09:45	
Ethylbenzene	ug/L	<0.33	1.1	05/11/18 09:45	
Gasoline Range Organics	ug/L	<36.3	121	05/11/18 09:45	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	05/11/18 09:45	
Naphthalene	ug/L	<0.51	1.7	05/11/18 09:45	
Toluene	ug/L	<0.49	1.6	05/11/18 09:45	
Xylene (Total)	ug/L	<0.97	3.2	05/11/18 09:45	
a,a,a-Trifluorotoluene (S)	%	98	80-120	05/11/18 09:45	

LABORATORY CONTROL SAMPLE & LCSD: 1688674 1688675

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	20.3	100	101	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	19.4	19.6	97	98	80-120	1	20	
Benzene	ug/L	20	19.6	19.5	98	97	80-120	1	20	
Ethylbenzene	ug/L	20	20.0	20.0	100	100	80-120	0	20	
Gasoline Range Organics	ug/L	200	213	220	107	110	80-120	3	20	
Methyl-tert-butyl ether	ug/L	20	18.3	18.6	91	93	80-120	2	20	
Naphthalene	ug/L	20	18.9	20.2	94	101	80-120	7	20	
Toluene	ug/L	20	19.8	19.7	99	98	80-120	0	20	
Xylene (Total)	ug/L	60	59.0	59.2	98	99	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				98	100	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1689163 1689164

Parameter	Units	40168822003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	<0.34	20	20	18.5	14.1	93	70	11-200	27	20	R1
1,3,5-Trimethylbenzene	ug/L	<0.33	20	20	18.3	15.9	91	80	54-142	14	20	
Benzene	ug/L	<0.31	20	20	20.9	21.4	104	107	66-140	3	20	
Ethylbenzene	ug/L	<0.33	20	20	21.0	21.3	105	106	66-143	1	20	
Methyl-tert-butyl ether	ug/L	<0.32	20	20	19.2	20.1	96	101	70-129	5	20	
Naphthalene	ug/L	<0.51	20	20	19.4	20.8	97	104	64-129	7	20	
Toluene	ug/L	<0.49	20	20	20.9	21.2	105	106	76-130	1	20	
Xylene (Total)	ug/L	<0.97	60	60	60.8	59.5	101	99	60-140	2	20	
a,a,a-Trifluorotoluene (S)	%						100	99	80-120			

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

QC Batch: 288403	Analysis Method: EPA 6010
QC Batch Method: EPA 3010	Analysis Description: 6010 MET
Associated Lab Samples: 40168705007	

METHOD BLANK: 1687856 Matrix: Water
Associated Lab Samples: 40168705007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	<4.3	13.0	05/10/18 20:16	

LABORATORY CONTROL SAMPLE: 1687857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	485	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1687858 1687859

Parameter	Units	40168482001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
Lead	ug/L	5.8J	500	500	468	470	92	93	75-125	0	20

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

QC Batch: 288846	Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87	Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40168705001, 40168705002	

SAMPLE DUPLICATE: 1690349

Parameter	Units	40168674002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.0	16.4	2	10	

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 289435 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40168705003, 40168705004, 40168705005, 40168705006

SAMPLE DUPLICATE: 1694154

Parameter	Units	40168727012 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.3	17.5	5	10	

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

QC Batch: 288150	Analysis Method: EPA 1010
QC Batch Method: EPA 1010	Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 40168705007	

LABORATORY CONTROL SAMPLE: 1685984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.0			

SAMPLE DUPLICATE: 1686011

Parameter	Units	10429832001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	106	103			

SAMPLE DUPLICATE: 1686031

Parameter	Units	40168570001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	121	126			

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QUALIFIERS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

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 and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

G+ Late peaks present outside the GRO window.

R1 RPD value was outside control limits.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

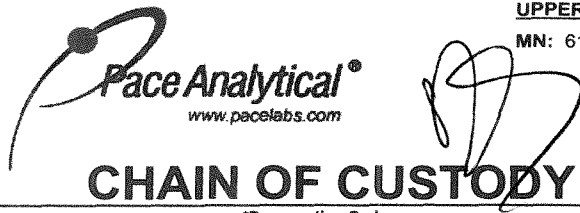
Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40168705001	BE	TPH GRO/PVOC WI ext.	288552	WI MOD GRO	288583
40168705002	BW	TPH GRO/PVOC WI ext.	288552	WI MOD GRO	288583
40168705003	SWE	TPH GRO/PVOC WI ext.	288552	WI MOD GRO	288583
40168705004	SWW	TPH GRO/PVOC WI ext.	288552	WI MOD GRO	288583
40168705005	SWN	TPH GRO/PVOC WI ext.	288552	WI MOD GRO	288583
40168705006	SWS	TPH GRO/PVOC WI ext.	288731	WI MOD GRO	288785
40168705007	DRUM-01	WI MOD GRO	288548		
40168705008	TB	WI MOD GRO	288548		
40168705007	DRUM-01	EPA 3010	288403	EPA 6010	288511
40168705001	BE	ASTM D2974-87	288846		
40168705002	BW	ASTM D2974-87	288846		
40168705003	SWE	ASTM D2974-87	289435		
40168705004	SWW	ASTM D2974-87	289435		
40168705005	SWN	ASTM D2974-87	289435		
40168705006	SWS	ASTM D2974-87	289435		
40168705007	DRUM-01	EPA 1010	288150		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: TRC Environmental
 Branch/Location: Madison, WI
 Project Contact: Don Haak
 Phone: 608-826-3628
 Project Number: 274 386
 Project Name: USM 2 UST (WisDOT-Spur)
 Project State: Wisconsin
 Sampled By (Print): Tom W. Perkins
 Sampled By (Sign): *[Signature]*
 PO #: _____ Regulatory Program: _____



UPPER MIDWEST REGION

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

40168705

CHAIN OF CUSTODY

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

FILTERED?
(YES/NO)
 PRESERVATION
(CODE)*

Y/N	N	N	N	N	N							
Pick Letter	B	D	B	B	A							
Analyses Requested	Puoc / Napthalene	Lead	Benzene	CRO	Flashpoint							

Quote #: _____
 Mail To Contact: Don Haak
 Mail To Company: TRC Environmental
 Mail To Address: 708 Heartland Trl. Suite 300B Madison, WI 53717
 Invoice To Contact: _____
 Invoice To Company: _____
 Invoice To Address: _____
 Invoice To Phone: _____
 CLIENT COMMENTS: _____
 LAB COMMENTS (Lab Use Only): _____
 Profile #: _____

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	Pick Letter	Analyses Requested	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
		DATE	TIME														
001	BE	5/3/18	1345	S	X												
002	BW	5/3/18	1350	S	X												
003	SWE	5/3/18	1355	S	X												
004	SWW	5/3/18	1400	S	X												
005	SWN	5/3/18	1405	S	X												
006	SWS	5/3/18	1410	S	X												
007	Drum-01	5/3/18	0925	W				X	X	X	X						
008	TB ①																

