

From: [Pearson, Joseph](#)
To: [Sager, John E - DNR](#)
Cc: [Lynette M. Carney \(LCarney@barr.com\)](#)
Subject: RE: Request for Updates BRRTS ID 02-16-581317 and 02-16-591050
Date: Friday, October 6, 2023 9:21:07 AM
Attachments: [image007.png](#)
[Platformer Concrete Replacement_022823.pdf](#)

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Good morning John,

The groundwater investigation associated with the April 26, 2018, fire and explosion (BRRTS ID 02-16-581317) is still underway. The PFAS well installation field work is scheduled for November 2, 2023. Sampling will likely not occur until the spring of 2024 to allow for adequate development and recovery of the well.

A copy of the Platformer Technical Memorandum was submitted to you via email on March 1, 2023. I have attached an additional copy of the Technical Memorandum for your records. We also had a follow up meeting March 13, 2023, to discuss how to formally transfer the site to the facility wide.

At this time, SRC has not submitted a site summary and fee for the Platformer or the other sites that are still pending formal transfer requests.

Please feel free to reach out with any questions or if you need anything else.

Thank you and have a great weekend!

Joe

Joseph Pearson, PG

Environmental Advisor - Remediation, Waste & Wetlands

Environmental - Superior Refinery

Downstream

Cell: 1.763.218.9982

Joseph.Pearson@cenovus.com

Superior, Wisconsin



From: Sager, John E - DNR <John.Sager@wisconsin.gov>
Sent: Wednesday, October 4, 2023 11:24 AM
To: Pearson, Joseph <Joseph.Pearson@cenovus.com>
Cc: Lynette M. Carney (LCarney@barr.com) <LCarney@barr.com>

Subject: Request for Updates BRRTS ID 02-16-581317 and 02-16-591050

Hi Joe,

Please send me an update of progress on the groundwater investigation associated with April 26, 2018 fire and explosion (BRRTS ID 02-16-581317). Also, please send an update of activities associated with the SRC Platformer Unit (BRRTS ID 02-16-591050). The last information I have for this site is a 1/13/23 email from Matt Turner saying Barr was retained to prepare a tech memo.

Please contact me with any questions.

Thanks.

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

John Sager

Hydrogeologist – Remediation and Redevelopment Program

Wisconsin Department of Natural Resources

1701 N. 4th St.

Superior, WI 54880

Phone: (715) 919-7239

john.sager@wisconsin.gov



dnr.wi.gov



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<http://www.cenovus.com>

Technical Memorandum

To: Joseph Pearson, Superior Refining Company, LLC
From: Lynette Carney and Kaitlin Montz
Subject: Platformer Concrete Replacement
Date: February 28, 2023
Project: 49161468.03 100 104
WDNR BRRTS: 02-16-591050

This memorandum summarizes the environmental response activities performed by Superior Refining Company LLC (SRC) following the discovery of historical petroleum impacts in the Platformer Unit at the SRC Refinery in Superior, Wisconsin (Figure 1).

Background

On December 6, 2022, SRC contractors removing concrete and replacing a catch basin encountered an apparent petroleum odor and petroleum impacted soil in the Platformer Unit (hereafter referred to as the Site; Figure 2). SRC personnel did not identify an active spill in the area.

The Wisconsin Department of Natural Resources (WDNR) was notified of the historical petroleum impacts by SRC on December 7, 2022. The WDNR assigned the BRRTS Activity # 02-16-591050 to the Site. The associated WDNR *Hazardous Substance Discharge Notification Form*, copy of submitted WDNR notification form 4400-225 and site contact information is provided in Attachment A.

Field Activity Summary

On December 7, 2022, Insight Environmental (Insight) was on site to document response cleanup activities and to collect soil field screening samples from the excavation (Photo 1 and Photo 2). A soil headspace screening sample was collected from the bottom of the excavation and tested for the presence of organic vapors using a 10.6 eV photoionization detector (PID). PID readings and other evidence of petroleum impacts, such as odor, were recorded on the field sampling and screening log provided in Attachment B.

The final excavation extent was approximately 8 feet (northeast to southwest) by 10 feet (northwest to southeast) and up to 3.5 feet below ground surface (bgs) (Attachment B). Clay soil was observed in the excavation sidewalls and bottom.

Insight collected one field screening soil sample and one analytical confirmation soil sample (S7). The soil analytical sample was submitted to Pace Analytical (Pace) in Duluth, Minnesota for analysis of petroleum volatile organic compounds (PVOCs) and polycyclic aromatic hydrocarbons (PAHs). The analytical confirmation soil sample location is shown on Figure 2.

To: Joseph Pearson, Superior Refining Company, LLC
From: Lynette Carney and Kaitlin Montz
Subject: Platformer Concrete Replacement
Date: February 28, 2023
Page: 2

The field headspace screening results for the soil sample collected from the final excavation extent resulted in a concentration of 8,289 parts per million. Laboratory results from the correlating sample collected at the final excavation extent resulted in PVOC and PAH analyte detections above the Wisconsin groundwater residual contaminant levels (RCLs) but there were not concentrations exceeding the Wisconsin Direct Contact Industrial RCLs. The analytical results are summarized in Table 1 and the Pace laboratory report is provided in Attachment C.

Upon completion of the project activities, the excavation was backfilled with clean fill and the concrete was replaced.

Receptor Survey

No direct contact risks were identified in underlying soil based on the response activities. No impacts to surface water were identified and there is no risk of future surface water impacts based on the site's location within the refinery. Laboratory results from analytical sample *S7* exceeded the Wisconsin groundwater RCLs for several analytes. Groundwater pathway at the SRC Refinery is addressed on a facility-wide basis through the established hydrogeologic performance standard approved by the WDNR. As part of this program, SRC samples the Refinery monitoring well network (shown on Figure 3) on a semiannual basis and provides the data to the WDNR. No historical petroleum impacts have been documented as part of the semiannual facility-wide groundwater monitoring activities (Figure 3) or in the closest downgradient monitoring well MW-12. In addition, there are no water supply wells located within 500 feet of the Platformer location.

The nearest enclosed structure is a slab-on-grade refinery building approximately 6-feet to the northeast. There is no risk of hazardous vapor accumulation in the structure due to the slab-on-grade construction and the clay soil conditions. SRC Refinery and contractors are also required to wear gas detector that would alert them to a potentially hazardous atmosphere.

Material Management

During the response excavation, the petroleum impacted material was transported to SRC's permitted onsite storage building for secure and temporary staging prior to arranging for offsite disposal. Approximately seven cubic yards of petroleum impacted material was subsequently disposed of at Shamrock Environmental, LLC (Shamrock) landfill in Cloquet, Minnesota under an existing facility waste profile number. The petroleum impacted material was not quantified separately from other similar materials awaiting disposal and was included in a combined load transported to the Shamrock landfill on January 4, 2023. The non-hazardous industrial waste shipping manifests from this date are included in Attachment D.