① TB-added to Calh lab- received w/shipment 5/8/18

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed: _____

Relinquished By: *[Signature]* Date/Time: 5/7/18, 0800
 Received By: _____ Date/Time: _____

Transmit Prelim Rush Results by (complete what you want): _____

Relinquished By: Walter Date/Time: 5/8/18 0850
 Received By: *[Signature]* Date/Time: 5/8/18 0850

PACE Project No. 40168705
 Receipt Temp = ROT °C
 Sample Receipt pH: Adjusted
 Cooler Custody Seal: Present / Not Present Intact / Not Intact

Sample Preservation Receipt Form

Client Name: TRC Environmental

Project # 40168705

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

Lab Lot# of pH paper: 10654771 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: 5/21

Date/Time:

Pace Lab #	Glass							Plastic							Vials				Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)					
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T								ZPLC	GN			
001																																				2.5 / 5 / 10
002																																				2.5 / 5 / 10
003																																				2.5 / 5 / 10
004																																				2.5 / 5 / 10
005																																				2.5 / 5 / 10
006																																				2.5 / 5 / 10
007																																				2.5 / 5 / 10
008																																				2.5 / 5 / 10
009																																				2.5 / 5 / 10
010																																				2.5 / 5 / 10
011																																				2.5 / 5 / 10
012																																				2.5 / 5 / 10
013																																				2.5 / 5 / 10
014																																				2.5 / 5 / 10
015																																				2.5 / 5 / 10
016																																				2.5 / 5 / 10
017																																				2.5 / 5 / 10
018																																				2.5 / 5 / 10
019																																				2.5 / 5 / 10
020																																				2.5 / 5 / 10

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

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	4oz amber glass unpreserved



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-GB-C-031-Rev.07

Document Revised: 25Apr2018
 Issuing Authority:
 Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: TRC Environmental

Project #: _____

WO#: 40168705

Courier: CS Logistics Fed Ex Speedee UPS **Waltco**
 Client Pace Other: _____



Tracking #: 1711503-1

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

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

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

Cooler Temperature Uncorr: R65 /Corr: _____

Temp Blank Present: yes no

Biological Tissue is Frozen: yes no

Person examining contents:
 Date: 5/8/18
 Initials: SSM

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>(1)</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S/W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>399</u>		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: (1) TB - received w/shipment - added to COC by lab SSM 5/8/18

Project Manager Review: Romp For TW

Date: 5/8/18

May 29, 2018

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

RE: Project: 274386.0000 WISDOT-USH 2
Pace Project No.: 40169129

Dear DAN HAAK:

Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 274386.0000 WISDOT-USH 2

Pace Project No.: 40169129

Green Bay Certification IDs

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

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SAMPLE SUMMARY

Project: 274386.0000 WISDOT-USH 2

Pace Project No.: 40169129

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40169129001	STA 173+30,10'R,9' BGS	Solid	05/11/18 09:40	05/15/18 09:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 274386.0000 WISDOT-USH 2
Pace Project No.: 40169129

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40169129001	STA 173+30,10'R,9' BGS	WI MOD GRO	ALD	10	PASI-G

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386.0000 WISDOT-USH 2

Pace Project No.: 40169129

Method: WI MOD GRO

Description: WIGRO GCV

Client: TRC - MADISON

Date: May 29, 2018

General Information:

1 sample was analyzed for WI MOD GRO. 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 TPH GRO/PVOC WI ext. 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.

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386.0000 WISDOT-USH 2
Pace Project No.: 40169129

Sample: STA 173+30,10'R,9' BGS Lab ID: 40169129001 Collected: 05/11/18 09:40 Received: 05/15/18 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	108-67-8	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	05/22/18 08:00	05/22/18 11:16	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	05/22/18 08:00	05/22/18 11:16	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	05/22/18 08:00	05/22/18 11:16	98-08-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274386.0000 WISDOT-USH 2
Pace Project No.: 40169129

QC Batch: 289562 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40169129001

METHOD BLANK: 1694556 Matrix: Solid
Associated Lab Samples: 40169129001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/22/18 09:31	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/22/18 09:31	
Benzene	ug/kg	<25.0	50.0	05/22/18 09:31	
Ethylbenzene	ug/kg	<25.0	50.0	05/22/18 09:31	
m&p-Xylene	ug/kg	<50.0	100	05/22/18 09:31	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/22/18 09:31	
Naphthalene	ug/kg	<25.0	50.0	05/22/18 09:31	
o-Xylene	ug/kg	<25.0	50.0	05/22/18 09:31	
Toluene	ug/kg	<25.0	50.0	05/22/18 09:31	
a,a,a-Trifluorotoluene (S)	%	100	80-120	05/22/18 09:31	

LABORATORY CONTROL SAMPLE & LCSD: 1694557

1694558

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	996	1030	100	103	80-120	4	20	
1,3,5-Trimethylbenzene	ug/kg	1000	958	992	96	99	80-120	3	20	
Benzene	ug/kg	1000	959	987	96	99	80-120	3	20	
Ethylbenzene	ug/kg	1000	993	1030	99	103	80-120	3	20	
m&p-Xylene	ug/kg	2000	1970	2030	98	101	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	874	930	87	93	80-120	6	20	
Naphthalene	ug/kg	1000	961	1060	96	106	80-120	10	20	
o-Xylene	ug/kg	1000	981	1010	98	101	80-120	3	20	
Toluene	ug/kg	1000	970	1000	97	100	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				100	100	80-120			

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 274386.0000 WISDOT-USH 2
Pace Project No.: 40169129

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 and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 274386.0000 WISDOT-USH 2

Pace Project No.: 40169129

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40169129001	STA 173+30,10'R,9' BGS	TPH GRO/PVOC WI ext.	289562	WI MOD GRO	289568

REPORT OF LABORATORY ANALYSIS

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90169129

Company Name: TRC Project Contact: Dan Haak/Tom Dushek Telephone: 608-826-3628 Project Name: WISDOT-USH 2 Project Number: 274386.0000 Project Location: Superior, WI Sampled By: Tom Dushek	TRC Place Header Sticker Here: Lab Use Only	Mail Report To: Dan Haak Company: TRC Address: 708 Heartland Trail City/State/Zip: Madison, WI 53717
Regulatory Program: UST RCRA SDWA NPDES Solid Waste Other _____	Ice Present Yes No Temperature _____ Initials _____ Date _____ Time _____ Cooler # _____	PO No. _____ Contract No. _____

Turnaround Time
 Normal RUSH* Date Needed _____
 *Notify Lab prior to sending in RUSH
 Surcharges 24 hr 200% 2-3 days 100% 4-9 days 50%
 Surcharges subject to change without notice.

Landfill License Number

Collection		Field Screen	Field ID	Grab/Comp	Sample ID Description	Filt'd Y/N	WDNR Well ID #	**Matrix:	PVOC's + Napthalene	Total No of Containers	Total No of Cont. Rec'd	Preservation*	Lab ID #
Date	Time												
Fill in Spaces with Bottles per Test													
5/11/18	0940			G	STA 173+30, 10'R, 9' bgs	N		S	1			1	
								F					


Relinquished By: <i>S.J. Dushek</i>	Date/Time 5/14/18 1600	Relinquished By: <i>Feb ex</i>	Date/Time 5/15/18 0950	**Matrix S-Soil A-Air Slg-Sludge M-Misc Waste GW-Groundwater SW-Surface Water WW-Wastewater DW-Drinking Water
Received by:	Date/Time	Received by: <i>[Signature]</i>	Date/Time 5/15/18 0950	

Sample Preservation Receipt Form

Client Name: TRC

Project # 40169129

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

Initial when completed: 

Date/Time:

Lab Lot# of pH paper:

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

Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)							
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T	ZPLC	GN				
001																																					2.5 / 5 / 10
002																																					2.5 / 5 / 10
003																																					2.5 / 5 / 10
004																																					2.5 / 5 / 10
005																																					2.5 / 5 / 10
006																																					2.5 / 5 / 10
007																																					2.5 / 5 / 10
008																																					2.5 / 5 / 10
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011																																					2.5 / 5 / 10
012																																					2.5 / 5 / 10
013																																					2.5 / 5 / 10
014																																					2.5 / 5 / 10
015																																					2.5 / 5 / 10
016																																					2.5 / 5 / 10
017																																					2.5 / 5 / 10
018																																					2.5 / 5 / 10
019																																					2.5 / 5 / 10
020																																					2.5 / 5 / 10

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

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	



Document Name:
Sample Condition Upon Receipt (SCUR)
Document No.:
F-GB-C-031-Rev.07

Document Revised: 25Apr2018
Issuing Authority:
Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: TRC

Project #: **WO# : 40169129**

Courier: CS Logistics Fed Ex Speedee UPS Walco
 Client Pace Other: _____



Tracking #: 8030 2533 3336

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

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

Packing Material: Bubble Wrap Bubble Bags None Other

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

Cooler Temperature Uncorr: 20.1 / Corr: _____

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

Person examining contents:
Date: 5/15/18
Initials: [Signature]

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>no sample</u> MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>no dry weight volume</u> <u>only 500µl</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <u>5/15/18</u>	13. <u>[Signature]</u>
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

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

Project Manager Review: [Signature] for TRC Date: 5/15/18

June 08, 2018

Tom Dushek
TRC Environmental
125 Rosecrans Street
Wausau, WI 54402

RE: Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

Dear Tom Dushek:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



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

Enclosures

cc: DAN HAAK, TRC - MADISON
Peggy Popp, TRC - Madison



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Green Bay Certification IDs

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

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SAMPLE SUMMARY

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40169888001	STA 173+60, 30'R, 7' BGS	Solid	05/17/18 19:05	05/26/18 10:15
40169888002	STA 173+35', 15'R, 8' BGS	Solid	05/18/18 12:00	05/26/18 10:15
40169888003	STA 173+25', 25'R, 4.5' BGS	Solid	05/23/18 11:00	05/26/18 10:15
40169888004	STA 179+60, 50'R, 3' BGS	Solid	05/22/18 13:00	05/26/18 10:15
40169888005	STA 178+90, 75'R, 3' BGS	Solid	05/22/18 16:00	05/26/18 10:15
40169888006	STA 179+10, 65'R, 3' BGS	Solid	05/22/18 16:20	05/26/18 10:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40169888001	STA 173+60, 30'R, 7' BGS	WI MOD GRO	ALD	10	PASI-G
40169888002	STA 173+35', 15'R, 8' BGS	WI MOD GRO	ALD	10	PASI-G
40169888003	STA 173+25', 25'R, 4.5' BGS	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40169888004	STA 179+60, 50'R, 3' BGS	WI MOD DRO	ABF	1	PASI-G
		WI MOD GRO	ALD	11	PASI-G
		EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40169888005	STA 178+90, 75'R, 3' BGS	WI MOD DRO	ABF	1	PASI-G
		WI MOD GRO	ALD	11	PASI-G
		EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	JXS	1	PASI-G
40169888006	STA 179+10, 65'R, 3' BGS	WI MOD DRO	ABF	1	PASI-G
		WI MOD GRO	ALD	11	PASI-G
		EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	SKW	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40169888002	STA 173+35', 15'R, 8' BGS					
WI MOD GRO	Benzene	659	ug/kg	50.0	05/31/18 21:29	
40169888003	STA 173+25', 25'R, 4.5' BGS					
WI MOD GRO	Benzene	41.1J	ug/kg	82.3	06/04/18 10:55	
WI MOD GRO	Naphthalene	66.4J	ug/kg	82.3	06/04/18 10:55	
ASTM D2974-87	Percent Moisture	27.1	%	0.10	05/30/18 14:07	
40169888004	STA 179+60, 50'R, 3' BGS					
WI MOD DRO	Diesel Range Organics	790	mg/kg	88.4	06/02/18 02:54	D5,DC
WI MOD GRO	Benzene	19600	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	Ethylbenzene	49500	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	Gasoline Range Organics	3340	mg/kg	169	06/04/18 13:29	GO
WI MOD GRO	Methyl-tert-butyl ether	2600	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	Naphthalene	5930	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	Toluene	5640	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	1,2,4-Trimethylbenzene	40700	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	1,3,5-Trimethylbenzene	18400	ug/kg	2030	06/04/18 13:29	
WI MOD GRO	m&p-Xylene	67300	ug/kg	4060	06/04/18 13:29	
WI MOD GRO	o-Xylene	17000	ug/kg	2030	06/04/18 13:29	
EPA 6010	Lead	44.2	mg/kg	3.1	06/07/18 11:20	
ASTM D2974-87	Percent Moisture	26.2	%	0.10	05/30/18 14:07	
40169888005	STA 178+90, 75'R, 3' BGS					
WI MOD GRO	Gasoline Range Organics	7.1	mg/kg	6.3	06/04/18 11:21	
WI MOD GRO	1,3,5-Trimethylbenzene	42.5J	ug/kg	76.1	06/04/18 11:21	
EPA 6010	Lead	7.4	mg/kg	1.5	06/06/18 16:41	
ASTM D2974-87	Percent Moisture	21.1	%	0.10	05/26/18 15:51	
40169888006	STA 179+10, 65'R, 3' BGS					
WI MOD DRO	Diesel Range Organics	58.3	mg/kg	5.1	06/02/18 01:05	D5,DC
WI MOD GRO	Benzene	45.9J	ug/kg	70.8	06/04/18 11:46	
WI MOD GRO	Ethylbenzene	40.5J	ug/kg	70.8	06/04/18 11:46	
WI MOD GRO	Gasoline Range Organics	17.7	mg/kg	5.9	06/04/18 11:46	G+
WI MOD GRO	Naphthalene	175	ug/kg	70.8	06/04/18 11:46	
WI MOD GRO	1,2,4-Trimethylbenzene	49.4J	ug/kg	70.8	06/04/18 11:46	
WI MOD GRO	1,3,5-Trimethylbenzene	70.3J	ug/kg	70.8	06/04/18 11:46	
WI MOD GRO	m&p-Xylene	85.8J	ug/kg	142	06/04/18 11:46	
WI MOD GRO	o-Xylene	35.7J	ug/kg	70.8	06/04/18 11:46	
EPA 6010	Lead	21.6	mg/kg	1.4	06/06/18 16:43	
ASTM D2974-87	Percent Moisture	15.2	%	0.10	05/30/18 14:07	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Date: June 08, 2018