Conclusions

Evidence of historical petroleum impacts were identified during the concrete replacement project in the Platformer Unit in December 2022. No active release was identified during the work. Soil with evidence of

petroleum impacts that was removed from the excavation was managed at a landfill. Based on results of sampling, the soil with residual historical impacts in the final excavation had PVOC and PAH analyte concentrations below the Wisconsin Direct Contact Industrial RCLs and clean backfill was used to backfill the excavation and concrete was poured over the excavation area. Based on the analytical results and concrete cover, no direct contact risk remains. No surface water impacts or vapor risks to nearby buildings was identified. In addition, the industrial land use at the facility is not expected to change and the native underlying soil in the vicinity of the historical impacts is documented to be low permeable clay material.

Although residual soil contamination exceeds the WDNR Groundwater RCLs, no nearby groundwater receptors were identified and since groundwater is handled on a facility-wide basis no nearby historical groundwater impacts have been identified. SRC believes no additional soil or groundwater investigation activities will be required and recommends that the WDNR transfer this site to the facility wide BRRS site 16-16-559511.

Site Photographs

- Photo 1 Excavation area in Platformer Unit. Photo taken on December 7, 2022, by Insight.
Photo 2 Excavation extent in Platformer Unit. Photo taken on December 7, 2022, by Insight.

Tables

- Table 1 Soil Analytical Data Summary

Figures

- Figure 1 Site Location
Figure 2 Site Layout
Figure 3 Receptor Survey

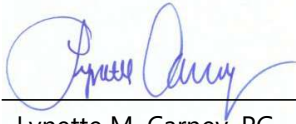
Attachments

- Attachment A WDNR Hazardous Substance Discharge Notification Form, WDNR Notification From 4400-225, and Site Contact Information
Attachment B Site Investigation Field Sampling and Screening Log
Attachment C Pace Laboratory Report for Confirmation Soil Sample
Attachment D Material Management Documentation

To: Joseph Pearson, Superior Refining Company, LLC
From: Lynette Carney and Kaitlin Montz
Subject: Platformer Concrete Replacement
Date: February 28, 2023
Page: 4

CERTIFICATION

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



Lynette M. Carney, PG
Reg #: 1138

February 28, 2023

Date

Site Photographs



Photo 1 Excavation area in Platformer Unit. Photo taken on December 7, 2022, by Insight.



Photo 2 Excavation extent in Platformer Unit. Photo taken on December 7, 2022, by Insight.

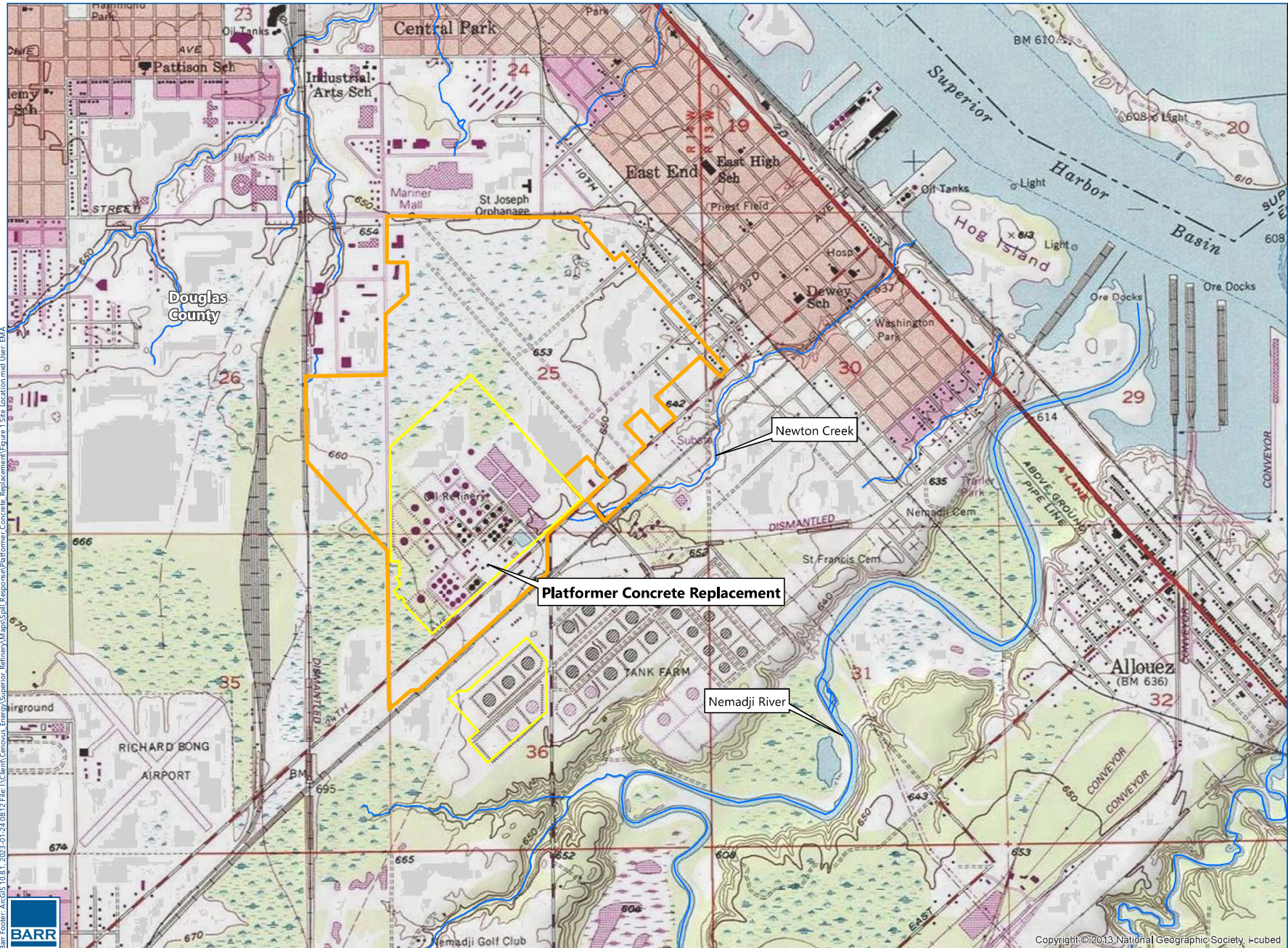
Tables

Table 1
Soil Analytical Data Summary
Superior Refining Company Platformer Concrete Replacement
Superior, WI