STA 173+60, 30'R, 7' BGS (Lab ID: 40169888001)

- Samples -001 and -002 are reported on an as-is basis.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

Method: WI MOD DRO
Description: WIDRO GCS
Client: TRC - MADISON
Date: June 08, 2018

General Information:

3 samples were analyzed for WI MOD DRO. 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 WI MOD DRO 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.

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:

Analyte Comments:

QC Batch: 290559

D5: The sample was re-weighed into a new container because the sample weight in the original container exceeded the method specifications.

- STA 178+90, 75'R, 3' BGS (Lab ID: 40169888005)
 - Diesel Range Organics
- STA 179+10, 65'R, 3' BGS (Lab ID: 40169888006)
 - Diesel Range Organics
- STA 179+60, 50'R, 3' BGS (Lab ID: 40169888004)
 - Diesel Range Organics

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Method: WI MOD GRO

Description: WIGRO GCV

Client: TRC - MADISON

Date: June 08, 2018

General Information:

6 samples were analyzed for WI MOD GRO. 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 TPH GRO/PVOC WI ext. 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.

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:

Analyte Comments:

QC Batch: 290349

1q: Sample received overweight. Values should be considered an estimate.

- STA 173+60, 30'R, 7' BGS (Lab ID: 40169888001)
 - a,a,a-Trifluorotoluene (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Method: EPA 6010

Description: 6010 MET ICP

Client: TRC - MADISON

Date: June 08, 2018

General Information:

3 samples were analyzed for EPA 6010. 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 3050 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.

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Sample: STA 173+60, 30'R, 7' BGS Lab ID: 40169888001 Collected: 05/17/18 19:05 Received: 05/26/18 10:15 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	108-67-8	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	05/30/18 07:00	05/30/18 19:37	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	05/30/18 07:00	05/30/18 19:37	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	05/30/18 07:00	05/30/18 19:37	98-08-8	1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Sample: STA 173+35', 15'R, 8' BGS **Lab ID: 40169888002** Collected: 05/18/18 12:00 Received: 05/26/18 10:15 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	659	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	71-43-2	
Ethylbenzene	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	1634-04-4	W
Naphthalene	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	91-20-3	W
Toluene	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	108-67-8	W
m&p-Xylene	<50.0	ug/kg	100	50.0	1	05/31/18 09:00	05/31/18 21:29	179601-23-1	W
o-Xylene	<25.0	ug/kg	50.0	25.0	1	05/31/18 09:00	05/31/18 21:29	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	05/31/18 09:00	05/31/18 21:29	98-08-8	

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ANALYTICAL RESULTS

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Sample: STA 173+25', 25'R, 4.5' **Lab ID:** 40169888003 Collected: 05/23/18 11:00 Received: 05/26/18 10:15 Matrix: Solid
BGS

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
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	41.1J	ug/kg	82.3	34.3	1	06/04/18 08:30	06/04/18 10:55	71-43-2	
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 10:55	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 10:55	1634-04-4	W
Naphthalene	66.4J	ug/kg	82.3	34.3	1	06/04/18 08:30	06/04/18 10:55	91-20-3	
Toluene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 10:55	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 10:55	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 10:55	108-67-8	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/04/18 08:30	06/04/18 10:55	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 10:55	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	06/04/18 08:30	06/04/18 10:55	98-08-8	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	27.1	%	0.10	0.10	1		05/30/18 14:07		

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ANALYTICAL RESULTS

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Sample: STA 179+60, 50'R, 3' BGS Lab ID: 40169888004 Collected: 05/22/18 13:00 Received: 05/26/18 10:15 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	790	mg/kg	88.4	26.4	15	05/31/18 11:21	06/02/18 02:54		D5,DC
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	19600	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	71-43-2	
Ethylbenzene	49500	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	100-41-4	
Gasoline Range Organics	3340	mg/kg	169	84.7	25	06/04/18 08:30	06/04/18 13:29		GO
Methyl-tert-butyl ether	2600	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	1634-04-4	
Naphthalene	5930	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	91-20-3	
Toluene	5640	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	108-88-3	
1,2,4-Trimethylbenzene	40700	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	95-63-6	
1,3,5-Trimethylbenzene	18400	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	108-67-8	
m&p-Xylene	67300	ug/kg	4060	1690	25	06/04/18 08:30	06/04/18 13:29	179601-23-1	
o-Xylene	17000	ug/kg	2030	847	25	06/04/18 08:30	06/04/18 13:29	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		25	06/04/18 08:30	06/04/18 13:29	98-08-8	
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	44.2	mg/kg	3.1	1.0	2	06/06/18 09:36	06/07/18 11:20	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	26.2	%	0.10	0.10	1		05/30/18 14:07		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

Sample: STA 178+90, 75'R, 3' BGS Lab ID: 40169888005 Collected: 05/22/18 16:00 Received: 05/26/18 10:15 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
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	<1.6	mg/kg	5.5	1.6	1	05/31/18 11:21	06/02/18 02:18		D5
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	100-41-4	W
Gasoline Range Organics	7.1	mg/kg	6.3	3.2	1	06/04/18 08:30	06/04/18 11:21		
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	95-63-6	W
1,3,5-Trimethylbenzene	42.5J	ug/kg	76.1	31.7	1	06/04/18 08:30	06/04/18 11:21	108-67-8	
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/04/18 08:30	06/04/18 11:21	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:21	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	06/04/18 08:30	06/04/18 11:21	98-08-8	
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	7.4	mg/kg	1.5	0.49	1	06/06/18 09:36	06/06/18 16:41	7439-92-1	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	21.1	%	0.10	0.10	1		05/26/18 15:51		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Sample: STA 179+10, 65'R, 3' BGS **Lab ID: 40169888006** Collected: 05/22/18 16:20 Received: 05/26/18 10:15 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	58.3	mg/kg	5.1	1.5	1	05/31/18 11:21	06/02/18 01:05		D5,DC
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	45.9J	ug/kg	70.8	29.5	1	06/04/18 08:30	06/04/18 11:46	71-43-2	
Ethylbenzene	40.5J	ug/kg	70.8	29.5	1	06/04/18 08:30	06/04/18 11:46	100-41-4	
Gasoline Range Organics	17.7	mg/kg	5.9	2.9	1	06/04/18 08:30	06/04/18 11:46		G+
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:46	1634-04-4	W
Naphthalene	175	ug/kg	70.8	29.5	1	06/04/18 08:30	06/04/18 11:46	91-20-3	
Toluene	<25.0	ug/kg	60.0	25.0	1	06/04/18 08:30	06/04/18 11:46	108-88-3	W
1,2,4-Trimethylbenzene	49.4J	ug/kg	70.8	29.5	1	06/04/18 08:30	06/04/18 11:46	95-63-6	
1,3,5-Trimethylbenzene	70.3J	ug/kg	70.8	29.5	1	06/04/18 08:30	06/04/18 11:46	108-67-8	
m&p-Xylene	85.8J	ug/kg	142	59.0	1	06/04/18 08:30	06/04/18 11:46	179601-23-1	
o-Xylene	35.7J	ug/kg	70.8	29.5	1	06/04/18 08:30	06/04/18 11:46	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	06/04/18 08:30	06/04/18 11:46	98-08-8	
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	21.6	mg/kg	1.4	0.47	1	06/06/18 09:36	06/06/18 16:43	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	15.2	%	0.10	0.10	1		05/30/18 14:07		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST
Project No.: 40169888

QC Batch: 290349 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40169888001

METHOD BLANK: 1698857 Matrix: Solid
Associated Lab Samples: 40169888001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/30/18 08:29	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/30/18 08:29	
Benzene	ug/kg	<25.0	50.0	05/30/18 08:29	
Ethylbenzene	ug/kg	<25.0	50.0	05/30/18 08:29	
m&p-Xylene	ug/kg	<50.0	100	05/30/18 08:29	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/30/18 08:29	
Naphthalene	ug/kg	<25.0	50.0	05/30/18 08:29	
o-Xylene	ug/kg	<25.0	50.0	05/30/18 08:29	
Toluene	ug/kg	<25.0	50.0	05/30/18 08:29	
a,a,a-Trifluorotoluene (S)	%	99	80-120	05/30/18 08:29	

LABORATORY CONTROL SAMPLE & LCSD: 1698858

1698859

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	961	1030	96	103	80-120	7	20	
1,3,5-Trimethylbenzene	ug/kg	1000	923	993	92	99	80-120	7	20	
Benzene	ug/kg	1000	905	975	91	98	80-120	7	20	
Ethylbenzene	ug/kg	1000	952	1030	95	103	80-120	7	20	
m&p-Xylene	ug/kg	2000	1890	2040	94	102	80-120	8	20	
Methyl-tert-butyl ether	ug/kg	1000	849	921	85	92	80-120	8	20	
Naphthalene	ug/kg	1000	963	1070	96	107	80-120	11	20	
o-Xylene	ug/kg	1000	939	1020	94	102	80-120	8	20	
Toluene	ug/kg	1000	926	990	93	99	80-120	7	20	
a,a,a-Trifluorotoluene (S)	%				99	99	80-120			

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

QC Batch: 290507 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40169888002

METHOD BLANK: 1699501 Matrix: Solid
Associated Lab Samples: 40169888002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/31/18 09:52	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/31/18 09:52	
Benzene	ug/kg	<25.0	50.0	05/31/18 09:52	
Ethylbenzene	ug/kg	<25.0	50.0	05/31/18 09:52	
m&p-Xylene	ug/kg	<50.0	100	05/31/18 09:52	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/31/18 09:52	
Naphthalene	ug/kg	<25.0	50.0	05/31/18 09:52	
o-Xylene	ug/kg	<25.0	50.0	05/31/18 09:52	
Toluene	ug/kg	<25.0	50.0	05/31/18 09:52	
a,a,a-Trifluorotoluene (S)	%	98	80-120	05/31/18 09:52	

LABORATORY CONTROL SAMPLE & LCSD: 1699502 1699503

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1020	1060	102	106	80-120	4	20	
1,3,5-Trimethylbenzene	ug/kg	1000	988	1030	99	103	80-120	4	20	
Benzene	ug/kg	1000	950	986	95	99	80-120	4	20	
Ethylbenzene	ug/kg	1000	991	1030	99	103	80-120	4	20	
m&p-Xylene	ug/kg	2000	1980	2030	99	101	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	921	980	92	98	80-120	6	20	
Naphthalene	ug/kg	1000	921	997	92	100	80-120	8	20	
o-Xylene	ug/kg	1000	984	1010	98	101	80-120	3	20	
Toluene	ug/kg	1000	955	1010	95	101	80-120	5	20	
a,a,a-Trifluorotoluene (S)	%				98	99	80-120			

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST
Project No.: 40169888

QC Batch: 290816 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40169888003, 40169888004, 40169888005, 40169888006

METHOD BLANK: 1701101 Matrix: Solid
Associated Lab Samples: 40169888003, 40169888004, 40169888005, 40169888006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	06/04/18 09:12	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	06/04/18 09:12	
Benzene	ug/kg	<25.0	50.0	06/04/18 09:12	
Ethylbenzene	ug/kg	<25.0	50.0	06/04/18 09:12	
Gasoline Range Organics	mg/kg	<1.6	5.0	06/04/18 09:12	
m&p-Xylene	ug/kg	<50.0	100	06/04/18 09:12	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	06/04/18 09:12	
Naphthalene	ug/kg	<25.0	50.0	06/04/18 09:12	
o-Xylene	ug/kg	<25.0	50.0	06/04/18 09:12	
Toluene	ug/kg	<25.0	50.0	06/04/18 09:12	
a,a,a-Trifluorotoluene (S)	%	99	80-120	06/04/18 09:12	

LABORATORY CONTROL SAMPLE & LCSD: 1701102

Parameter	Units	1701102		1701103		% Rec Limits	RPD	Max RPD	Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec				
1,2,4-Trimethylbenzene	ug/kg	1000	992	1010	99	101	80-120	2	20
1,3,5-Trimethylbenzene	ug/kg	1000	952	974	95	97	80-120	2	20
Benzene	ug/kg	1000	934	956	93	96	80-120	2	20
Ethylbenzene	ug/kg	1000	977	1000	98	100	80-120	2	20
Gasoline Range Organics	mg/kg	10	8.4	8.7	84	87	80-120	3	20
m&p-Xylene	ug/kg	2000	1920	1980	96	99	80-120	3	20
Methyl-tert-butyl ether	ug/kg	1000	869	857	87	86	80-120	1	20
Naphthalene	ug/kg	1000	979	975	98	98	80-120	0	20
o-Xylene	ug/kg	1000	967	990	97	99	80-120	2	20
Toluene	ug/kg	1000	957	964	96	96	80-120	1	20
a,a,a-Trifluorotoluene (S)	%				100	99	80-120		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