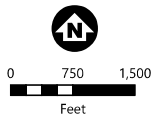
		Location Date	S1 12/07/2022
Parameter	Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	
Last Updated	12/01/2018	12/01/2018	
Exceedance Key	Bold	No Exceedances	
General Parameters			
% Moisture			22.4
Semivolatile Organic Compounds			
1-Methylnaphthalene		72.7	0.609
2-Methylnaphthalene		3010	1.32
Acenaphthene		45200	0.165
Acenaphthylene			0.0355
Anthracene	196.9492	100000	0.514
Benz(a)anthracene		20.8	0.906
Benzo(a)pyrene	0.47	2.11	0.655
Benzo(b)fluoranthene	0.4781	21.1	0.903
Benzo(g,h,i)perylene			0.356
Benzo(k)fluoranthene		211	0.281
Chrysene	0.1442	2110	0.781
Dibenz(a,h)anthracene		2.11	0.102
Fluoranthene	88.8778	30100	2.19
Fluorene	14.8299	30100	0.24
Indeno(1,2,3-cd)pyrene		21.1	0.421
Naphthalene	0.6582	24.1	0.774
Phenanthrene			2.06
Pyrene	54.5455	22600	1.83
Volatile Organic Compounds			
1,2,4-Trimethylbenzene	1.3787 (1)	219	8.45
1,3,5-Trimethylbenzene	1.3787 (1)	182	3.18
Benzene	0.0051	7.07	0.628
Ethyl benzene	1.57	35.4	2.28
Methyl tertiary butyl ether (MTBE)	0.027	282	< 0.0228 U
Toluene	1.1072	818	3.14
Xylene, total	3.96	260	11.2

Note:
All values in mg/kg unless otherwise noted

Figures



- Approximate SRC Property Boundaries for Contiguous Operations
- Approximate Fenceline Boundaries for Refining-Related Activities



SITE LOCATION
 Superior Refining Company LLC (SRC)
 Superior, WI



FIGURE 1

Bar Footer: ArcGIS 10.6.1 - 2023-01-24 08:12 File: \\c:\item\c\enous\energy\superior\refining\map\spill_response\platformer_concrete_replacement\figure 1 site location.mxd User: EMA

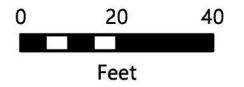


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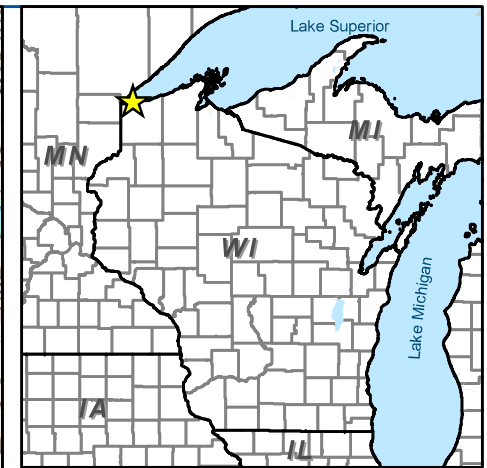
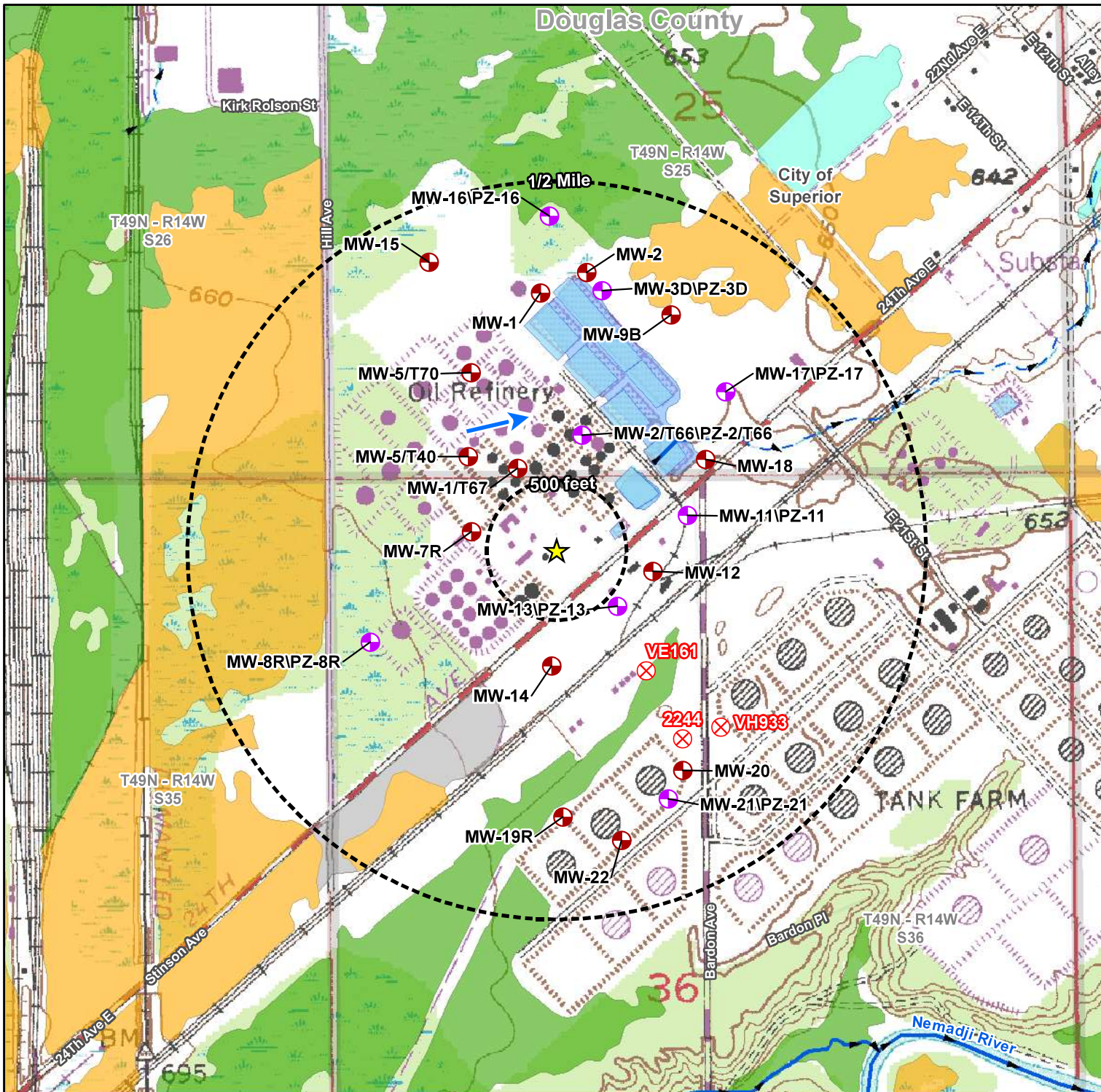
-  Analytical Sample Location
-  Excavation Extent

Nearmap Imagery, 5/7/2022



SITE LAYOUT
PLATFORMER CONCRETE
REPLACEMENT
Superior Refining
Company LLC (SRC)
Superior, WI

FIGURE 2



- Site Location
- Area Water Supply Wells
- Existing Facility Monitoring Well
- Existing Facility Monitoring Well & Piezometer Pair
- Groundwater Flow Direction

Wisconsin Wetland Inventory

- Emergent/wet meadow
- Filled/draind wetland
- Forested
- Open Water
- Scrub/Shrub
- Perennial Stream
- Intermittent Stream

0 1,000 2,000

Feet
1 Inch = 1,000 Feet

RECEPTOR SURVEY
PLATFORMER CONCRETE
REPLACEMENT
 Superior Refining
 Company LLC (SRC)
 Superior, WI

FIGURE 3

Attachments

Attachment A

WDNR Hazardous Substance Discharge Notification Form, WDNR Notification Form 4400-225, and Site Contact Information

**Platformer Concrete Replacement
Site and Facility Contact Information**

Site Information:

WDNR BRRTS Number: 02-16-591050
Facility Identification Number: 816009590
Superior Refining Company LLC
2407 Stinson Avenue
Superior, Wisconsin
Douglas County, Wisconsin
NE ¼, NW ¼ of Section 36, T49N, R14W
Latitude / Longitude: 46.690167 / 92.0704029
WTM91 Coordinates: X: 361690, Y: 692816

Responsible Party:

Superior Refining Company LLC
Attn: Joseph Pearson, Environmental Advisor
2407 Stinson Avenue
Superior, WI 54880
Phone: (763) 218-9982
Email: joseph.pearson@cenovus.com

Environmental Consultant:

Barr Engineering Co.
Attn: Lynette Carney, Project Manager
325 South Lake Avenue, Suite 700
Duluth, MN 55802
Phone: (218) 529-7141
Email: lcarney@barr.com

Hazardous Substance Discharge Notification Form - NR 706.05

Superior Refining Company LLC
2407 Stinson Ave., Superior, WI 54880
Phone: (715) 398-3533 Fax: (715) 398-8209
Refinery Map Coordinates: NW1/4, NW1/4, Sect. 36, T 49N, R 14N.

1) Reporting Information

Name: Joseph Pearson Phone: 763-218-9982
Date: 12/06/2022 Position: Environmental Advisor

2) Discharge Information

Date: 12/06/2022 Time: 1630
Amount Released: NA Duration: NA
Material/Product: Petroleum Response Time: NA
Specific Location: Platformer
How was spill detected: Historic spill was identified during removal of concrete.
Cause: Historic release in refinery process unit.

If necessary, continue on back

3) Additional Information

Physical Characteristics (i.e. solid, liquid or gas): Petroleum saturated soil
Chemical Properties: _____
Possible Hazards: _____
Immediate Corrective Action/Clean-up: _____
People/Companies Performing the Action: Lakehead Construction
Speed and Movement of Discharge(if any): None
Actual/Potential Impacts to Human Health(if any): _____
Actual/Potential Impacts to Environment(if any): _____
Weather Conditions(i.e. precipitation, wind speed and direction): 15 degrees F, Overcast, E wind
Agencies On-scene During Spill(if any): None
Further action needed(if any): _____
Amount reaching Navigable Waters: None
Total Oil Storage Capacity of Tanks/Lines Material was Discharged From: NA
Adequate Secondary Containment: Yes
Steps taken to Reduce Possibility of Recurrence: NA
Enforcement Actions(if any): None
Effectiveness of Monitoring Equipment(if any) NA

Original: Refinery Manager CC: Operations Manager, Environmental Manager



Notice: Hazardous substance discharges must be reported immediately according to Wis. Stat. § 292.11. Non-emergency hazardous substance discharges may be reported by submitting this online form, calling the Department or visiting an office in person. Under Wis. Stat. § 292.99, the penalty for violating the reporting requirement of Wis. Stat. ch. 292 shall be no less than \$10 nor more than \$5,000 for each violation. Each day of continued violation is a separate offense. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than program administration. However, information submitted on this form may also be made available to requesters under Wisconsin's Open Records Law (Wis. Stat. § 19.31 - 19.39). Submitting the notification as part of a Phase 1 or Phase 2 environment assessment report is not considered immediate notification under Wis. Stat. ch. 292.

To assist the DNR in processing this Hazardous Substance Discharge Notification please include any laboratory confirmation results as part of step six of this submittal. If the results are not yet available please return to the Submittal Portal, click on "Submitted Forms - Pending Attachments" and submit the labs with with the appropriate form, as soon as possible.

Discharge Reported By:

First Name* Lynette	Last Name* Carney	Company* Barr Engineering	Email* lcarney@barr.com	Phone Number* (218) 529-7141
Address 1* 325 S Lake Ave	City* Duluth	State* MN	Zip* 55802	

Site Information - Identify the area of the hazardous substance discharge

Site Name: Identify the location of the hazardous substance discharge. For example, a business name, a public facility, a road, a waterbody, etc. *

Superior Refining Company LLC (SRC)

*Step 1- Enter address information

Address

2407 Stinson Ave

Address unknown

Location Description: Describe the property location as precisely as possible. i.e. 1/4-mile NW of HWY 60 & 123, 100 ft east of Hwy 60 in the hayfield

NW1/4, NW1/4, Sec 36, T49N, R14W

City* Superior	State* WI	Zip* 54880
-------------------	--------------	---------------

*Step 2- Enter the WTM or Latitude/Longitude coordinates OR click on the map below to locate where contamination was found on the property.

WTM X* 361691	WTM Y* 692814	Latitude* 46.69015	Longitude* -92.07039
------------------	------------------	-----------------------	-------------------------

*What does the coordinate location (orange point on the map) represent? (choose one)

- Contamination source (preferred)
- Center of the parcel
- Other (explain)

Explain

County* Douglas	Municipality* Superior
--------------------	---------------------------






Map Legend

- Address location from step 1
- Contamination location from step 2

Responsible Parties (RP)

Responsible Party Name and/or Company: Add business and/or owner name that is responsible for cleanup according to Wis. Stat § NR 700.03(5j). If more than one, click on **ADD ANOTHER RP**.

*Is the responsible party: (choose one)

An Individual A Company 

Company Superior Refining Company L	First Name	Last Name	Phone Number* (715) 398-3533	
Email* joseph.pearson@cenovus.com	Address 1* 2407 Stinson Ave	City* Superior	State* WI	Zip* 54880

ADD ANOTHER RP

Check box if the Responsible Party is unknown.