QC Batch: 291085 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 40169888004, 40169888005, 40169888006

METHOD BLANK: 1702099 Matrix: Solid

Associated Lab Samples: 40169888004, 40169888005, 40169888006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.3	06/06/18 15:48	

LABORATORY CONTROL SAMPLE: 1702100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	49.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1702101 1702102

Parameter	Units	1702101		1702102		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40169837001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Lead	mg/kg	6.9	53.2	52.9	55.2	55.3	91	92	75-125	0	20

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

QC Batch: 290559 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 40169888004, 40169888005, 40169888006

METHOD BLANK: 1699718 Matrix: Solid
Associated Lab Samples: 40169888004, 40169888005, 40169888006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	06/01/18 22:58	

LABORATORY CONTROL SAMPLE & LCSD: 1699719 1699720

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	31.5	32.2	79	80	70-120	2	20	

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

QC Batch: 290154

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40169888005

SAMPLE DUPLICATE: 1698384

Parameter	Units	40169888005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.1	20.8	2	10	

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QUALITY CONTROL DATA

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

QC Batch: 290442

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40169888003, 40169888004, 40169888006

SAMPLE DUPLICATE: 1699200

Parameter	Units	40169878001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.5	6.2	5	10	

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QUALIFIERS

Project: 274383.0000 WISDOT_BELKNAP ST
Pace Project No.: 40169888

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 and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
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.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

SAMPLE QUALIFIERS

Sample: 40169888001
[1] Samples -001 and -002 are reported on an as-is basis.

ANALYTE QUALIFIERS

1q Sample received overweight. Values should be considered an estimate.
D5 The sample was re-weighed into a new container because the sample weight in the original container exceeded the method specifications.
DC Chromatographic pattern inconsistent with typical Diesel Fuel.
G+ Late peaks present outside the GRO window.
GO Early and late peaks present outside the GRO window.
W Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 274383.0000 WISDOT_BELKNAP ST

Pace Project No.: 40169888

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40169888004	STA 179+60, 50'R, 3' BGS	WI MOD DRO	290559	WI MOD DRO	290622
40169888005	STA 178+90, 75'R, 3' BGS	WI MOD DRO	290559	WI MOD DRO	290622
40169888006	STA 179+10, 65'R, 3' BGS	WI MOD DRO	290559	WI MOD DRO	290622
40169888001	STA 173+60, 30'R, 7' BGS	TPH GRO/PVOC WI ext.	290349	WI MOD GRO	290369
40169888002	STA 173+35', 15'R, 8' BGS	TPH GRO/PVOC WI ext.	290507	WI MOD GRO	290548
40169888003	STA 173+25', 25'R, 4.5' BGS	TPH GRO/PVOC WI ext.	290816	WI MOD GRO	290853
40169888004	STA 179+60, 50'R, 3' BGS	TPH GRO/PVOC WI ext.	290816	WI MOD GRO	290853
40169888005	STA 178+90, 75'R, 3' BGS	TPH GRO/PVOC WI ext.	290816	WI MOD GRO	290853
40169888006	STA 179+10, 65'R, 3' BGS	TPH GRO/PVOC WI ext.	290816	WI MOD GRO	290853
40169888004	STA 179+60, 50'R, 3' BGS	EPA 3050	291085	EPA 6010	291142
40169888005	STA 178+90, 75'R, 3' BGS	EPA 3050	291085	EPA 6010	291142
40169888006	STA 179+10, 65'R, 3' BGS	EPA 3050	291085	EPA 6010	291142
40169888003	STA 173+25', 25'R, 4.5' BGS	ASTM D2974-87	290442		
40169888004	STA 179+60, 50'R, 3' BGS	ASTM D2974-87	290442		
40169888005	STA 178+90, 75'R, 3' BGS	ASTM D2974-87	290154		
40169888006	STA 179+10, 65'R, 3' BGS	ASTM D2974-87	290442		

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Page: 1 of 1
2083479

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: TRC		Report To: Tom Dushek		Attention:	
Address: 208 Heartland Trl, Suite 300		Copy To: Dan Haak		Company Name: TRC	
Madison, WI				Address:	
Email To: TDushek@TRCSolutions.com		Purchase Order No.:		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Phone: Fax:		Project Name: WisDOT - Belknap St		Pace Quote Reference:	
Requested Due Date/TAT: Normal		Project Number: 274383,0000		Pace Project Manager: Tad Noltenmeyer	
				Pace Profile #:	
				Site Location	
				STATE:	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test ↓	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other		Analysis Test ↓	PVC's + Naphthalene	GRO	DRO			LEAD
					DATE	TIME	DATE	TIME																		
001	1	STA 173+60, 30'R, 7' bgs	SL G	G	5/17/18	1905			1							X										
002	2	STA 173+35, 15'R, 8' bgs	SL G	G	5/18/18	1300			1							X										
003	3	STA 173+25, 25'R, 4.5' bgs	SL G	G	5/23/18	1100			2							X										
004	4	STA 179+60, 50'R, 3' bgs	SL G	G	5/22/18	1300			5							X	X	X	X							
005	5	STA 178+90, 75'R, 3' bgs	SL G	G	5/22/18	1600			5							X	X	X	X							
006	6	STA 179+10, 85'R, 3' bgs	SL G	G	5/22/18	1620			5							X	X	X	X							
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Tom Dushek / Tom Dushek	5/24/18	1530				
	Fedex	5/24/18	1015	John Pace	5/24/18	1015	RE Y Y Y

ORIGINAL

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Tom Dushek	DATE Signed (MM/DD/YY): 5/24/18				
SIGNATURE of SAMPLER: Thomas J. Dushek					

Sample Preservation Receipt Form

Client Name: TRC

Project # 40169888

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

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

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

Pace Lab #	Glass						Plastic						Vials				Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)				
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU								WPFU	SP5T	ZPLC	GN
001																		1															2.5 / 5 / 10
002																		1															2.5 / 5 / 10
003																	1																2.5 / 5 / 10
004																	2																2.5 / 5 / 10
005																	2																2.5 / 5 / 10
006																	2																2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

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

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-GB-C-031-Rev.07

Document Revised: 25Apr2018
 Issuing Authority:
Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: TRC

Project #: **WO# : 40169888**

 40169888

Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

Tracking #: 8030 2533 3310

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

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

Packing Material: Bubble Wrap Bubble Bags None Other

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

Cooler Temperature Uncorr: 20.2 ICorr: _____

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

Person examining contents:
 Date: 5/26/18
 Initials: [Signature]

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

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

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

Project Manager Review: RMC for TRC Date: 5/26/18

Appendix G

Waste Inventory Forms

Perkins, Thomas

From: Voit, Angela
Sent: Friday, May 25, 2018 5:57 PM
To: kenneth.gruennert@veolia.com; DOT Hazmat Unit (DOTHazmatUnit@dot.wi.gov); 'amy.adrihan@dot.wi.gov'
Cc: Perkins, Thomas; Haak, Daniel
Subject: Non-Hazardous Waste Inventory Record, USH 2, Douglas County (WisDOT ID 8680-00-71)
Attachments: Non-Hazardous Waste Inventory Record_USH 2_Douglas Co_WisDOT ID 8680-00-71.pdf

Attached is the Non-Hazardous Waste Inventory Record for drum pickup for the USH 2 project in Douglas County (WisDOT ID 8680-00-71).