Contact Person

- Check all that apply:
- Representing the Responsible Party, Business or Property Owner
 - Current Property Owner

Contact Person Information:
Select one to autofill fields below or type in information directly:

- Same as Contact Reporting Discharge
- Same as Responsible Party
- None of the above

Company Superior Refining Company L	First Name Joseph	Last Name Pearson	Phone Number* (763) 218-9982	
Email* joseph.pearson@cenovus.com	Address 1* 2407 Stinson Ave	City* Superior	State* WI	Zip* 54880

- Check all that apply
- I certify that I am submitting this form for a local governmental unit claiming an exemption from state Spill Law and Solid Waste Management responsibilities for the discharge being reported, per Wis. Stat. §§ 292.11(9)(e) and 292.23.

Please review [DNR publication RR-055](#) and provide documentation to DNR that demonstrates compliance with the statutory requirements of the liability exemptions. Local governmental units may also request a fee-based liability clarification letter from DNR by using [DNR Form 4400-237](#).

I certify that I am submitting this form for a lender that is claiming an exemption from state Spill Law responsibilities for the discharge being reported, per Wis. Stat. § 292.21 (1)(b) or (c).

Please review [DNR publication RR-508](#) and attach documentation of compliance with the statutory requirements of the liability exemption. Lenders may also request a fee-based liability clarification letter from DNR by using [DNR Form 4400-237](#).

I am asserting that the hazardous substance discharge being reported is migrating from another property (off-site contamination). I understand that off-site property owners may qualify for a liability exemption per Wis. Stat. § 292.13; however, the owner is not exempt from reporting requirements per Wis. Stat. § 292.11(2). I also understand that I may be required to provide additional information to document compliance with the exemption.

Please review [DNR publication RR-589](#) for more information about the off-site liability exemption and rights and responsibilities of off-site owners. Off-site property owners may also request a fee-based off-site liability exemption or liability clarification letter from DNR by using [DNR form 4400-201](#).

Hazardous Substance Information:

*Select the type of discharge (check all that apply):

- Aboveground Petroleum Storage Tank System
- Dry Cleaner Facility
- Underground Petroleum Storage Tank System
- Other - Describe

Discharge Comments

historical release in refinery process unit (Platformer)

*Contamination was discovered as a result of:

Tank System Site Assessment (TSSA)

Phase I Environmental Site Assessment (ESA)

Phase II Environmental Site Assessment (ESA)

Other Assessment - Describe
12/06/2022

Other Assessment Comments

Historical petroleum spill identified during removal of concrete in the Platformer Unit

Underground Petroleum Storage Tank (UST) Information

Underground Storage Tank (UST) Regulation

- Federally Regulated UST System Non-Federally Regulated UST System Unknown

Has a new confirmed release been verified?

- Yes No Unknown

Federal Energy Act Requirements (Section 3002(d) of the Solid Waste Disposal Act (SWDA))

For all confirmed releases from USTs occurring after 9/30/2007 please provide the following information:

* Source (select one):

- Delivery Problem Dispenser Piping Submersible Turbine Pump Tank Other (None Listed – Specify)

Specify Other Source

*Cause (select one):

- Corrosion Installation Problem Overfill Physical Or Mechanical Damage Spill Other (None Listed – Specify)

Specify Other Cause

***Identify hazardous substance discharged (Select all that apply from the list below)**

Unknown Type ▼

VOC Other Comments

Other Substance Comments

***Impacts to the environment (check all that apply)**

- Contaminated Private Well
- Contaminated Public Well
- Ground Water Contamination
- Indoor Air Contamination
- Sanitary Sewer Contamination
- Sediment Contamination
- Soil Contamination
- Soil Gas Contamination
- Storm Sewer Contamination
- Sub-Slab Vapor Contamination

Lab Results and Documents

***Please select one of the below:**

- Lab results or report will be submitted upon receipt
- Lab results or report are attached
- Labs included in other documents attached below
- No lab results or report are available

Explain

Samples will be collected as access allows. Laboratory results will be provided in a future report

Upload File *

Choose file... Browse

Additional documentation and request (select one):

Hover over selections below for more information

- Submit request for No Action Required (NAR) determination under Wis. Admin. Code s. NR 716.05 - No Letter Requested (**No Fee**)
- Submit request for No Action Required (NAR) determination under Wis. Admin. Code s. NR 716.05 - Letter requested (General liability clarification letter under Wis. Stat. s. 292.55) - Include Form 4400-237 (**\$700**)
- Submit request for No Further Action (NFA) determination under Wis. Admin. Code s. NR 708.09 - Letter requested - Include Form 4400-237 (**\$350**)
- Submit other documentation, not listed above (**No Fee**)
- None of the above

Document Type

Nothing selected ▼

Comments

Upload File *

Choose file... Browse

Additional Comments: Include a brief description of immediate actions taken to halt the release and contain or cleanup hazardous substances that have been discharged or any other information not captured in this form.

Additional Information

Historical impacts to soil were discovered during a concrete replacement project in the Platformer. Soil removed as part of this work will be managed separately. Representative soil samples will be collected from the excavation prior to concrete replacement. Concrete replacement work may happen in multiple phases.

Cart

Note: To edit or delete labs or reports go back to Tab 6 - Lab results and documents

Lab or report name	File name	Fee
None of the above	NA	0
No lab results or report are available	NA	0
Total		0

If you have questions please contact:

KATHLEEN SHAFEL
North Region
kathleen.shafel@wisconsin.gov
(715) 527-0116
223 E STEINFEST RD
ANTIGO, WI, 54409



Attachment B

Site Investigation Field Sampling and Screening Log

Attachment C

Pace Laboratory Report for Confirmation Soil Sample

December 20, 2022

Jim Taraldsen
Barr Engineering Company
325 S Lake Ave
Duluth, MN 55802

RE: Project: 49161468.03 100 103 SRC Platfo
Pace Project No.: 10636362

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on December 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

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

Sincerely,



Martha Hansen
martha.hansen@pacelabs.com
(612)607-6451
Project Manager

Enclosures

cc: Lynette Carney, Barr Engineering Co
Barr DM, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

A2LA Certification #: 2926.01*

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10636362001	S1	Solid	12/07/22 13:08	12/08/22 10:50

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SAMPLE ANALYTE COUNT

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10636362001	S1	ASTM D2974	JL5	1	PASI-M
		EPA 8270E by SIM	JLR, JNG	20	PASI-M
		EPA 8260D	SB2	10	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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ANALYTICAL RESULTS

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

Sample: S1 **Lab ID: 10636362001** Collected: 12/07/22 13:08 Received: 12/08/22 10:50 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
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	22.4	%	0.10	0.10	1		12/12/22 14:06		N2
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
Acenaphthene	165	ug/kg	12.8	2.6	1	12/09/22 18:12	12/12/22 21:46	83-32-9	
Acenaphthylene	35.5	ug/kg	12.8	1.4	1	12/09/22 18:12	12/12/22 21:46	208-96-8	
Anthracene	514	ug/kg	12.8	1.2	1	12/09/22 18:12	12/12/22 21:46	120-12-7	
Benzo(a)anthracene	906	ug/kg	12.8	2.2	1	12/09/22 18:12	12/12/22 21:46	56-55-3	
Benzo(a)pyrene	655	ug/kg	12.8	1.4	1	12/09/22 18:12	12/12/22 21:46	50-32-8	
Benzo(b)fluoranthene	903	ug/kg	12.8	1.3	1	12/09/22 18:12	12/12/22 21:46	205-99-2	
Benzo(g,h,i)perylene	356	ug/kg	12.8	2.4	1	12/09/22 18:12	12/12/22 21:46	191-24-2	
Benzo(k)fluoranthene	281	ug/kg	12.8	1.3	1	12/09/22 18:12	12/12/22 21:46	207-08-9	
Chrysene	781	ug/kg	12.8	1.3	1	12/09/22 18:12	12/12/22 21:46	218-01-9	
Dibenz(a,h)anthracene	102	ug/kg	12.8	1.5	1	12/09/22 18:12	12/12/22 21:46	53-70-3	
Fluoranthene	2190	ug/kg	25.7	1.9	2	12/09/22 18:12	12/13/22 15:33	206-44-0	
Fluorene	240	ug/kg	12.8	1.5	1	12/09/22 18:12	12/12/22 21:46	86-73-7	
Indeno(1,2,3-cd)pyrene	421	ug/kg	12.8	1.0	1	12/09/22 18:12	12/12/22 21:46	193-39-5	
1-Methylnaphthalene	609	ug/kg	12.8	3.0	1	12/09/22 18:12	12/12/22 21:46	90-12-0	
2-Methylnaphthalene	1320	ug/kg	25.7	5.3	2	12/09/22 18:12	12/13/22 15:33	91-57-6	
Naphthalene	774	ug/kg	12.8	1.4	1	12/09/22 18:12	12/12/22 21:46	91-20-3	
Phenanthrene	2060	ug/kg	25.7	2.0	2	12/09/22 18:12	12/13/22 15:33	85-01-8	
Pyrene	1830	ug/kg	25.7	3.9	2	12/09/22 18:12	12/13/22 15:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73	%	59-125		1	12/09/22 18:12	12/12/22 21:46	321-60-8	
p-Terphenyl-d14 (S)	74	%	65-125		1	12/09/22 18:12	12/12/22 21:46	1718-51-0	
8260D MSV UST									
Analytical Method: EPA 8260D Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Minneapolis									
Benzene	628	ug/kg	23.9	7.2	1	12/13/22 11:23	12/14/22 23:36	71-43-2	
Ethylbenzene	2280	ug/kg	59.8	10.3	1	12/13/22 11:23	12/14/22 23:36	100-41-4	
Methyl-tert-butyl ether	<22.8	ug/kg	59.8	22.8	1	12/13/22 11:23	12/14/22 23:36	1634-04-4	
Toluene	3140	ug/kg	59.8	22.6	1	12/13/22 11:23	12/14/22 23:36	108-88-3	
1,2,4-Trimethylbenzene	8450	ug/kg	59.8	12.5	1	12/13/22 11:23	12/14/22 23:36	95-63-6	
1,3,5-Trimethylbenzene	3180	ug/kg	59.8	8.1	1	12/13/22 11:23	12/14/22 23:36	108-67-8	
Xylene (Total)	11200	ug/kg	179	22.6	1	12/13/22 11:23	12/14/22 23:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	75-125		1	12/13/22 11:23	12/14/22 23:36	460-00-4	
Toluene-d8 (S)	94	%	75-125		1	12/13/22 11:23	12/14/22 23:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	80	%	75-125		1	12/13/22 11:23	12/14/22 23:36	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

QC Batch: 857945

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10636362001

SAMPLE DUPLICATE: 4534619

Parameter	Units	30545665001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4.1	4.1	1	30	N2

SAMPLE DUPLICATE: 4534620

Parameter	Units	30545665011 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.2	7.3	1	30	N2

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QUALITY CONTROL DATA

Project: 49161468.03 100 103 SRC Platfo
Pace Project No.: 10636362

QC Batch: 858253 Analysis Method: EPA 8260D
QC Batch Method: EPA 5035/5030B Analysis Description: 8260D MSV UST
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10636362001

METHOD BLANK: 4535740 Matrix: Solid
Associated Lab Samples: 10636362001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	12.1J	50.0	12/14/22 19:40	
1,3,5-Trimethylbenzene	ug/kg	<6.8	50.0	12/14/22 19:40	
Benzene	ug/kg	10.2J	20.0	12/14/22 19:40	
Ethylbenzene	ug/kg	<8.6	50.0	12/14/22 19:40	
Methyl-tert-butyl ether	ug/kg	<19.1	50.0	12/14/22 19:40	
Toluene	ug/kg	<18.9	50.0	12/14/22 19:40	
Xylene (Total)	ug/kg	<18.9	150	12/14/22 19:40	
1,2-Dichlorobenzene-d4 (S)	%	96	75-125	12/14/22 19:40	
4-Bromofluorobenzene (S)	%	97	75-125	12/14/22 19:40	
Toluene-d8 (S)	%	99	75-125	12/14/22 19:40	

LABORATORY CONTROL SAMPLE: 4535741

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	890	89	63-125	
1,3,5-Trimethylbenzene	ug/kg	1000	864	86	62-125	
Benzene	ug/kg	1000	1010	101	58-126	
Ethylbenzene	ug/kg	1000	965	97	67-125	
Methyl-tert-butyl ether	ug/kg	1000	958	96	65-128	
Toluene	ug/kg	1000	962	96	57-125	
Xylene (Total)	ug/kg	3000	2780	93	64-125	
1,2-Dichlorobenzene-d4 (S)	%			101	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4535743 4535744

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10636378001 Result	Spike Conc.	Spike Conc.	MS Result						
1,2,4-Trimethylbenzene	ug/kg	6260	383	383	8700	8210	639	508	59-133	6	30 E,P6
1,3,5-Trimethylbenzene	ug/kg	2330	383	383	4270	3720	507	365	62-128	14	30 P6
Benzene	ug/kg	430	383	383	726	732	77	79	52-131	1	30
Ethylbenzene	ug/kg	3020	383	383	3270	3340	66	83	65-125	2	30
Methyl-tert-butyl ether	ug/kg	ND	383	383	401	409	105	107	65-128	2	30
Toluene	ug/kg	4940	383	383	4840	4850	-25	-23	56-126	0	30 E,P6
Xylene (Total)	ug/kg	13200	1140	1140	14700	14700	125	127	63-127	0	30 ES
1,2-Dichlorobenzene-d4 (S)	%						67	95	75-125		S0

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QUALITY CONTROL DATA

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4535743 4535744												
Parameter	Units	10636378001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
4-Bromofluorobenzene (S)	%.							116	111	75-125		
Toluene-d8 (S)	%.							107	107	75-125		