Please contact us with questions.

Angie Voit
Senior Project Coordinator



708 Heartland Trail, Suite 3000, Madison, WI 53717
T: 608.444.3509 | avoit@trcsolutions.com

[LinkedIn](#) | [Twitter](#) | [Blog](#) | www.trcsolutions.com



NON-HAZARDOUS WASTE INVENTORY RECORD

Wisconsin Department of Transportation
 DT1229 6/2016 (For use with DT1208)

DTSD Region and Office Northwest - Superior		
WisDOT Project ID 8680-00-71	County Douglas	Highway and Termini USH 2
Site Name 902-904 Belknap Street		Phase of Investigation 4
Consultant Company TRC Environmental Corporation		
Consultant Contact Dan Haak		
Contact (Area Code) Telephone Number 608-826-3628		
Contact Email Address dhaak@trcsolutions.com		
Consultant ID for this Site 274386		
Generation Date (m/d/yyyy) 5/3/2018		
Comments, special instructions for pickup or site access 10 Drums located at WisDOT Northwest Region Office, address 1701 N 4th St. #3, Superior, WI 54880. Drums located behind locked gate. Contact WisDOT's Brendan Dirkes at 715-395-3026 for access to drums. See attached map for drum location.		

Waste Description – describe containers of similar size and contents in one row. Insert additional rows as needed. <i>Number and Label Each Container.</i>				
Container ID Number	Container Size and Type	Estimated Volume of Waste	Source: Tank, Well, Boring	Contents: Soil, Water, Other (Describe)
Example: 1, 4, 5, 6, 7, 18, 22, 23	Example: 30 gallon metal drum	Example: 8 drums x 30 gal = 240 gallons	Example: monitoring wells # MW3, MW4, and MW7	Example: wash water,alconox
1 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
2 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
3 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
4 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
5 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
6 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
7 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
8 of 10	55 Gallon Metal Drum	50 Gallons	Tank	Tank Water
9 of 10	55 Gallon Metal Drum	35 Gallons	Tank	Tank Water
10 of 10	55 Gallon Metal Drum	35 Gallons	Tank	Tank Water
Total Number of Containers to be picked up: 10				

Container Location: Attach map or site sketch to Email

Analytical Results: Attach analytical results to Email

Email one copy of this form to each of the following:



NON-HAZARDOUS WASTE INVENTORY RECORD

Wisconsin Department of Transportation
DT1229 6/2016 (For use with DT1208)

- [DOT Hazardous Materials Specialist](#)
- [Regional Environmental or Hazardous Materials Coordinator](#)
- [Hazardous Waste Contractor](#)

Include a copy of this form as the final appendix in the report for this site.







May 22, 2018

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

RE: Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

Dear DAN HAAK:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Green Bay Certification IDs

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

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SAMPLE SUMMARY

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40168705001	BE	Solid	05/03/18 13:45	05/08/18 08:50
40168705002	BW	Solid	05/03/18 13:50	05/08/18 08:50
40168705003	SWE	Solid	05/03/18 13:55	05/08/18 08:50
40168705004	SWW	Solid	05/03/18 14:00	05/08/18 08:50
40168705005	SWN	Solid	05/03/18 14:05	05/08/18 08:50
40168705006	SWS	Solid	05/03/18 14:10	05/08/18 08:50
40168705007	DRUM-01	Water	05/03/18 09:25	05/08/18 08:50
40168705008	TB	Water	05/03/18 00:00	05/08/18 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40168705001	BE	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168705002	BW	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168705003	SWE	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705004	SWW	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705005	SWN	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705006	SWS	WI MOD GRO	ALD	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40168705007	DRUM-01	WI MOD GRO	ALD	3	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 1010	DEY	1	PASI-G
40168705008	TB	WI MOD GRO	ALD	9	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40168705007	DRUM-01					
WI MOD GRO	Benzene	13100	ug/L	40.8	05/11/18 18:16	
WI MOD GRO	Gasoline Range Organics	25800	ug/L	4840	05/11/18 18:16	G+
EPA 6010	Lead	137	ug/L	26.0	05/10/18 20:50	
EPA 1010	Flashpoint	>200	deg F		05/08/18 15:23	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Method: WI MOD GRO

Description: WIGRO GCV

Client: TRC - MADISON

Date: May 22, 2018

General Information:

8 samples were analyzed for WI MOD GRO. 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 TPH GRO/PVOC WI ext. 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.

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.

QC Batch: 288548

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40168822003

R1: RPD value was outside control limits.

- MSD (Lab ID: 1689164)
- 1,2,4-Trimethylbenzene

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Method: EPA 6010

Description: 6010 MET ICP

Client: TRC - MADISON

Date: May 22, 2018

General Information:

1 sample was analyzed for EPA 6010. 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 3010 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

Method: EPA 1010
Description: 1010 Flashpoint,Closed Cup
Client: TRC - MADISON
Date: May 22, 2018

General Information:

1 sample was analyzed for EPA 1010. 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.

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.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: DRUM-01 **Lab ID: 40168705007** Collected: 05/03/18 09:25 Received: 05/08/18 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	13100	ug/L	40.8	12.2	40		05/11/18 18:16	71-43-2	
Gasoline Range Organics	25800	ug/L	4840	1450	40		05/11/18 18:16		G+
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%	80-120		40		05/11/18 18:16	98-08-8	
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	137	ug/L	26.0	8.7	2	05/10/18 07:31	05/10/18 20:50	7439-92-1	
1010 Flashpoint,Closed Cup		Analytical Method: EPA 1010							
Flashpoint	>200	deg F			1		05/08/18 15:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

Sample: TB **Lab ID: 40168705008** Collected: 05/03/18 00:00 Received: 05/08/18 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	<0.31	ug/L	1.0	0.31	1		05/11/18 21:40	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/11/18 21:40	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/11/18 21:40	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/11/18 21:40	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/11/18 21:40	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/11/18 21:40	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/11/18 21:40	108-67-8	
Xylene (Total)	<0.97	ug/L	3.2	0.97	1		05/11/18 21:40	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%	80-120		1		05/11/18 21:40	98-08-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 288552 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40168705001, 40168705002, 40168705003, 40168705004, 40168705005

METHOD BLANK: 1688687 Matrix: Solid
Associated Lab Samples: 40168705001, 40168705002, 40168705003, 40168705004, 40168705005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/11/18 09:35	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/11/18 09:35	
Benzene	ug/kg	<25.0	50.0	05/11/18 09:35	
Ethylbenzene	ug/kg	<25.0	50.0	05/11/18 09:35	
m&p-Xylene	ug/kg	<50.0	100	05/11/18 09:35	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/11/18 09:35	
Naphthalene	ug/kg	<25.0	50.0	05/11/18 09:35	
o-Xylene	ug/kg	<25.0	50.0	05/11/18 09:35	
Toluene	ug/kg	<25.0	50.0	05/11/18 09:35	
a,a,a-Trifluorotoluene (S)	%	101	80-120	05/11/18 09:35	

LABORATORY CONTROL SAMPLE & LCSD: 1688688

1688689

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1060	1060	106	106	80-120	0	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
Benzene	ug/kg	1000	987	1000	99	100	80-120	2	20	
Ethylbenzene	ug/kg	1000	1040	1040	104	104	80-120	0	20	
m&p-Xylene	ug/kg	2000	2060	2040	103	102	80-120	1	20	
Methyl-tert-butyl ether	ug/kg	1000	945	947	95	95	80-120	0	20	
Naphthalene	ug/kg	1000	1040	1040	104	104	80-120	0	20	
o-Xylene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
Toluene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 288731 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40168705006

METHOD BLANK: 1690013 Matrix: Solid
Associated Lab Samples: 40168705006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	05/14/18 10:05	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	05/14/18 10:05	
Benzene	ug/kg	<25.0	50.0	05/14/18 10:05	
Ethylbenzene	ug/kg	<25.0	50.0	05/14/18 10:05	
m&p-Xylene	ug/kg	<50.0	100	05/14/18 10:05	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	05/14/18 10:05	
Naphthalene	ug/kg	<25.0	50.0	05/14/18 10:05	
o-Xylene	ug/kg	<25.0	50.0	05/14/18 10:05	
Toluene	ug/kg	<25.0	50.0	05/14/18 10:05	
a,a,a-Trifluorotoluene (S)	%	102	80-120	05/14/18 10:05	

LABORATORY CONTROL SAMPLE & LCSD: 1690014

1690015

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1040	1070	104	107	80-120	3	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1000	1030	100	103	80-120	2	20	
Benzene	ug/kg	1000	996	1020	100	102	80-120	3	20	
Ethylbenzene	ug/kg	1000	1040	1060	104	106	80-120	2	20	
m&p-Xylene	ug/kg	2000	2040	2090	102	105	80-120	3	20	
Methyl-tert-butyl ether	ug/kg	1000	906	986	91	99	80-120	8	20	
Naphthalene	ug/kg	1000	1010	1110	101	111	80-120	10	20	
o-Xylene	ug/kg	1000	1020	1050	102	105	80-120	3	20	
Toluene	ug/kg	1000	1010	1030	101	103	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

QC Batch: 288548 Analysis Method: WI MOD GRO
 QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
 Associated Lab Samples: 40168705007, 40168705008

METHOD BLANK: 1688673 Matrix: Water

Associated Lab Samples: 40168705007, 40168705008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	05/11/18 09:45	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	05/11/18 09:45	
Benzene	ug/L	<0.31	1.0	05/11/18 09:45	
Ethylbenzene	ug/L	<0.33	1.1	05/11/18 09:45	
Gasoline Range Organics	ug/L	<36.3	121	05/11/18 09:45	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	05/11/18 09:45	
Naphthalene	ug/L	<0.51	1.7	05/11/18 09:45	
Toluene	ug/L	<0.49	1.6	05/11/18 09:45	
Xylene (Total)	ug/L	<0.97	3.2	05/11/18 09:45	
a,a,a-Trifluorotoluene (S)	%	98	80-120	05/11/18 09:45	

LABORATORY CONTROL SAMPLE & LCSD: 1688674 1688675

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	20.3	100	101	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	19.4	19.6	97	98	80-120	1	20	
Benzene	ug/L	20	19.6	19.5	98	97	80-120	1	20	
Ethylbenzene	ug/L	20	20.0	20.0	100	100	80-120	0	20	
Gasoline Range Organics	ug/L	200	213	220	107	110	80-120	3	20	
Methyl-tert-butyl ether	ug/L	20	18.3	18.6	91	93	80-120	2	20	
Naphthalene	ug/L	20	18.9	20.2	94	101	80-120	7	20	
Toluene	ug/L	20	19.8	19.7	99	98	80-120	0	20	
Xylene (Total)	ug/L	60	59.0	59.2	98	99	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				98	100	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1689163 1689164

Parameter	Units	40168822003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	<0.34	20	20	18.5	14.1	93	70	11-200	27	20	R1
1,3,5-Trimethylbenzene	ug/L	<0.33	20	20	18.3	15.9	91	80	54-142	14	20	
Benzene	ug/L	<0.31	20	20	20.9	21.4	104	107	66-140	3	20	
Ethylbenzene	ug/L	<0.33	20	20	21.0	21.3	105	106	66-143	1	20	
Methyl-tert-butyl ether	ug/L	<0.32	20	20	19.2	20.1	96	101	70-129	5	20	
Naphthalene	ug/L	<0.51	20	20	19.4	20.8	97	104	64-129	7	20	
Toluene	ug/L	<0.49	20	20	20.9	21.2	105	106	76-130	1	20	
Xylene (Total)	ug/L	<0.97	60	60	60.8	59.5	101	99	60-140	2	20	
a,a,a-Trifluorotoluene (S)	%						100	99	80-120			

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 288403 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40168705007

METHOD BLANK: 1687856 Matrix: Water
Associated Lab Samples: 40168705007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	<4.3	13.0	05/10/18 20:16	

LABORATORY CONTROL SAMPLE: 1687857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	485	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1687858 1687859

Parameter	Units	1687858		1687859		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40168482001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Lead	ug/L	5.8J	500	500	468	470	92	93	75-125	0	20

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22

Pace Project No.: 40168705

QC Batch: 288846

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40168705001, 40168705002

SAMPLE DUPLICATE: 1690349

Parameter	Units	40168674002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.0	16.4	2	10	

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QUALITY CONTROL DATA

Project: 274386 USH 2 UST SITE 22
Pace Project No.: 40168705

QC Batch: 289435 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40168705003, 40168705004, 40168705005, 40168705006

SAMPLE DUPLICATE: 1694154

Parameter	Units	40168727012 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.3	17.5	5	10	

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