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QUALITY CONTROL DATA

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

QC Batch: 857812

Analysis Method: EPA 8270E by SIM

QC Batch Method: EPA 3546

Analysis Description: 8270E Solid PAH by SIM MSSV

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10636362001

METHOD BLANK: 4533274

Matrix: Solid

Associated Lab Samples: 10636362001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	10.0	12/20/22 10:49	
2-Methylnaphthalene	ug/kg	<2.0	10.0	12/20/22 10:49	
Acenaphthene	ug/kg	<2.0	10.0	12/20/22 10:49	
Acenaphthylene	ug/kg	<1.1	10.0	12/20/22 10:49	
Anthracene	ug/kg	<0.92	10.0	12/20/22 10:49	
Benzo(a)anthracene	ug/kg	<1.7	10.0	12/20/22 10:49	
Benzo(a)pyrene	ug/kg	<1.1	10.0	12/20/22 10:49	
Benzo(b)fluoranthene	ug/kg	<1.0	10.0	12/20/22 10:49	
Benzo(g,h,i)perylene	ug/kg	<1.9	10.0	12/20/22 10:49	
Benzo(k)fluoranthene	ug/kg	<1.0	10.0	12/20/22 10:49	
Chrysene	ug/kg	<1.0	10.0	12/20/22 10:49	
Dibenz(a,h)anthracene	ug/kg	<1.2	10.0	12/20/22 10:49	
Fluoranthene	ug/kg	<0.72	10.0	12/20/22 10:49	
Fluorene	ug/kg	<1.2	10.0	12/20/22 10:49	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.80	10.0	12/20/22 10:49	
Naphthalene	ug/kg	<1.1	10.0	12/20/22 10:49	
Phenanthrene	ug/kg	<0.79	10.0	12/20/22 10:49	
Pyrene	ug/kg	<1.5	10.0	12/20/22 10:49	
2-Fluorobiphenyl (S)	%	73	59-125	12/20/22 10:49	
p-Terphenyl-d14 (S)	%	71	65-125	12/20/22 10:49	

LABORATORY CONTROL SAMPLE: 4533275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	100	68.6	69	50-125	
2-Methylnaphthalene	ug/kg	100	84.5	85	55-125	
Acenaphthene	ug/kg	100	74.2	74	60-125	
Acenaphthylene	ug/kg	100	73.5	73	59-125	
Anthracene	ug/kg	100	87.9	88	62-125	
Benzo(a)anthracene	ug/kg	100	92.0	92	64-125	
Benzo(a)pyrene	ug/kg	100	89.0	89	64-125	
Benzo(b)fluoranthene	ug/kg	100	94.5	95	65-125	
Benzo(g,h,i)perylene	ug/kg	100	70.1	70	66-125	
Benzo(k)fluoranthene	ug/kg	100	83.0	83	66-125	
Chrysene	ug/kg	100	77.7	78	66-125	
Dibenz(a,h)anthracene	ug/kg	100	73.0	73	67-125	
Fluoranthene	ug/kg	100	98.7	99	65-125	
Fluorene	ug/kg	100	86.6	87	60-125	
Indeno(1,2,3-cd)pyrene	ug/kg	100	78.6	79	64-125	

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QUALITY CONTROL DATA

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

LABORATORY CONTROL SAMPLE: 4533275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	100	70.9	71	48-125	
Phenanthrene	ug/kg	100	89.3	89	62-125	
Pyrene	ug/kg	100	76.2	76	68-125	
2-Fluorobiphenyl (S)	%			70	59-125	
p-Terphenyl-d14 (S)	%			73	65-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4533276 4533277

Parameter	Units	20263475005		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
1-Methylnaphthalene	ug/kg	<0.0023 mg/kg	99.7	97.8	64.4	65.4	64	67	60-125	1	30		
2-Methylnaphthalene	ug/kg	<0.0020 mg/kg	99.7	97.8	75.4	78.7	75	80	59-125	4	30		
Acenaphthene	ug/kg	<0.0020 mg/kg	99.7	97.8	72.3	74.9	73	77	70-125	4	30		
Acenaphthylene	ug/kg	<1.1	99.7	97.8	70.0	70.6	70	72	30-150	1	30		
Anthracene	ug/kg	<0.00091 mg/kg	99.7	97.8	91.5	95.6	92	98	67-125	4	30		
Benzo(a)anthracene	ug/kg	<0.0017 mg/kg	99.7	97.8	91.8	93.1	91	94	64-125	1	30		
Benzo(a)pyrene	ug/kg	<0.0011 mg/kg	99.7	97.8	89.2	89.5	90	92	40-137	0	30		
Benzo(b)fluoranthene	ug/kg	<0.00099 mg/kg	99.7	97.8	95.0	99.6	95	102	30-150	5	30		
Benzo(g,h,i)perylene	ug/kg	<0.0019 mg/kg	99.7	97.8	76.1	75.9	76	78	69-125	0	30		
Benzo(k)fluoranthene	ug/kg	<0.0010 mg/kg	99.7	97.8	82.1	78.3	82	80	48-133	5	30		
Chrysene	ug/kg	<0.0010 mg/kg	99.7	97.8	81.6	81.9	81	83	62-125	0	30		
Dibenz(a,h)anthracene	ug/kg	<0.0012 mg/kg	99.7	97.8	78.7	79.4	79	81	57-125	1	30		
Fluoranthene	ug/kg	<0.00071 mg/kg	99.7	97.8	106	107	106	108	60-125	0	30		
Fluorene	ug/kg	<0.0011 mg/kg	99.7	97.8	85.2	86.2	85	88	53-125	1	30		
Indeno(1,2,3-cd)pyrene	ug/kg	<0.00079 mg/kg	99.7	97.8	87.7	87.0	88	89	49-130	1	30		
Naphthalene	ug/kg	<0.0011 mg/kg	99.7	97.8	63.4	67.4	63	68	46-125	6	30		
Phenanthrene	ug/kg	<0.00078 mg/kg	99.7	97.8	97.1	99.3	97	102	61-125	2	30		
Pyrene	ug/kg	<0.0015 mg/kg	99.7	97.8	74.4	76.1	74	77	58-125	2	30		
2-Fluorobiphenyl (S)	%						32	34	59-125			S0	
p-Terphenyl-d14 (S)	%						41	41	65-125			S0	

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QUALIFIERS

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

ES The reported result is estimated because one or more of the constituent results are qualified as such.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161468.03 100 103 SRC Platfo

Pace Project No.: 10636362

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10636362001	S1	ASTM D2974	857945		
10636362001	S1	EPA 3546	857812	EPA 8270E by SIM	858007
10636362001	S1	EPA 5035/5030B	858253	EPA 8260D	858770

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed.

WO#: 10636362

10636362

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Page: <u>1</u> of <u>1</u>
Company: <u>Barr Engineering</u>	Report To: <u>Lynette Carney</u>	Attention: <u>Lynette Carney</u>	REGULATORY AGENCY <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 _____
Address: <u>3255 Lake Av</u>	Copy To:	Company Name: <u>Barr</u>	
Email To: <u>LCARNEY@Barr.com</u>	Purchase Order No.:	Address:	Site Location STATE: <u>WI</u>
Phone: _____ Fax: _____	Project Name: <u>SAC Platformer</u>	Pace Quote Reference:	
Requested Due Date/TAT:	Project Number: <u>49161468.03 100 103</u>	Pace Project Manager:	Pace Profile #:

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								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 ↓									
					DATE	TIME	DATE	TIME																				
1	<u>SL</u>		<u>SL</u>	<u>G</u>	<u>12/7/22</u>	<u>15:08</u>			<u>10</u>	<u>4</u>	<u>2</u>																	
2																												
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	<u>Ella King</u>	<u>12/7/22</u>	<u>1523</u>	<u>[Signature]</u>	<u>12/7/22</u>	<u>1523</u>	<u>7.6</u>	<u>Y</u>	<u>N</u>	<u>Y</u>
	<u>Stelacical Pace</u>	<u>2/7/23</u>	<u>15:23</u>	<u>[Signature]</u>	<u>12/8/22</u>	<u>0800</u>				
	<u>[Signature]</u>	<u>12/8/22</u>	<u>1050</u>	<u>Nancy/Pace</u>	<u>12/8/22</u>	<u>1050</u>	<u>1.0</u>	<u>Y</u>	<u>N</u>	<u>Y</u>

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:	<u>Seth Hamilton</u>				
SIGNATURE of SAMPLER:	<u>[Signature]</u>				
DATE Signed (MM/DD/YY):	<u>12-07-22</u>				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Effective Date: 11/16/2022

Sample Condition Upon Receipt Client Name: Barr Engineering

Project #: **WO#: 10636362**
PM: MKH Due Date: 12/22/22
CLIENT: BARR

Courier: FedEx UPS USPS Client
 Pace SpeedDee Commercial

Tracking Number: _____ See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No
Biological Tissue Frozen? Yes No N/A
Packing Material: Bubble Wrap Bubble Bags None Other Temp Blank? Yes No
Thermometer: T1 (0461) T2 (1336) T3 (0459) T4 (0254) T5 (0178)
Type of Ice: Wet Blue Dry None
 T6 (0235) T7 (0042) T8 (0775) T9 (0727) 01.339252/1710 Melted

Did Samples Originate in West Virginia? Yes No Were All Container Temps Taken? Yes No N/A
Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: 0.9 °C Average Corrected Temp (no temp blank only): _____ °C
Correction Factor: 1.0 Cooler Temp Corrected w/temp blank: 1.0 °C See Exceptions ENV-FRM-MIN4-0142 1 Container

USDA Regulated Soil: N/A, water sample/other: _____ Date/Initials of Person Examining Contents: 12/8/22 MW
Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? Yes No
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): <input type="checkbox"/> Duluth <input checked="" type="checkbox"/> Minneapolis <input type="checkbox"/> Virginia	COMMENTS
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 1.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 2.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 4. If fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 <input type="checkbox"/> No
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E.coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrom <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 6.
Sufficient Sample Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 8.
Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9.
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC? Matrix: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other	11. If no, write ID/Date/Time of container below: <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 12. Sample # <input type="checkbox"/> NaOH <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Positive for Residual Chlorine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks—verify with PM first.)	pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 13.
Extra labels present on soil VOA or WIDRO containers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 14. <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
3 Trip Blanks Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 15.
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
Person Contacted: _____ Date/Time: _____
Comments/Resolution: _____
Project Manager Review: _____ Date: 12/9/22
Field Data Required? Yes No

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: MW Line: 2

Attachment D

Material Management Documentation

Shamrock Landfill
 761 Minnesota 45
 Cloquet, MN 55720

INBOUND CHARGE

002708 LAKEHEAD CONSTRUCTORS INC
 3801 WINTER ST
 SUPERIOR WI 54880-5560

SITE	TICKET	GRID		WEIGHMASTER	
01	00105256	LANDFILL		Janet B	
DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
01/04/23	01/04/23	08:35	08:35	U54	19-0020-02
REFERENCE			ORIGIN		
19-0020-02			VIN: 55130Z-WI-5AVLES		

Scale 1 Gross Wt. 53820 LB
 Stored Tare Wt. 28760 LB
 Net Weight 25060 LB

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
12.53	TON	Industrial/ton				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

Generator: HUSKY ENERGY/SUPERIOR REFINING
 Address: 2407 STINSON AVE
 City/ST: SUPERIOR, WI 54880
 Manifest: 3826

SKB-WCI 4410

SIGNATURE _____

Shamrock Landfill
 761 Minnesota 45
 Cloquet, MN 55720

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Generator: HUSKY ENERGY/SUPERIOR REFINING
 Address: 2407 STINSON AVE
 City/ST: SUPERIOR, WI 54880
 Manifest: 3826

SKB-WCI 4410

SIGNATURE _____



Shamrock Landfill 

Non Hazardous Industrial Waste

3826

Shipping Manifest		1. Generator's US EPA ID No. (if any)			2. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address HUSKY ENERGY/SUPERIOR REFINING CO 2407 STINSON AVE. SUPERIOR, WI 54880				Mailing Address HUSKY ENERGY/SUPERIOR REFINING CO 2407 STINSON AVE. SUPERIOR, WI 54880				
4. Generator's Phone: (715) 817-6621				Fax:				
5. Transporter 1 Company Name UDEEN TK # 54								
6. Transporter 2 Company Name							Phone:	
7. Designated Facility Name and Site Address SKB/Shamrock Environmental, LLC 761 MN Highway 45 Cloquet, MN 55720				Phone: 218-878-0112				
8. U.S. DOT Description (including Proper Shipping Name)					9. Containers	10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#
					No.	Type		
a. Non Hazardous Industrial Waste (PETROLEUM IMPACTED SOIL)								
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below)					14. Special Handling Procedures for Wastes Listed Above			
a. CL CL19-0020-02 PETROLEUM IMPACTED SOIL								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						Office Use Only Load # 105256		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.								
Printed/Typed Name William Sloan				Signature <i>William Sloan</i>		Month Day Year 01 04 23		
17. Transporter 1 Acknowledged of Receipt of Materials Printed/Typed Name William Sloan Signature UDEEN TK # 54								
Signature <i>William Sloan</i>				Month Day Year 01 04 23				
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Month Day Year								
19. Discrepancy Indication Space New Plate 55130 Z WI-SAT								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this Manifest except as noted in item 19. Printed/Typed Name Janet Balduc or Alexis Phillip Signature <i>Janet Balduc</i> Month Day Year 01 04 22								

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy